

HTML

and the *Art* of the



Web page

R. CRAIG COLLINS

10th Edition, with Support for Windows 7 and Windows 10

R. Craig Collins, © 2004-2016

Note: Much of this book is general in nature; general to the point that on occasion I have oversimplified. It is not that I want to lie to you; I just don't want your head to explode. Future classes (especially Web Design II), other books, and experience will refine the topics introduced here.

To paraphrase a Jack Nicholson character, "You can't handle the truth."
Well, not just yet.

Colors reference using Hexadecimal

See Overview 6 for details











Red part Green part Blue part

The mixture behaves like light:
add full values of red, green, and blue light,
in equal parts, and you have white light (FF FF FF).
Add no red, green or blue light, and you would be in the dark, or black (00 00 00).

Color Chart

Our 8 crayon box colors, in hex :)

000000		0000FF	
00FF00		00FFFF	
FF0000		FF00FF	
FFFF00		FFFFFF	

IMPORTANT NOTE ON VERSIONS OF HTML

HTML 3 Introduced in 1995-97, included standard web features, plus Tables, support for applets, and some new text formatting.

HTML 4 Introduced in 1997-99, added frames and style sheets (which deprecated some features). In this book, we will learn the HTML 3 features first, then move on in Overview 9 to HTML 4, and styles.

HTML 5 is available, will add native support for video, reducing the need for Flash style plug-ins needing to be added, but is not widely supported yet. HTML 5 is typically a Web Design II topic, but will be addressed briefly.



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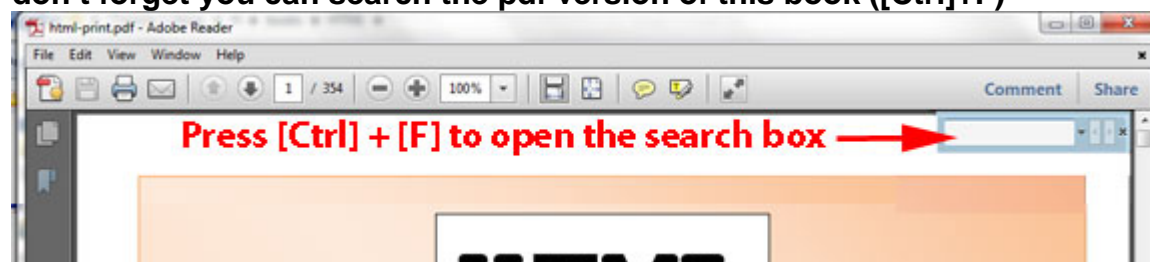
Videos, Additional Colors info, etc. are on class web site



MORE ON THE WEB

Check out the class web site

If you're looking for something,
don't forget you can search the pdf version of this book ([Ctrl]+F)

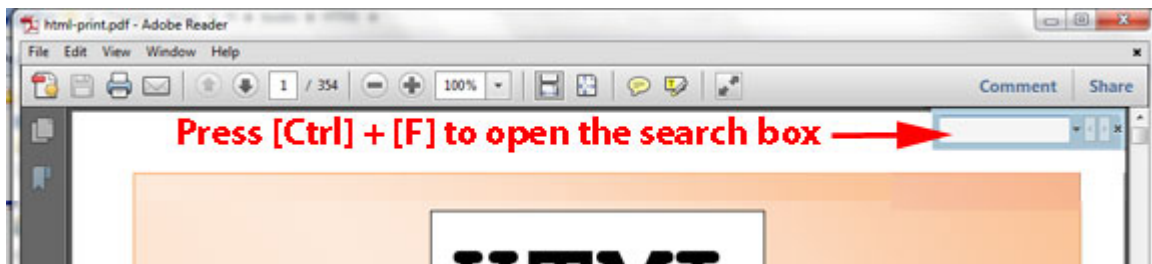


Overview 1

Getting Started

Read the Orientation (Campus specific orientations in Appendix)
What's Due at the end of this Overview 6

Note: to find a specific item, open the pdf version of the book, and use [Ctrl]+F [Find]



Overview 1 activities

- **Read the Campus Specific Orientation at the back of the book**
- In your school's Learning Management System (LMS), View the Week 1 News item, and Content for Week 1
- Update your profile in the LMS

What's due at the end of this overview

Submit by 11:59 am, Friday, of the current week
(Check your Learning Management System (LMS) for specific due dates)
Details on your LMS are in the College Specific Appendix at the end of the book.

- **Participation Discussion 1**
Respond in the class LMS Discussion forum to the following:
Please Introduce yourself to the class
- **MUD 1 (My Understanding, Details)**
Respond in the class LMS Discussion forum to the following:
What was helpful this week?
What do you hope we cover next week?
Please include feedback on additional content provided



MORE ON THE WEB
Check out the class web site

There are links in your LMS to more material for the class

Start reading Overview 2



Overview 2

Background Info

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Reminder: Did you check your School eMail? Did you check the Junk folder?

Netiquette and Smiley

Netiquette is about not what you can do, but what you should do. The Core Rules of Netiquette were written by Virginia Shea, and discuss how you, as an Internet User, suddenly have a lot of power... and why you shouldn't let it go to your head!

Below are the 10 rules Virginia Shea developed, and my quick take on them. If you would like to read what she said, go to www.albion.com/netiquette/corerules.html

Rule 1: Remember the Human (you aren't dealing with machines, you are dealing with people who put information on machines; just because you can't see them doesn't mean they don't exist. All other rules relate to this one. Remember this Mantra: Treat others as you wish to be treated)

Rule 2: Adhere to the same standards of behavior online that you follow in real life (Don't hide behind the anonymity of a made up username, and forget everything you mother taught you! Behave on line as you would in the non-virtual world. Treat others as you wish to be treated)

Rule 3: Know where you are in cyberspace (It is illegal for people in Saudi Arabia to have pictures of bikini models... so don't email one there. You have to contend with import/export and local laws, as well as laws of places you visit electronically)

Rule 4: Respect other people's time and bandwidth (Every file you get uses someone's computer power, and takes up bandwidth, which they may have to pay for. Or listening to Internet radio instead of real radio could tie up bandwidth your company needs for e-mail. Just be aware of the implications. Treat others as you wish to be treated)

Rule 5: Make yourself look good online (Electronic communication lacks the nuances of body language and inflection, be sure of what you are communicating... look for double meanings, and use spell check!) More on this topic [below](#)...

Rule 6: Share expert knowledge (What makes the system work is the idea of 'you rub my back, I'll rub yours.' Treat others as you wish to be treated)

Rule 7: Help keep flame wars under control (If someone is an idiot, they deserve to know. Once. Don't swamp their mailbox with insults every day for the rest of your life. Treat others as you wish to be treated)

Rule 8: Respect other people's privacy (If you don't want folks looking in your medicine cabinet, return the favor. Treat others as you wish to be treated)

Rule 9: Don't abuse your power (You could look through other folks files, you could tie up their server, you could ruin their mail box... don't. Treat others as you wish to be treated)

Rule 10: Be forgiving of other people's mistakes (You will make mistakes. How do you want to find out about it? A flame, or a friendly hint? Treat others as you wish to be treated)

Smileys and trying to communicate with email

Many people retain information according to the following rates:

10% of what they read

20% of what they hear

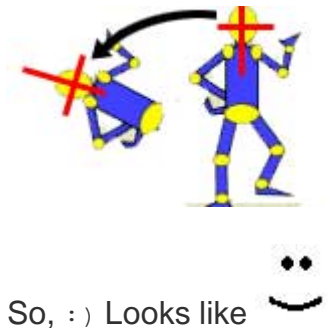
30% of what they see

70% of what they see and hear...

The problem with email is that you have eliminated 90% of communication when you are stuck with just reading. To try and overcome this shortcoming, many people try to use emoticons or abbreviations.






Emoticons (*Emotion Icons*), or smileys, are keystrokes to represent your body language. If someone in person asks me how a student is doing... reading 'just fine' has a completely different meaning than if I said it in person, and I rolled my eyes. So to try and convey a smile, a frown, etc. people use smileys.

To read a smiley, you have to turn your head 90° to the left.



So, :) Looks like

Some Programs actually convert the keystrokes into Emojis, to take away the guessing.

To Get This:	Type This:
	:)
	:D
	:O
	:P
	;)

And guessing can be a problem, when people use non-standard, complex emoticons, such as

<| |8u{ }>. (That's Santa... but since it didn't convey anything until I said that, it is an example of how NOT to use them, as they don't help communication.)

Many people will also use abbreviations and acronyms to try and improve communication. A lot of you know that LOL is laughing out loud, and that IMHO is In My Humble Opinion, but a lot of these also get to complex to be useful. It is so much easier to just say what you mean, re-read it for clarity, and then send it!

But just in case, here is a short list of chat acronyms (or chaq, pronounced "chalk") :

BFT or ttfn, bye or tata for now

BRB, be right back

BTW, by the way

CWOT, complete waste of time

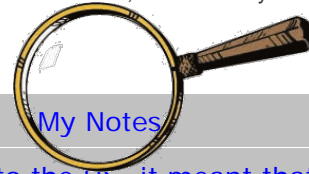
DIY, do it yourself

RTM, read the manual

A more detailed list is at <http://www.sharpened.net/glossary/acronyms.php>

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1950s

1957	
USSR launches Sputnik, first artificial earth satellite. In response, US forms the Advanced Research Projects Agency (ARPA) within the Department of Defense (DoD) to establish US lead in science and technology applicable to the military (:amk:)	This was huge to the US, it meant that the Russians beat us into space; they had the ability to perhaps drop bombs from space, and knock out our communications. So, the US knew they needed a better way for Generals to talk to each other in case of war, and a better way for scientists to talk to each other, to get caught up.

1960s

1962	
Paul Baran, RAND: "On Distributed Communications Networks" <ul style="list-style-type: none">• Packet-switching (PS) networks; no single outage point	It took 5 years for someone to think of an idea of communications that could survive a nuclear bomb... by de-centralizing the network, and letting the parts be responsible for moving the messages.
1965	
ARPA sponsors study on "cooperative network of time-sharing computers"	ARPA: they gave us the stealth bomber... now they want to build that bomb proof network... 8 years after the need arose.
1967	
ACM Symposium on Operating Principles <ul style="list-style-type: none">• First design paper on ARPANET published by Lawrence G. Roberts• Plan presented for packet-switching network	10 years after Sputnik, now we have a design.
1969	
ARPANET commissioned by DoD for research into networking	The Internet goes on-line in 1969... same year man walked on the moon. Which is more important, now?
First Request for Comment (RFC): "Host Software" by Steve Crocker	Instead of letting problems fester for years, they had a method of letting people know there is an issue to tackle... the RFC.

1970s

1970

ALOHAnet developed by Norman Abrahamson, U of Hawaii (:sk2:)

ARPANET hosts start using Network Control Protocol (NCP).

1971

15 nodes (23 hosts): UCLA, SRI, UCSB, U of Utah, BBN, MIT, RAND, SDC, Harvard, Lincoln Lab, Stanford, UIU(C), CWRU, CMU, NASA/Ames

Hold on, the Internet had only 23 server computers back then?

1972

ALOHAnet connected to the ARPANET

The Internet leaves the Continental US.

InterNetworking Working Group (INWG) created to address need for establishing agreed upon protocols. Chairman: Vinton Cerf.

Ray Tomlinson of BBN invents email

Birth of e-mail.

Telnet specification (RFC 318)

1973

First international connections to the ARPANET: University College of London (England) and Royal Radar Establishment (Norway)

The Internet expands beyond the US.

Bob Metcalfe's Harvard PhD Thesis outlines idea for Ethernet (:amk:)

This is how you connect little computers to a network. Bob went on to found 3Com... maybe you see football games played in his stadium in San Francisco.

Bob Kahn poses Internet problem, starts internetting research program at ARPA. Vinton Cerf sketches gateway architecture in March on back of envelope in hotel lobby in San Francisco (:vgc:)

Vinton Cerf is a neat guy. Designs a way to connect lots of different kinds of computers together. I met him a few years ago... looks just like me. Tall, bald, bearded, good looking...

File Transfer specification (RFC 454)

You still will use this 40 year old technology to upload to a web server

1974

Vint Cerf and Bob Kahn publish "A Protocol for Packet Network Internetworking" which specified in detail the design of a Transmission Control Program (TCP). (:amk:)

1976

Elizabeth, Queen of the United Kingdom sends out an e-mail (various Net folks have e-mailed dates ranging from 1971 to 1978; 1976 was the most submitted and the only found in print)

Note when a US President goes online... and our country invented this stuff!

UUCP (Unix-to-Unix CoPy) developed at AT&T Bell Labs and distributed with UNIX one year later.

1977

Mail specification (RFC 733)

1980s

1982

DCA and ARPA establishes the Transmission Control Protocol (TCP) and Internet Protocol (IP), as the protocol suite, commonly known as TCP/IP, for ARPANET. (:vgc:)

We still use TCP/IP, but it is due for an overhaul, to allow more devices to connect by expanding the number of IP addresses.

- This leads to one of the first definitions of an "internet"

- DoD declares TCP/IP suite to be standard for DoD (:vgc:)

External Gateway Protocol (RFC 827) specification. EGP is used for gateways between networks.

1983

Name server developed at U of Wisconsin, no longer requiring users to know the exact path to other systems.

Cutover from NCP to TCP/IP (1 January)

ARPANET split into ARPANET and MILNET;

Generals don't want to share anymore...

Desktop workstations come into being, many with Berkeley UNIX which includes IP networking software.

Internet Activities Board (IAB) established, replacing ICCB

Berkeley releases 4.2BSD incorporating TCP/IP (:mpc:)

First computer operating system to include TCP/IP... this is why BSD and other UNIX computers constitute the majority of web servers

1984

Domain Name Server (DNS) introduced.

Instead of using just IP numbers (32 1s and 0s) to identify a computer, we can also use a name, such as DCCCD.EDU or TEMPLEJC.EDU

of hosts breaks 1,000

Pay attention to the growth now

1986

NSFNET created (backbone speed of 56Kbps)

- NSF establishes 5 super-computing centers to provide high-computing power for all.

1987

1000th RFC: "Request For Comments reference guide"

of hosts breaks 10,000 # of BITNET hosts breaks 1,000

About every 2 1/2 years, the Internet grows by a factor of 10... not doubling, as in 2 to 4, but by a factor of 10, from 1,000 to 10,000

1988

1 November - Internet worm burrows through the Net, affecting ~6,000 of the 60,000 hosts on the Internet (:ph1:)

DoD chooses to adopt OSI and sees use of TCP/IP as an interim.

NSFNET backbone upgraded to T1 (1.544Mbps)

Countries connecting to NSFNET: Canada, Denmark, Finland, France, Iceland, Norway, Sweden

1989

of hosts breaks 100,000

Cuckoo's Egg written by Clifford Stoll tells the real-life tale of a German cracker group who infiltrated numerous US facilities

Great Story, but Stoll is now an idiot

Countries connecting to NSFNET: Australia, Germany, Israel, Italy, Japan, Mexico, Netherlands, New Zealand, Puerto Rico, UK

1990s

1990

ARPANET ceases to exist

Al Gore supports a bill to keep things

	going when ARPA shuts it down: the Internet. Write a note and thank him. He never said he invented it, by the way.
Archie released by Peter Deutsch, Alan Emtage, and Bill Heelan at McGill	

The World comes on-line (world.std.com), becoming the first commercial provider of Internet dial-up access

Countries connecting to NSFNET: Argentina, Austria, Belgium, Brazil, Chile, Greece, India, Ireland, South Korea, Spain, Switzerland

1991

Gopher released by Paul Lindner and Mark P. McCahill from the U of Minn	Until now, you used one program to search for files, another to transfer files, and yet another to read the file. Gopher did all of that in one program.
PGP (Pretty Good Privacy) released by Philip Zimmerman (:ad1:)	

US High Performance Computing Act (Gore 1) establishes the National Research and Education Network (NREN) NSFNET backbone upgraded to T3 (44.736Mbps)

NSFNET traffic passes 1 trillion bytes/month and 10 billion packets/month

Countries connecting to NSFNET: Croatia, Czech Republic, Hong Kong, Hungary, Poland, Portugal, Singapore, South Africa, Taiwan, Tunisia

1992	
Internet Society (ISOC) is chartered	There is no King of the Internet, just volunteers who make recommendations... which most people adopt. What a great way to run the world.
World-Wide Web (WWW) released by CERN; Tim Berners-Lee developer, a prototype browser	Tim wants folks reading his scientific papers to be able to read similar papers, so he add the ideas of links. He now runs the volunteer group that oversees new ideas for the WWW
# of hosts breaks 1,000,000	Still growing by a factor of 10

IAB reconstituted as the Internet Architecture

Board and becomes part of the Internet Society

Veronica, a gopherspace search tool, is released by UofNevada

Computer people are weird. Archie is an FTP search engine, and Veronica and Jughead are Gopher search engines.

Countries connecting to NSFNET: Cameroon, Cyprus, Ecuador, Estonia, Kuwait, Latvia, Luxembourg, Malaysia, Slovakia, Slovenia, Thailand, Venezuela

1993

InterNIC created by NSF to provide specific Internet services: (:sc1:)

- directory and database services (AT&T)
- registration services (Network Solutions Inc.)
- information services (General Atomics/CERFnet)

US White House comes on-line (<http://www.whitehouse.gov/>):

Finally, 17 years after the Queen.

- President Bill Clinton: president@whitehouse.gov
- Vice-President Al Gore: vice-president@whitehouse.gov

US National Information Infrastructure Act

Mosaic takes the Internet by storm; WWW proliferates at a 341,634% annual growth rate of service traffic.

Marc Andreessen had taken Tim Berners-Lee's idea, added pictures to web pages, and develops a free server and browser while at the University of Illinois. This was the first browser for personal computers

Marc later decides to start a company to sell some of this stuff... the first commercial browser was called Netscape.

Gopher's growth is 997%.

Countries connecting to NSFNET: Bulgaria, Costa Rica, Egypt, Fiji, Ghana, Guam, Indonesia, Kazakhstan, Kenya, Liechtenstein, Peru, Romania, Russian Federation, Turkey, Ukraine, UAE, Virgin Islands

1994	
ARPANET/Internet celebrates 25th anniversary	
<p>Arizona law firm of Canter & Siegel "spams" the Internet with email advertising green card lottery services; Net citizens flame back</p> <p>NSFNET traffic passes 10 trillion bytes/month</p> <p>WWW edges out telnet to become 2nd most popular service on the Net (behind ftp-data) based on % of packets and bytes traffic distribution on NSFNET</p> <p>Countries connecting to NSFNET: Algeria, Armenia, Bermuda, Burkina Faso, China, Colombia, French Polynesia, Jamaica, Lebanon, Lithuania, Macau, Morocco, New Caledonia, Nicaragua, Niger, Panama, Philippines, Senegal, Sri Lanka, Swaziland, Uruguay, Uzbekistan</p>	
1995	
WWW surpasses ftp-data in March as the service with greatest traffic on NSFNet based on packet count, and in April based on byte count	It used to take 10 years for a good idea to take root, but look how fast WWW grew.
<p>NSFNET reverts back to a research network.</p> <p>Traditional online dial-up systems (CompuServe, American Online, Prodigy) begin to provide Internet access</p> <p>Registration of domain names is no longer free. Beginning 14 September, a \$50 annual fee has been imposed, which up until now was subsidized by NSF.</p> <ul style="list-style-type: none"> • NSF continues to pay for .edu registration, and on an interim basis for .gov " 	
1996	
Number of .com sites surpasses .edu sites	The scientists now have their own network, called Internet 2. It is 100 times faster than what you can get at school.

That's enough history, for now.

Patents, Trademarks, and Copyrights...

protect the rights of those who create something.

The way this applies to web pages, very briefly, is as follows.

If you create something, and put it in a tangible form, it is automatically copyrighted. A web page is a fixed, tangible form, and therefore it is copyrighted. It helps if you note this on your material with the ©, and it helps if you register your material with the Copyright Office of the Library of Congress, but these steps are not required.

Once created, no one can use your material without permission until their copyright or patent expires. Period.

This also means you may not use other people's material on your web site without their permission. Period.

Some sites have notices, which state that you may use their drawings, etc.; this is their way of granting you permission. If this notice is not present, you must ask them. E-mail is usually is not considered legal permission, as there is no signature or proof of who sent it.

Legal Gray Areas

It is possible to get a picture of Mickey Mouse from sites aside from Disney, and while these 'generous' sites may grant you permission to use *their* version of Mickey... they did not have permission in the first place, so them granting you permission to copy it to your site is useless. They are breaking the law, and you would be distributing illegal copies.

It is possible to pull an image from Disney, and display it on your site, which seems legal, as you are not storing the image. And, Disney had put it up there on the Internet already for people to look at... but this is theft of bandwidth, and the image is not being used as the copyright holders intended.

Finally, copyrights do expire, normally 50 years after the death of the author, or 75 years after the item was released if the author is still alive.

A U.S. utility patent is generally granted for **20 years** from the date the patent application is filed. A design patent is generally granted protection for **14 years** measured from the date the design patent is granted.
<http://www.stopfakes.gov/faqs/how-long-does-patent-trademark-or-copyright-protection-last>

How you can copyright something someone else made.

Aside from being able to copyright the original, you *can* copyright your version, if you have permission to make your own version or if there is not copyright in place.

Example: Barnes and Noble can copyright the Sherlock Holmes books that *they* publish, or the New York Philharmonic can copyright *their* performance of Beethoven's 9th Symphony, as they have the legal right to publish or perform the material since both original copyrights have expired. But again, these new, legal expressions are now copyrighted... preventing you from photocopying a book, or copying a CD.

You can make your own version of the Mona Lisa if you paint it from memory as the original is out of copyright; but if you use a photograph as your starting point, you are violating the copyright of the photographer.

So, in this class,

- 1) you must have created it yourself, or
- 2) you must have written permission to use anyone else's material, or
- 3) you must have legal permission to use the material, by way of fair use.

Fair Use: A POSSIBLE exception to copyright law

Fair use states that *some* work can be used without permission under a few rules:

- 1) to parody a copyrighted work
- 2) to critique or review a copyrighted work, only a small portion is used (a rule of thumb is 10% or less) and credit is given
- 3) review a copyrighted work for scholarly purposes (again, only if a small portion is used and credit is given)

PS You can't claim your webpage on a game, mp3, or movie is scholarly.

So let me repeat, in this class, to use something on your web page,

- 1) you must have created it yourself, or
- 2) you must have written permission to use anyone else's material, or
- 3) you must have legal permission to use the material, by way of fair use.

Check before using something you didn't make.

See also <http://www.copyright.gov/>

Searching Techniques at Most Search Engines

To increase the precision of your search results, many search engines require that most of the words in your search string be present in the result documents. So, it may be better to start by listing just a few *key* words, and add additional terms to refine searches.

To gain even more control over your results, please read through the following hints.

Most search engines support full Boolean capability; Boolean terms are **AND**, **OR**, & **NOT**.

Use **AND** to connect a series of keywords you would expect to be in your documents, this forces the search engine to include that word in documents.

Example: War AND Peace

will return documents that contain both the word War *and* the word Peace, not just one or the other as with a simple series of words.

Use **OR** to retrieve documents that include *either* of the search words

Example: encryption OR cryptography

will locate documents that either include the word encryption *or* the word cryptography.

Use **NOT** to indicate a word that must *not* appear in the documents.

Example:

dolphins NOT NFL

will deliver searches on the mammal, rather than the football team.

Some browsers use + and - instead of **AND** or **NOT**; you may use a + (plus) to indicate words that **must** be present in the documents and a - (minus) for those that **must not** be present.

Examples:

+dolphins -NFL

+recipes for +cake -nuts

Use **"quotes"** around specific phrases to focus your search on occurrences of the actual phrase.

Example

"War AND Peace"

will return documents with the phrase "War and Peace" (such as discussion of the book by Leo Tolstoy), instead of random pages on conflict and quiet; thus you can use quotes to force the search on the phrase, rather than individual words.

Slowly add additional words in your search if the results are still too random, but don't do this too early... you may be putting blinders on the search engine, and miss good results. The often, the more words you enter, the more on target your results will be.

Examples:

ski resorts Vermont
(instead of *skiing*)

ergonomic workstation mouse keyboard
(instead of *ergonomics*)

Most search engines support a truncation symbol (wildcard) in queries. Often you must have at least four non-wildcard characters in a word before you introduce a wildcard. The * (asterisk) can be used to replace multiple characters.

(Please note that often search engines automatically stem most common plural and singular forms of words; a search on **cat** will also return results containing the word **cats**, and a search on **cats** will return results containing the word **cat**.)

Examples:

chemi* will find results containing words that begin with 'chemi' (e.g. chemical, chemistry, chemist)

psych*ist will find all results which contain words that begin and end with 'psych' and 'ist' (e.g. psychologist, psychiatrist)

A list of search engines:

<http://www.google.com>

<http://www.ask.com>

<http://www.yahoo.com>

<http://bing.com>

What search Engines Look For

Some Search engines simply take the first 25 words or so that appear on your page and compare searches to just those words. But, many search engines use the <META> tag, nested in the <HEAD> when collecting data to include in the search engine database.

More on the <META> tag in Overview 13.

Periodically, this book will include **Sneak peeks** on topics related to an item just was covered, that will be covered in much greater detail later.

This is done for the very curious... and to plant a seed that we will be returning to... as often it is easier to grasp a concept later if you have some prior knowledge. **No need to fully master these sneak peeks now.**



Sneak Peek: Meta tags

**Planting seeds today...
...we will discuss this again**

There are many variations of the meta tags that can be nested in computer use portion of a web site, the <head> or Header.

```
<meta name="description" content="your info">
```

Which allows the search engine to capture a description you create, and

```
<meta name="keywords" content="your info">
```

Which allows the search engine to capture keywords you designate.

There are other <META> tags, as well, such as

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
```

Which tells the browser which character set was used to render typed items,

```
<link rel="meta" href="http://www.example.org/labels.rdf"
type="application/rdf+xml" title="ICRA labels" />
```

```
<meta http-equiv="pics-label" content='(pics-1.1
"http://www.icra.org/pics/vocabularyv03/" 1 gen true for "http://www.example.org" r
(n 0 s 0 v 0 l 0 oa 1 c 0 ))' />
```

Which allows the browser to detect parental control ratings
(See <http://www.icra.org/webmasters/>), and

```
<META HTTP-EQUIV="REFRESH" CONTENT="x; URL=y">
```

Which automatically jumps to another page 'y' after 'x' seconds.
(You could even force the current page to be reloaded...)

We will not use meta tags now (Chapter 13), but be aware that they exist.

What is the Internet

Let's start with what the Internet is not; it is not an overnight sensation.

Started in 1969 as a small communications tool for the scientific and military communities, the number of users practically doubled yearly until it reached today's staggering figures, and continues... because it works. It allows information to flow, and fuels our information age.

Granted, it is still in its infancy, subject to growing pangs and fears, but it will not be a temporary fad. Once people see the work (and fun) that can be done on-line (and the recent trendy aura wears off allowing mature growth sets in), the Internet will become as indispensable as newspapers, books, televisions and shopping centers; not because it will replace them... but because it can enhance and expand their effect.

The Internet is not run by the US. While originally operated by the Department of Defense, currently the Internet is a free standing network that receives *influence* (or perhaps *direction* is a better word) from the Internet Society. But the Internet Society has no real control aside from suggesting standards... the Internet as a whole today is an unregulated entity that basically transcends any nation's control. While limits may be attempted on a local area by a government, as a whole it is unfettered and working pretty well on its own.

Finally, the Internet is not unchanging. The beast is dynamic. Computer time is like dog years, multiplied by a factor of 10, or more. Information sources come and go at incredible rates, but new tools are introduced every few months to better access and locate those bits of gold among the rubble that is today's Internet. Many businesses and individuals are developing truly engaging Internet sites, and keeping them up for the long run.

What is included in the Internet?

While most people today equate the Internet with the World Wide Web (described shortly), it is much more than that. It is email, remote access (such as telnet and ftp), and information and storage areas (such as the now nearly dead gopher, and www, the World Wide Web.) After a brief intro to each topic, some terms for use are also given, such as URL and browsing.

e-mail

If you participate on most any computer network, you are identified to the network with an electronic address. This way software can not only flow from your computer, but be drawn to it. One of the first tools on the Internet was e-mail, which allowed not only software to flow across the network, but messages for a particular user, as well.

e-mail addresses

Much as a conventional street address is composed of many parts, so is the electron mail address. Addresses can be read from *right* to *left*, from the general to the specific. Street addresses go from a region, to a city, to a street, to a particular place, to a particular individual. E-mail addresses go to a particular region, to a particular institution (domain), to a particular computer (host), where it is held for a particular individual (user). The sections are divided by periods, and the user portion is set off by the @ (at) sign. Some e-mail addresses have more sections to further point within a domain. Below are the parts of both a street and an e-mail address.

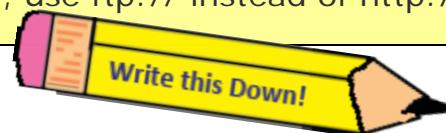
Street Address	Craig Collins	2600 S. First	Temple, TX	76504
	individual	building on street	city	region
e-mail address	craig.collins@	Mail3.	templejc.	edu
	user	host	domain	top-level domain

Remote Computer Access Tools

In the beginning, using the Internet meant using someone else's computer, from 500 miles away. This is called remote access, and the prime tools were Telnet and FTP.

Telnet is a method of 'driving' a computer that could be in a different state from the operator. Programs could be executed, files created or changed, whatever you could do if you were sitting at the actual machine. While still in use today for running certain networks, it is not what most people deal with or think of when you mention the Internet.

ftp, for File Transfer Protocol, is still a widely used tool to copy files from one machine to another machine. The biggest problem with FTP was not the act of copying files, but finding files to copy in the first place. One of the first tools to locate information on the Internet was a search engine for FTP called Archie. To ftp from a browser, use ftp:// instead of http://



Information Storage Areas

Today when you think of the Internet, you don't think of accessing someone else's computer or copying files, you probably think of browsing. The modern, easy way to look at data: window shopping, and not necessarily keeping everything you look at. The files placed on this part of the Internet come in quite a few flavors, such as Wide Area Index Search and Gopher, but almost every one of them has fallen by the wayside since the introduction of the World Wide Web in the early 90's.

WWW, The World Wide Web

What is the web? The World Wide Web, or just Web, is a method of not only making information available, but linking it to related information as well. These links are more appropriately called hyper text links, and the development of HTML (Hyper Text Markup Language) enabled documents sent across the globe to look more like magazine layouts than typewriter produced term papers. Taking the it one step further was the inclusion of images and sound in a document in 1993, and hyper media Internet was born!

Browsing

One of the reasons the Internet has come into the mainstream and grown so quickly is the fact that there is now very good, user-friendly software products available for home computers. These 'browsers' allow users to access and navigate through the millions of sites now on the web. After starting the browser, your computer retrieves information from an Internet site that has been set as its 'home', normally a site maintained by the company that created your browser. From here, normally you have three options:

going to sites that are recorded in the equivalent of a speed dialer, one is to use a 'search engine' and one is to follow links from the site you are currently visiting. All of these methods involve URL's.

URL

URL's (Uniform Resource Locators) are just a web sites address, very similar to an e-mail address for an individual. When you watch TV, and it says to visit someone's site, the mumbo jumbo they give our is their URL.

URL's, as with e-mail, are divided up into routing sections. The standard form begins with a command to your browser to expect a hyper text page, followed by the host, the domain, and the top level domain.

Below is a comparison of e-mail and web site addresses.

e-mail address		ccollins1@		hotmail.	com
		user	host	domain	top-level domain
URL	http://		www.	templejc.	edu
	Protocol		host	domain	top-level domain

A protocol is a rule for transferring hypertext documents.



Most sites have an automatic starting point that displays when you visit a site, or you can specify a particular file, or page. These pages are files that usually end with .htm or .html, again representing hypertext information.

This file information goes to the right, separated by a '/', such as
<http://www.templejc.edu/dept/cis/CCollins/Collins.htm>

URL	http://	www.	templejc.	edu	/dept/cis/CCollins/Collins.htm
	Protocol	host	domain	top-level domain	path to a particular file name

Other protocols include https:// and ftp://, and even one for email

top level domains

The top level domains are the first routing sign, and point to one of seven regions the Internet is divided into. The 'regions' are used not only for the World Wide Web, but on e-mail, too:

- .com, for commercial; the largest region as far as sheer numbers
- .edu, for educational, the largest segment until 1996
- .org, for organization, usually non-profit
- .net, for network, which usually are to support the Internet,
- .gov, for government, as in the President's e-mail
- .mil, for military, and finally the little used .int, for International.

Recently several new top level domains were added, such as .info
 Some site us a two letter country code, such as

- o .uk for the United Kingdom or .jp for Japan or
- o .tv for Tuvalu (a small island nation, not short for TeleVision).

TCP-IP

TCP/IP is the basis for Internet Communications. When participating on the Internet, you have many options: any number of pieces of hardware such as a computer or cell phone with a physical or wireless connection to the Internet, at least one of a variety of software tools, such as telnet, ftp, or a browser, but you must have TCP/IP. So how does TCP/IP work?

Many people believe since a lot of the Internet traffic flows over phone lines that all the information follows one path straight from the sender to the receiver immediately, just as a phone call works. That is called circuit switched delivery. But in fact, the Internet works more like the post office, moving information by different routes when a carrier is available to pick up and forward. This is called packet switched delivery. The only difference between the post office and the Internet is that the whole process may take less than a second to break, distribute, collect and reassemble a message whose parts may have gone through Texas and Japan on the way. Why do you suppose a straight connection from sender to receiver is not used on the Internet?

The answer is: much of the time when you are on the Internet, nothing is being transferred, such as when you are reading a page. It would be wasteful to tie up a line. You may also recall that one of the major reasons to build the Internet was to get away from centralized communications. Any number of routes can be used, even if a particular station is not working.

TCP/IP first takes the data you are ready to move across the internet, and breaks it into smaller pieces, called packets. These packets are each numbered, and are stamped with information concerning who the packet is from, where it is going, and how many packets there are total.

Then TCP/IP places the information on the Internet, starting with the local host computer. This first computer examines each packet, finds the 'TO' address, and polls nearby computer on the Internet to see which one a) is not busy, and b) if that computer can forward a packet.

When a computer responds, the packet is sent to that machine, where the process is repeated.

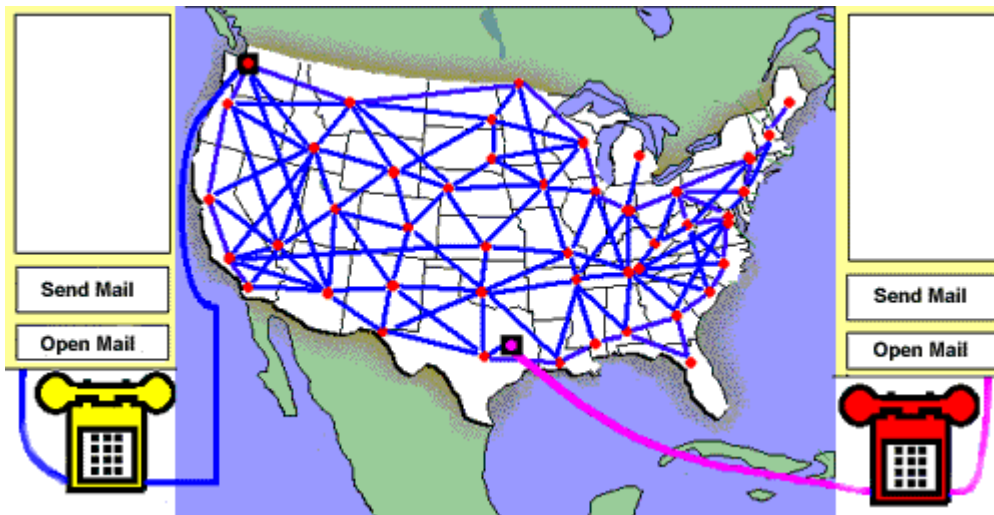
It is important to note that the same computer(s) probably will not handle all of the out-going packets. Some of the computers that 'volunteer' may actually be out of the way, depending on how busy the

Internet is at that time.

Therefore it is possible that many of the last packets sent will actually arrive at the destination before some of the first packets, depending on which computers handled what packets. However, the difference is often measured in milliseconds, and is not noticed.

At the receiving host computer, the message is reassembled. TCP/IP uses error-correcting 'checksums' to validate the data received, and requests replacement packets from the sending machine. Once the packets are all accounted for, they are re-assembled and held, until the recipient requests that host deliver their mail.

To begin a (very large) demo, go to this page on the class web site. It will show a message being composed near Redmond Washington, broken into packets, placed upon the Internet where they find their way to Central Texas. The packets are sequenced, checked for errors, and finally the mail is made available for reading...



IMPORTANT NOTE ON VERSIONS OF HTML

HTML 3 Introduced in 1995-97, included standard web features, plus Tables, support for applets, and some new text formatting.

HTML 4 Introduced in 1997-99, added frames and style sheets (which deprecated some features). In this book, we will learn the HTML 3 features first, then move on in Overview 9 to HTML 4, and styles

HTML 5 has started to be used, and will add native support for video, reducing the need for Flash style plug-ins needing to be added. HTML 5 is typically a Web Design II topic, but we'll look it at toward the end of class.

How To: Your First Web Page

An eight minute video is available in your LMS (Overview 2) that illustrating the following steps. I recommend you **read over this web page first**, *then* watch the video to see the steps being performed.



Note on Controlling File Names in Windows

Many computers are set up to hide known file extensions, this can be very confusing for computer students. To set your computer to display the entire file name Refer to the Controlling File Names section of the Orientation, in the appendix of this book.

How web pages work

Web pages are simply plain text files that contain simple markup language controls, called tags; these tags format documents for viewing by a web page browser, such as Internet Explorer or Chrome. A tag is enclosed between a less than sign (<) and a greater than sign (>).

99% of all tags are pairs; you start a tagged area, then end the tagged area, such as telling the browser when to turn on making words bold, and then when to turn off making word bold. So, think of tags as light switches, to turn on and off some formatting. **Most tags surround text.**



Starting a plain text editor

Windows Users:

To begin this project, launch **Notepad**.

From the [Start] button, open up to the **Programs** tab, then open the **Accessories** tab. Click on **Notepad**.



Linux Users:

From a Terminal prompt, touch `template.htm`, then either `emacs template.htm` or `vi template.htm`

All browsers need to be instructed as to what type of file to they are about to deal with, so the first tag set that we need to type in your text editor identifies the page as a Hyper-text document. Type in:

```
<HTML> </HTML>
```

(You can, and perhaps should, use lower case...
I just use upper case for emphasis.)

I usually type in both the starting tag `<HTML>` and the ending tag `</HTML>` at the same time, this way I don't forget the ending tag later. Next, place the insertion point between the tag set, and hit the enter key a few times to give you space to work. What is typed *in between these two tags* will be part of the web page.

```
<HTML>
```

```
</HTML>
```

Next, we need to know that there are two parts of the web page, the part the computer reads, and the part the users read. We'll insert the computer's part next. Just as Microsoft Word has parts of the document reserved for page numbers, etc., web pages also have something similar to a header section, called the head.

Between the two `<HTML>` tags, add the head section, as follows. Don't worry about how many spaces or how many lines are between things...browsers ignore this "white" space. It also doesn't matter if you use capital letters or not.

```
<HTML>
```

```
<HEAD>
```

```
</HEAD>
```

```
</HTML>
```

Usually, the only thing that goes in between the head tags is something to create a title. So add the following so that your entire page looks like:

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>
```

```
</TITLE>
```

```
</HEAD>
```

```
</HTML>
```

Now, just as in Microsoft Word, we need to add the section where all the words go; just as Microsoft Word has a body area, web pages also have something similar, also called the body.

```
<HTML>

<HEAD>

<TITLE>

</TITLE>

</HEAD>

<BODY>

</BODY>

</HTML>
```

Notice the two HTML tags surround the entire document. Within the document you have a HEAD section and a BODY section. And within the head, you have an area for a TITLE. We are now ready to save this document, which will be the starting point for all of your web documents.

Windows Users:

Click on the **File** menu item, then select **Save**. This will open the Save As dialog box. For the file name, type in **"template.htm"**

Please make sure that the extension is .htm, and not txt. In the upper box, select to save the file, perhaps on your floppy disk, A:. Then choose **Save**.

Linux User:

Choose File\Save Current Buffers

Now we have a file that contains all the required tags. Instead of having to type them in each time, we can simply open the file, and using the File\Save As menu, create a new file with a new name.

Let's do that now; Using File\Save As, **save the file test1.htm**. You should now have two, identical documents, template.htm and test1.htm, with test1.htm now open

Again, you'll be able to use the template.htm later as a starting point later, so we will be making our changes only to copies of it, as we have

done. Whenever you want to start a new web page, open `template.htm`, and use **save as** to create a copy, with a different name. This page contains all the required tags...all it lacks is your formatted text.

Now modify `test1.htm` by inserting a title between the `<TITLE>` tags. Call it something like *My 1st page*.

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>
```

```
My 1st page
```

```
</TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
</BODY>
```

```
</HTML>
```

Now click the **File** menu item, and then select the **save** option. (Not *save as*, the file already has a name.)

Next, minimize your text editor window; DO NOT CLOSE THE WINDOW, as we will be switching back to it.

Windows Users:

Start (My) Computer or This PC, and browse to the location where you saved `test1.htm`, and double click it.

Linux Users:

Open your 'home' folder, locate `test1.htm`, and double click it.

This should launch Internet Explorer, Safari, Chrome or the Firefox browser, placing **test1.htm** in **address** text box.

It may look like nothing is being displayed, but look for the title tab, often at the top of the browser window, above the big window. It should read "My 1st page". This is appropriate as we have only put in a title.



Next, leave the browser running, but click on the your text editor icon on the task bar, to switch to your text editor.



If you accidentally closed Notepad and are using Windows, go back to the folder where you saved the file, right click test1.htm, and choose Open with... and choose Notepad

Between the <BODY>tags, type Hi.

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>
```

```
My 1st page
```

```
</TITLE>
```

```
</HEAD>
```

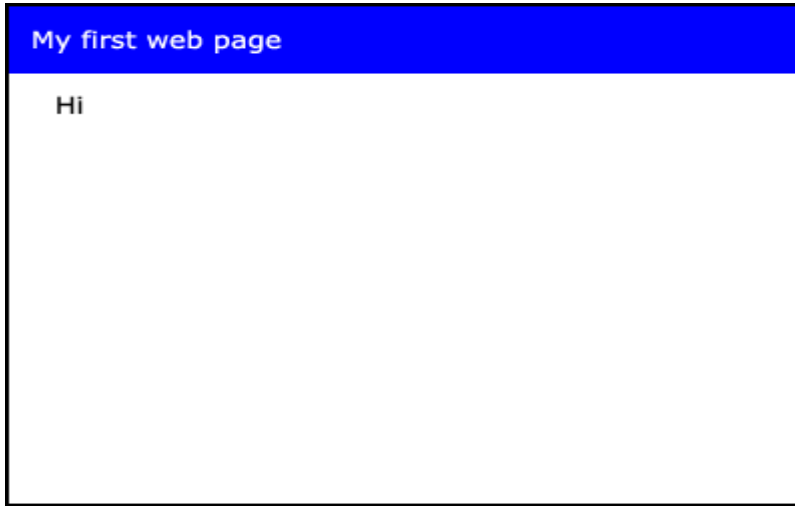
```
<BODY>
```

```
Hi
```

```
</BODY>
```

```
</HTML>
```


Save your text editor file, click on the browser icon, then click on the refresh/reload button (F5). You should now see the word **Hi** displayed.



Switch back to your text editor, and highlight the word Hi by clicking just to the left of the word, and drag across it with the mouse button still depressed. When the word is highlighted, press down the [Ctrl] button and hold it down. Now tap the [c] key and let go of both. Now press the [End] key. This will break the highlight, and place the cursor at the end of the line. Press the [Enter] key to create a new line below the word **Hi**. Now, press down the [Ctrl] button and hold it down. Now tap the [v] key and let go of both. A copy of the word **Hi** should now be pasted in below the original. (You could also have used the edit menu.)

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>
```

```
My 1st page
```

```
</TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
Hi
```

```
Hi
```

```
</BODY>
```

```
</HTML>
```

Save the changes, and switch back to your browser. Refresh/reload (Internet Explorer can be refreshed by using the [F5] key.)

You should now have two **Hi**'s, but are they one on top of the other?

No. I'll bet they are side by side.



Why? Because the browser ignored the white space separating the two, and thus they are displayed side by side.

In Microsoft Word, you start a new line by inserting a line break... so let's force a line break here. In your text editor, make the following change, and save.

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>
```

```
My 1st page
```

```
</TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
Hi <BR>
```

```
Hi
```

```
</BODY>
```

```
</HTML>
```

Notice that the break tag `
` does not have an ending component, as this tag is not surrounding text in order to format the text for display. You don't start breaking your leg, then finish breaking your leg later... it is just a break!

Some web pages will use `
`, basically a start break **and** an end break in one tag, but this is not required for our purposes now.

Switch to your browser, refresh, and you should now see the two **Hi**'s displayed in stacked fashion.



Now, when we read a newspaper, we know when a new story starts, because of headlines. Headlines are different sizes, bold, and always are on a different line than the story. So, let's try to add one of the 6 headlines by making the following changes, and note the results in your browser. Remember, every time you make a change in your editor, save your document, switch to your browser, then refresh/reload.

Recall also, tags normally surround the text that they will format for the browser.

Only the `<BODY>` section will be changing this time, but the other tags must still be on your document.

First we'll get rid of the `
`, and surround the first word Hi with a headline size 6 tag set.

```
1. <HTML>
   <HEAD>
   <TITLE> My first web page </TITLE>
   <BODY>
   <H6>Hi</H6>
   Hi
   </BODY>
</HTML>
```

You should see a really small first line now, as h6 is the smallest headline, and this tag surrounds the first word Hi. This headline is actually SMALLER than regular text.

Note: headlines size 3 is about the same size as regular text.



Now, let's try a headline size 2, by *replacing* the h6 tags with H2 tags. Recall from above, we don't need a line break after a headline

```
2. <HTML>
    <HEAD>
    <TITLE> My first web page </TITLE>
    <BODY>
    <H2>hi</H2>
    Hi
    </BODY>
</HTML>
```



This is the second largest... I avoided using H1 tags, as they look a little too much like Hi, but you can try an H1 set if you like!

In the steps below, DO NOT ADD ADDITIONAL BODY TAGS! Simply edit the existing body tag to reflect the changes. From this step on, the items are being inserted **between** the "<body" and the ">" in <body>... again, ALL of these changes made are **BETWEEN** the < and the >. Also and use the number "0", not the letter "o". Changes to be made are in **bold**. Don't forget to save after each change, and refresh/reload your browser.

• **NOTE:** Do NOT use curly quotation marks, such as ”; only use straight quotation marks, such as ”.



We are about to modify a tag to alter its behavior. These modifiers are called **attributes**. Attributes are followed by a value structure (**=**"**value**"), to indicate how the modification will work. Instead of having a white background, we are going green. So we will change <body> to <body bgcolor=**"green"**>

attribute value

3. `<HTML>`
`<HEAD>`
`<TITLE> My first web page </TITLE>`
`<BODY BGCOLOR="green">`
`<H2>hi</H2>`
`Hi`
`</BODY>`
`</HTML>`

Again, this modifies the background color to be green. The modifier is called an attribute, and attributes are followed by ="value", in this case, bgcolor="green"

4. `<HTML>`
`<HEAD>`
`<TITLE> My first web page </TITLE>`
`<BODY BGCOLOR="#00FF00">`
`<H2>hi</H2>`
`Hi`
`</BODY>`
`</HTML>`

Think of a room with 6 lights, 2 red, 2 green, and 2 blue. If 0 is off, and F is fully on, then #00ff00 means no red light, lots of green light, and no blue light... making the background green. Try this now.

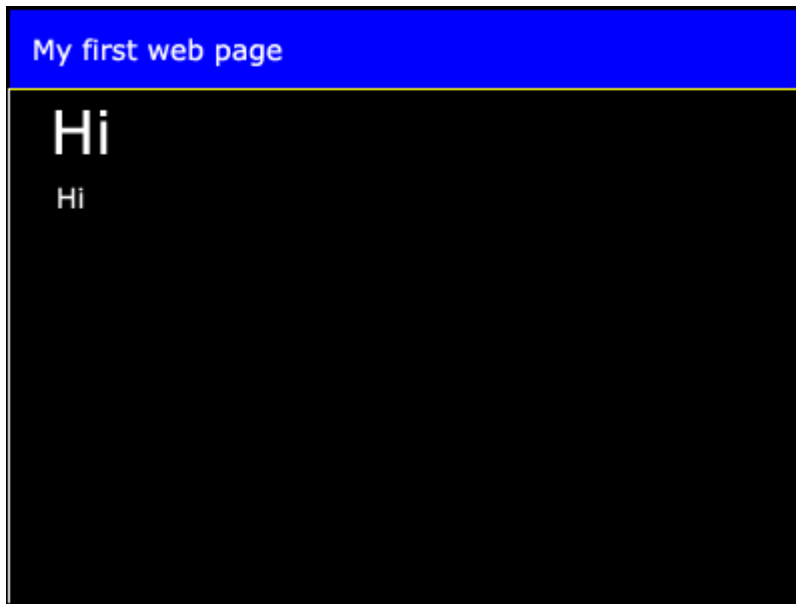
5. `<HTML>`
`<HEAD>`
`<TITLE> My first web page </TITLE>`
`<BODY BGCOLOR="#000000">`
`<H2>hi</H2>`
`Hi`
`</BODY>`
`</HTML>`

Did you guess that if no lights are on, that the room would be black? If the background is black, let's make the text white.

#000000 Black
#FFFFFF White
#FF0000 Red
#00FF00 Green
#0000FF Blue
#FF00FF Red/Blue is Purple
#00FFFF Green/Blue is Turquoise
#FFFF00 Yellow (Think rainbow order, **Red** Orange Yellow **Green** ...)
Lots more on colors to come.

Again this is all between the <body and the >, even though I am adding another instruction on the next line down.

6. `<HTML>`
`<HEAD>`
`<TITLE> My first web page </TITLE>`
`<BODY TEXT="#FFFFFF"`
`BGCOLOR="#000000">`
`<H2>hi</H2>`
`Hi`
`</BODY>`
`</HTML>`



What else goes in web page?

Oh yes... now, let's add a picture.

Open [Google](#) and select to search for Images. Type in something, such as *money* or *Lincoln*, and search. You will be presented a list of images; right click one of those images, and choose Save Picture As...

Save the picture in the same folder as the web page you are working on, and give it a short, memorable name.

(I'll call mine 'prez.jpg'). Again, save the picture in the same folder.



NOTE, this is 'fair use' of a copyrighted image, since only you are viewing it. You may NOT use this image on web pages that you post to the Internet. Review Copyrights (see page 17), if you aren't sure how to use copyrighted images

Now, switch back to your text editor and insert the following line.

```
<HTML>
<HEAD>
<TITLE> My first web page </TITLE>
<BODY TEXT="#FFFFFF"
BGCOLOR="#000000">
<H2>hi</H2>
Hi

</BODY>
</HTML>
```

Then, switch back to the browser, and refresh.

Finally, we'll create a link, using the anchor tag. An anchor tag allows you to not only move to another site, but to later return to sight you came from by using the back button, hence the anchor name. Just as the **image** tag required the **source** attribute to point to the location of the image, the **a** tag requires an **href** attribute to point to the fully qualified URL of the site you wish to link to. And just as the **H2** tag set needs to surround the text to render as a headline, the **a** tags need to surround the text that will become the clickable link.

Note, shown below is the entire document... your work in your text editor should be identical, aside from URL!

Please replace **URL** below with a favorite web site, such as <http://www.google.com> or <http://www.templejc.edu> .
(You must include the protocol, usually <http://>)

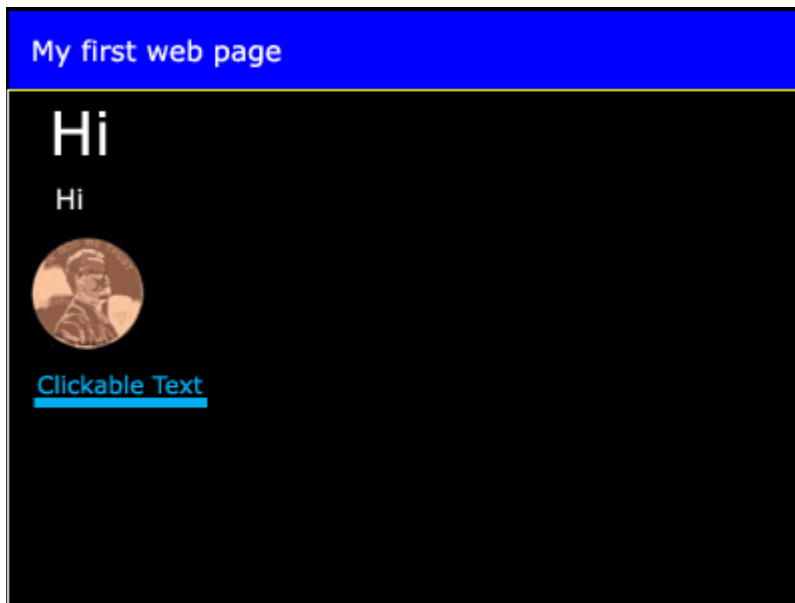
```
<HTML>
<HEAD>
<TITLE>My First Web Page</TITLE>
</HEAD>
<BODY TEXT="#FFFFFF"
BGCOLOR="#000000">
<H2>hi</H2>
Hi
<br>
<a href="URL"> Clickable Text </a>
</BODY>
</HTML>
```

You obviously could replace **clickable Text** with something like *to Temple College*


```

<HTML>
<HEAD>
<TITLE>My First Web Page</TITLE>
</HEAD>
<BODY TEXT="#FFFFFF"
BGOLOR="#000000">
<H2>hi</H2>
Hi
<br>
<a href="http://www.templejc.edu"> Clickable Text </a>
</BODY>
</HTML>

```



Additional Notes

This sample web page introduces many concepts that need further refining, such as the notion of networks, numerical representation of color, and how to control images. All of these topics will be addressed in future overviews, but a few topics deserve a little attention right now.



Tim Berners-Lee came up with the **World Wide Web** as easy to use method of sharing data; his key idea was to be able to *link* to related documents using something called hypertext. What made this idea work was software to distribute web pages, called a Web server, and software to receive web pages was called a Web browser. You may recall from the Timeline (page 10) that **Marc Andreesson** and his group at the University of Illinois/UC developed the first viable server and browser. The browser code-name was Mozilla but they called the finished product **Mosaic**. **Andreesson** later helped create a business to continue this software development resulted in **Netscape Navigator**, the first commercially available browser. Netscape Navigator lives on, a new Mozilla group releases Firefox.

How To: Check for errors in HTML

- Make sure you are starting with
`<html>`
`<head>`
`<title>`
`</title>`
`</head>`
`<body>`
`</body>`
`</html>`
- You only use `<body>` `</body>` once, and **all** the items to display in the main browser window go in between.
- When constructing a web page in HTML, it is important to build up your page one item at a time; not all at once, and not in a linear fashion. That is, don't start typing from start to finish, then look at the browser.

If you put in a less than sign to start making a tag, you should immediately put in the the greater than sign.

`< >`

If you have a beginning tag that is used to change the appearance of text, you should immediately put in the ending tag.

`< > </ >`

If the tag requires an attribute, make sure there is a space after the tag before you place the attribute, and if needed type in the = followed immediately by TWO quotation marks " ".

No space between attribute and the =

`<tag attribute=""> </tag>`

Insert the attribute value between the " and ", no spaces.

`<tag attribute="value"> </tag>`

Insert the text that the tag/attribute will format, between the tags.

`<tag attribute="value">Text</tag>`

TEST JUST THIS CODE in your browser.

If you wish to add additional attributes, add them one at a time, testing the code in between.

SUMMARY: Most errors on a web page are due to missing one of these matched elements

< and >; < > and </ >; =" and "

- Be careful spelling; if copying something, make sure it is plain text and don't use word processors.

" is not the same as " (plain quotation marks, not curly quotation marks)

a href is not the same as a herf

a href="pagetwo.htm" wont find a file named *page-two.htm*

- Separate components with a space
<tag attribute="value" attribute="value" attribute="value">
</tag>
- When looking at a web page's code, the error is almost always above where it starts to look wrong in the browser. A bug chunk of a web page will disappear if you miss a " earlier in your code.
- You only use <body> </body> once, and **all** the items to display in the main browser window go in between.
- Many times you have compound mistakes (if you don't add a piece at a time, as recommended)... fix them one at a time, and test the code before moving on.

Common problems in Web Design labs

- **Files names**
Files with incorrect file names (labs have specified file names)
If you have not set your computer correctly, as shown in the Orientation, FAQ, and the top of the practice web page, you may wind up with files named page1.htm.htm instead of page1.htm
because your computer is hiding part of the filename.
My notes also say not to use upper case letters or spaces in filenames.
- **Zip**
You are not zipping files, or are complaining the zip breaks the file
How to zip is included on the lab web site and links in class web
A zipped page does not function correctly until I unzip it.
- **Spaces between quotation marks**
You cannot put extra space within quotation marks...
"white " is not the same as
"white"

Additional Notes, preparing for Lab 1

As you learned for the first web page (page 28), HTML web pages are just plain text, meaning Notepad can generate great web pages if you don't want to spend money on Editors. Yes, we will experiment with editors, later, but only after you understand how HTML really works. So, in the meantime, we need to focus on how to write HTML ourselves.

Patrick Carey had some great tips on writing HTML in his "Creating Web Pages with HTML..." series.

Tips for Good HTML Code

- Use line breaks and indented text to make your HTML file easier to read
- Insert comments in your HTML file to document your work
- Enter all tags and attributes in lowercase
- Place all attribute values in quotes
- Close all two sided tags
- Make sure that nested elements do not cross
`<i>` should end with `</i>`, NOT `</i>`
...
- Include the alt attribute for any image, to specify alternative text for non-graphical browsers and to support visually challenged users
...
- Test your Web page

Some other things to recall when creating your future labs include: tags are not case sensitive, but many file names are; so normally you use lower case everywhere, and avoid spaces in file-names.

If using another book to help you as you learn to create web pages, please realize that many of these books often start with something called 'styles.'

Styles, including 'inline style' items, can provide extra, more complex formatting than should be discussed this early in your learning curve; but by the end of the semester styles, including Cascading Style Sheets (CSS) **will** be covered.

Just note, this textbook will wait on 'styles' until you have had a chance to practice the basics of HTML, often referred to as HTML 3.



If you are continuing on to Web Design II, books like Carey's are used to implement the more complex HTML 4 and 5. But, especially early in the semester, this textbook will stick with traditional HTML.

Other reference guides still should introduce the basic HTML\HEAD\BODY structure, and should start you formatting text with many different size headlines, and should include that just as in a word processor, you can not only break a line with `
`, but also organize information using the `<P></P>` paragraph set. Paragraphs come with a built in line break, just as headline tags do.

Your other reference book may also introduce lists. Basically, you surround the text of the list with either `` or `` tags, depending on whether you want an ordered (numbered) list, or an unordered (bullet) list. Where ever you want the bullet or number, drop in a List Item tag, ``.

`` or ``?

In the old days, if your computer was using a font that did not have a bold attribute, the ` ` tag set would not work, but the ` ` set would at least add some emphasis to the text. Today, PC's typically use Times which does include a bold attribute; Mac's use Chicago, which also has a bold attribute, so `` and `` appear the same on most computers.

So, while there are many ways to format text, few people care if it is logical or physical formatting, so focus on which tag is easier to remember... I prefer `` for bold much more than ``, as they look identical on most browsers, so I choose the one that requires less typing, and is similar to the formatting I use in word processing... `` for bold, `<I>` for italic, etc..

But technically, `` is safer to use, since it is not reliant on the font installed on your computer.

You have already inserted an in-line image during first your first web page (page 28), but typically you can only use jpg or gif files. This text will include more on graphic formats in Overview 7.

Wondering how to display the less than or greater than < or > on a web page, such as if trying to display $1 < 2$ for math, or how to add the copyright symbol to a page? This text will shortly cover how to create many special characters using `&xxx`; combinations, such as `<` to make a <, and `©` to make a ©. Finally, many references use `<HR>`, the horizontal rule, to draw a line across a web page. This too will be covered in lab 1.

By following the instructions for the upcoming lab 1, you will soon build a web page that illustrates many of these points.

In the next overview, you will be officially introduced to basic formatting of web pages... so you will need to make notes on these upcoming new tags (making notes on tags is called *documentation* in this text). Then, after creating the web page you should be answer a few questions, and submit Lab 1! This text will show you how to take the quiz and use the dropbox required to submit your lab 1.

Completing Overview 2

To prepare for future labs and exams, it is suggested that you take the practice test in LMS.

What's Due at the end of Overview 2?

- Submit by 11:59 am, Friday, of the current week (see Class website for due dates)

- Participation Discussion 2

Respond in the class LMS Discussion forum to the following:

Discuss your level of experience in programming languages, or using markup languages, if any

- MUD 2 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

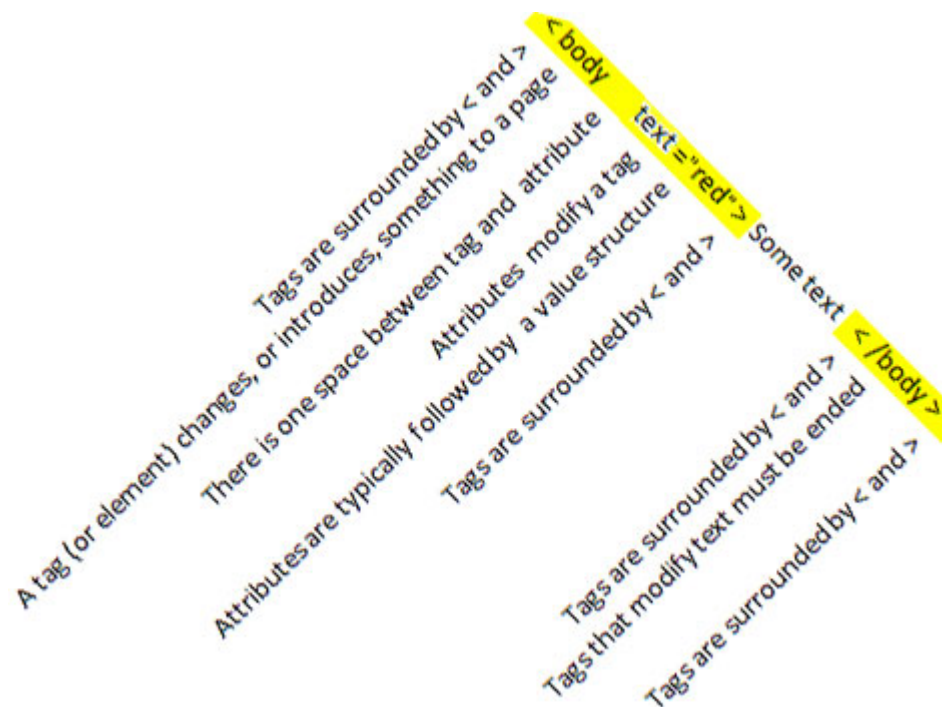
For the next time frame:

- Read next Overview
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to start on the Overview 3 material, and preview Lab 1

Overview 3

HTML Tags

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HTML Tags

Review and Details...

This document clarifies some of what you are already doing, and contains links to other sites on the Internet that contain more complete lists of tags, and some of the newer ways of implementing tags; but for the most part, this is an attempt to collect together a quick list of the tags that wind up in 90% of the basic documents today.

A Brief explanation of what tags do

Web pages are based on HTML (**H**yper **T**ext **M**ark up **L**anguage), which basically is plain text with added instructions to, say, make text appear **bold**, or in *italics*. These instructions are called tags, and tags that modify text typically surround the text they modify.

That is, you tell the browser when to start making a word bold, then tell the computer where to stop making things bold; so to do this, you could surround the text to be modified with `` and ``.

Tags can be fine-tuned, just like DOS commands, using a modifier called an attribute. A tag may be used by itself, or there may be a combination of available attributes to further modify the way the document appears on screen; however, an attribute cannot be used without the 'parent' tag.

A tag, and any desired attribute, is always included inside the angled brackets; example: `<body>` can be modified to make the background blue by changing the tag to `<body bgcolor="blue">`.

attribute value

(Don't forget, this body tag surrounds all the text to be displayed, so you will need the `</body>` after the text to display has ended. Also, you only close the original tag, not any attributes.)

A small example of a basic web page.

All web pages should include the following elements:

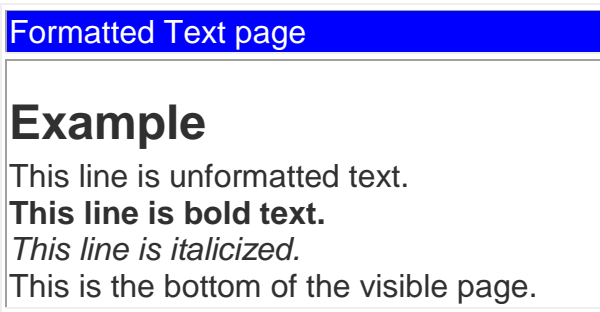
1. A tag to indicate to browsers that it is, in fact, a HTML document, and an ending HTML tag.
2. A head, that is, information read by the browser, but not included in the visible document portion. A Title tag is included within this section, and both sections end with the appropriate ending tag.

(Think headers in a word processing document...header information is not part of the body of the document.)

3. And the body, or, the portion of the document that is viewed on the computer screen. As with most tags, the body tag requires an end tag.

Example

To make your page look like



you would put:

```
<html>
<head>
<title>
Formatted text page
</title>
</head>
<body>
<h1>Example</h1>
This line is unformatted text.<br>
<b>This line is bold text.</b><br>
<i>This line is italicized.</i><br>
This is the bottom of the visible page.
</body>
</html>
```

Note the three distinct sections, the HTML, which contains the HEAD, and the BODY. Each section is started, and stopped.

The word

Example

was defined as a heading one (headline, size 1), whose tag is `<h1>`. Headings are a different size, bold, and force a line break.

Again, if you don't want to change the way some text looks, you don't need to use tags at that point.

`` is for bold, and `<i>` is for italics. HTML is not case sensitive, so you some say you can mix and match uppercase letters in your tags, but you will find your instructor prefers, and more advanced web programming requires, lower case.

Further, browsers ignore white space; that is, so it doesn't matter if you write everything on one line, or hit the return key to write additional lines each starting with the margin; whatever is easiest for YOU to read. As far as displaying goes, until the browser encounters something to force a line of text to drop down a line, such as the break `
`, the browser will keep everything on the same line until it runs out of computer screen, then wraps the text to the next line..

Note: `
` is one of the few tags that does not require an ending tag, as it does not surround text in order to modify the way the text appears... this doesn't mix with newer html programming so they include the end inside the tag, such as `
`... you may use either in this class.



Note: not all tags you may run across are W3C (World Wide Web Consortium) compliant, so tags like `<marquee></marquee>` or `<blink></blink>` are not supported on all browsers. Some tags are begin **deprecated**... or phased out. They still can be used, but there are now other ways to accomplish the same thing.

Browsers are fault tolerant; that is, if a browser doesn't recognize a tag, it simply ignores it; example: `<!>` will be ignored.

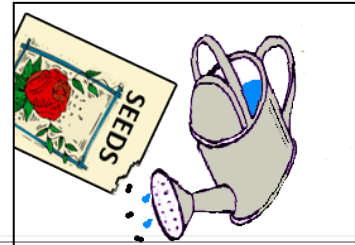
We can leverage this to make comments in our document... as `<!-->` is **not** a HTML tag, so if we include `<!-- some text -->` the browser will ignore it and not display anything, but it is a nice way to leave a comment, or note to ourselves. I like to use this to add my authorship to a page.

Technically, you could use `<! Comment >` or `<! Web page by Craig >` but good form is `<!-- Comment -->` or `<!-- Web page by Craig -->` Often these comments go with `<head>` and `</head>`, but can be placed anywhere in a page that you would like to document what is going on, such as

```
<html> <head> <title> My Stuff </title>
<!-- Web page by Craig --> </head> <body> Some stuff </body>
</html>
```

A Sneak Peek (if you're interested)

Upcoming HTML Tags & Attributes with explanations



<code><html></code>	begins the html	Planting seeds today...
		<u>...we will discuss this again</u>
<code><head></code>	begins the computer use portion of the web page, hold the title	
<code><title>text</title></code>	Text placed between the tags displays on the browser title bar	
<code></head></code>	ends the computer use portion of the web page	
<code><body</code>	begins the visible portion of the web page, body can be modified	
<code>background="filename"</code>	attribute, within the body, that places an image behind the text. Use with bgcolor, in case the image doesn't download	
<code>bgcolor="color"</code>	attribute, within the body, that places a color behind the text	
<code>text="color"</code>	attribute, within the body, that sets the color of all, unmodified text	
<code>link="color"</code>	attribute, within the body, that sets the color of not yet visited links	
<code>vlink="color"</code>	attribute, within the body, that sets the color of visited links	
<code>alink="color"</code>	attribute, within the body, that sets the color of a link as it clicked or activated... on slow connections, this indicates the linked page will appear soon	
<code>></code>	This is where the body tag ends, all the above attributes are inside	
<code><hx>text</hx></code>	You make text a heading (head line) by surround it with h1-h6	
	This is where you place your document contents, and images	
<code><img</code>	the tag to display an image	
<code>src="filename"</code>	tells the browser where the source file to display is	
<code>alt="text"</code>	alternate text to display for visually challenged users	
<code>height="value in pixels or %"</code>	tells the browser how high the image is to be displayed	
<code>width="value in pixels or %"</code>	tells the browser how wide the image is to be displayed	
<code>></code>	closes the img tag; note, as this does not surround text, you don't need /img	
<code></body></code>	This ends the body	
<code></html></code>	this ends the web page	

Reminder on 'Links' (actually anchors, and hypertext references): <a>

The anchor tags are used to 'link' or reference, to related text; this hypertext reference can go to a different place in the same document, to a different a document within the same site, or to a document at a different web site. It is called an anchor tag, because you can 'pull on the anchor chain' to return to the original page you were on, after following a link.

More tag examples, including an updated starting template, and links, will be introduced soon!

Special Characters

So, how do you put in a less than sign, if the browser is going to expect a tag?

Item	Example	Item	Example
" (Quotation Mark)	" ;	© (Copyright)	© ;
< (Less than)	< ;	® (Registration Symbol)	® ;
> (Greater than)	> ;	(Non-breaking space)	 ;
é (e acute)	é ;	& (ampersand)	& ;

The ANSI Character Set

The following table shows a few of the characters 128-255 of the ANSI character set. To use one of the following characters in a web page, insert an **&**, followed by a **#**, followed by the three digit number, and then finish the code with a **;**
example: **é** makes the acute, or accented e... **é**

Note: Some characters on this page may not display correctly unless you are using a Windows browser.

Code	Char	Name	Code	Char	Name
146	'	close single quote	169	©	copyright
147	"	open double quote	174	®	registered trademark
148	”	close double quote	191	¿	Spanish inverted ?
149	•	bullet (large)	188	¼	one-fourth
150	—	en dash	189	½	one-half
152	~	tilde	209	Ñ	N tilde
160		non-breaking space	233	é	e acute
162	¢	cents	241	ñ	n tilde

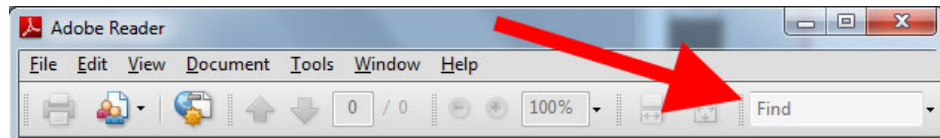
Additional Special /Math characters are available on the class web site.



MORE ON THE WEB
Check out the class web site

Available in Overview 3

Lab 1



General Lab Directions (You can search to pdf version of the book [Ctrl] + F)

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59PM
(see due dates on web site)

•**NOTE:** Do NOT use CAPITAL letters OR spaces anywhere in file names **EVER.**

•**NOTE:** Do NOT use curly quotation marks, such as ”;

only use straight quotation marks, such as ”.

- Note: If you need to stop work on a web page:
Save your changes in your text editor (Notepad)
When ready to resume,
open the file in notepad
and
double click web page to open browser



Preview of the major steps in Lab 1

- Document tags introduced in Lab 1

(You will later transfer this information into a LMS quiz)

- Tags to document must include: and , , <hr>, <p>, and how to form special characters, such as é

DOCUMENTATION BEGINS ON PAGE 53

- Begin coding and testing Lab 1

(You will later zip and transfer this information into a LMS dropbox)

THE DIRECTIONS ARE ON PAGE 56 and 57

- Answer questions concerning topics covered in Lab 1

(You will later transfer this information into a LMS quiz)

THE EXACT QUESTIONS THAT APPEAR IN THE QUIZ ARE ON PAGE 64

At the end of this process,

1) you will submit the web page files by zipping them, and placing them in your LMS dropbox area. Instructions on zipping are below.

2) you will be 'turning in' your documentation and Q&A by taking the IMED Lab 1: quiz in the Quizzes area your LMS. So, to get the best score, **complete the documentation and Q&A as directed below, first.**

Part 1, Documentation (30%) You will later demonstrate this knowledge in a LMS quiz
While information on tags and attributes are included in the appendix, a great way to learn HTML is to write down what each tag does, how it works, list useful attributes, and perhaps include an example.

These are some of the new tags introduced in lab 1, some are already filled out for you.

Tag: **** **** or **** ****

Ordered List or Unordered List (numbered list or bullet list)

Syntax (required and [optional attributes]) **** **** [****] ****

Syntax (required and [optional attributes]) **** **** [****] ****

What does it do? Automatically numbers or bullets items in a list

Example:

```
<ol>
```

```
<li>Item One
```

```
<li>Item Two
```

```
</ol>
```

Notes: **** begins the list, **** is inserted every place an automatically number list item is to display, **** ends the list

Tag: **** Image (updates the documentation given in My First Web Page)

Syntax (required and [optional attributes]) ****

What does it do? Displays an image

Attribute **alt=" "** display an alternative text message if the image isn't visible, or for visually challenged users whose computers read the page.

Example:

```

```

Notes: no ending **** is required.

Can also use self terminating tag ****

- **<p>** (10 points),

Tag: **<p>** **</p>**

Syntax (required and [optional attributes])

What does it do?

Example:

Note: in this class, as with using **** or **** you may use **
** or **<br .../>** if instead of creating a paragraph, you simply wish to insert a line break.

- **<hr>** (10 points)

Tag: `<hr>`

Syntax (required and [optional attributes])

What does it do?

Example:

and know

how to form special characters, such as for the acute e (é) in Résumé,
(10 points)

Notes:

1) You do not need to turn in your notes, the quiz lets me know :)

2) If it helps you learn, write out your own documentation below

`<!--stuff-->`

```
<ol>
<li>stuff
</ol>
```

```
<ul>
<li>stuff
</ul>
```

```

```

```
<p>stuff</p>
```

```
<hr>
```

Part 2, Activity (40%): You will later transfer this information into a LMS dropbox

- Create a folder named lab1
- Using a text editor, create the web page, as described starting on page 57, in a new lab1 folder. See page 79 for submission info.

Grading Points

- Is html the same as the original in the book? (35 points, 3 points for each typo or change)

Does the web page look the same as the original in the book, including the image? (5 points)

Part 3: Hands On (30%) You will later demonstrate this knowledge in a LMS quiz

Posers, could you answer the following on the test?

The actual questions in the quiz are on page

What does the tagset do?

What does the tagset do?

What does the tag do?

What does the tagset do?

The tag that displays a graphic requires an attribute to point to the location of the graphic file; that attribute is _____

The tag that displays a graphic requires an attribute for ADA compliance to display alternate text. This text is available in case the image doesn't download, sometimes when you point to the image, and when visually impaired users have the web page electronically read to them; that attribute it is ____

Do the <p> tag set works identically to the
 tag?

In this class, can you use either
 or
 to create line breaks?
What does the <hr> tag do?

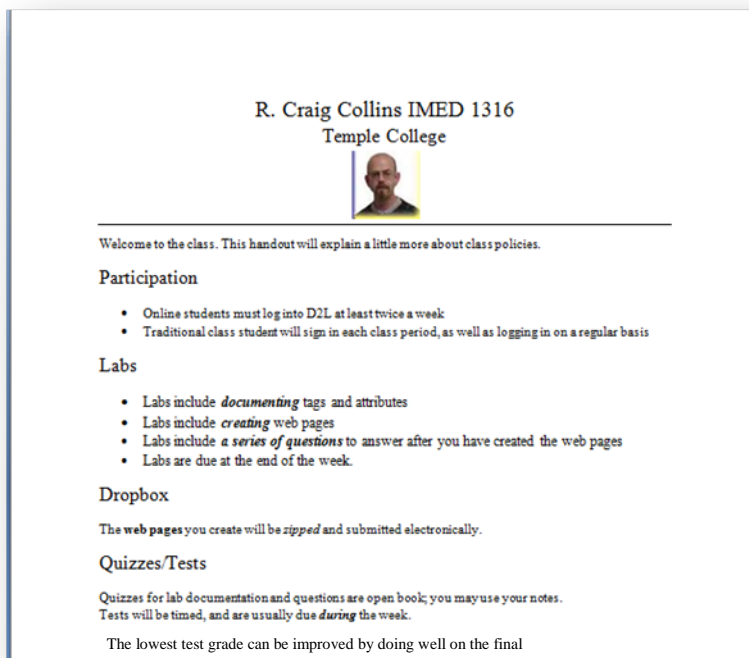
To display special characters, you start with ___, and end with the ;
such as ___#233; to make the é

THE EXACT QUESTIONS THAT APPEAR IN THE QUIZ ARE ON PAGE 65

Submission info on page 79.

Part 2, Activity (40%): You will later transfer this information into a LMS dropbox

Design Starting Point, the IMED 1316 class handout



To recreate this lab, begin by creating a folder called lab1.
Next start Notepad, or some other text editor, and add the following

```
Untitled-Notepad
File Edit Format View Help
<html>

<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>

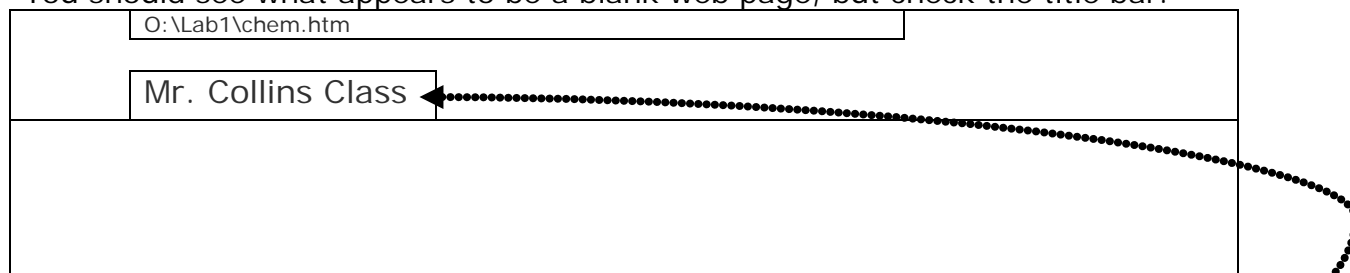
<body>
</body>

</html>
```

Replace your name and the date appropriately. Save the file as chem.htm in the lab1 folder. (Collins Handout for Educational Media = chem.) Review the Practice web page on page 28 for details on starting your editor and setting up your computer to save files with the proper extension.

Open your file browser, such as Windows (My) Computer, and open the lab1 folder. You should see chem.htm and it should have a web page icon. Open the web page.

You should see what appears to be a blank web page, but check the title bar.



While the page is blank, you should see Mr. Collins Class on the title bar.

Switch back to your editor,

Modify the body tag to include `text="blue"`

this attribute and value must be divided from the tag body by a space or a line break, but must go inside of the < and the >. Do not place any extra spaces within the quotation marks, it should read

`= "blue"` **not**

`= "blue "`

Insert the following text after the <body...> and before the </body> tags:

R. Craig Collins IMED 1316

```
chem.htm-Notepad
File Edit Format View Help
<html>

<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>

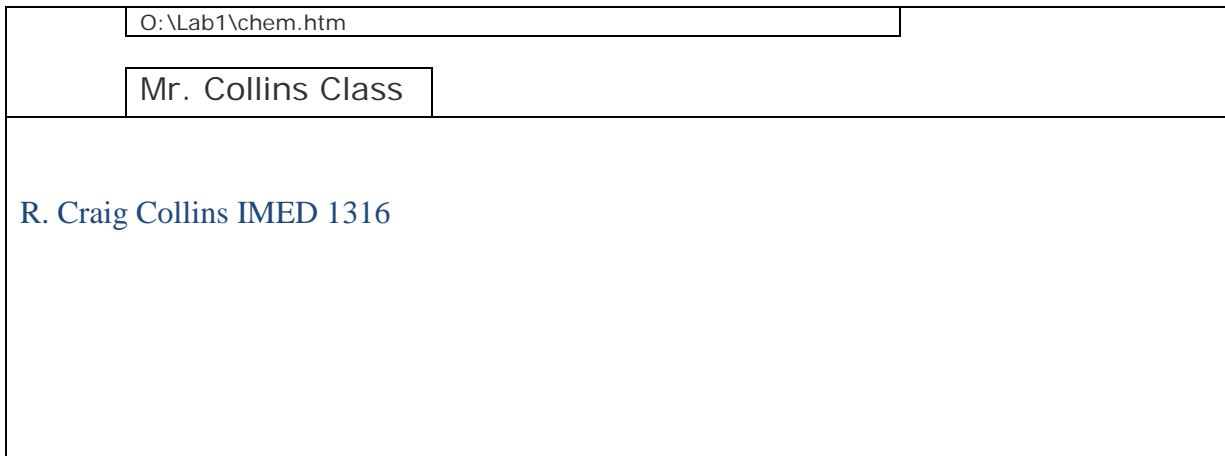
<body text="blue">

R. Craig Collins IMED 1316
</body>

</html>
```

Note add only the items that look like `this`. Everything else should already be there.

Save your changes in the editor, then switch back to your browser and refresh. You should now see something similar to the following; notice *Mr. Collins Class* in the title bar, and *R. Craig Collins IMED 1316* in the body of the web page.



Switch back to your editor, and surround R. Craig Collins IMED 1316 with `<center>` and `</center>` tags.

```
chem.htm-Notepad
File Edit Format View Help
<html>

<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>

<body text="blue">

<center>R. Craig Collins IMED 1316</center>

</body>

</html>
```


The `<center>` `</center>` tag set is what is called deprecated; deprecated tags still work, but are being phased out in favor of something newer... we will learn a better way to center items in a few weeks, but this will work for now. Save your changes in the editor, then switch back to your browser and refresh.

You should now see something similar to the following; notice *R. Craig Collins IMED 1316* is centered.

O:\Lab1\chem.htm	
Mr. Collins Class	
<p style="text-align: center;">R. Craig Collins IMED 1316</p>	

Next we will add the next two elements from the handout, the text with Temple College, and the picture of Mr. Collins. (Picture available in LMS). Also note, the handout shows the lines of text are bold, different sizes than regular text, and have space above and below the text. That is what headlines provide. All of these items are centered, so we will be inserting all of this **between** the existing `<center>` `</center>` tags.

R. Craig Collins IMED 1316
Temple College



Welcome to the class. This handout will explain a little more about class policies.

Participation

- Online students must log into D2L at least twice a week
- Traditional class student will sign in each class period, as well as logging in on a regular basis

Labs

- Labs include *documenting* tags and attributes
- Labs include *creating* web pages
- Labs include *a series of questions* to answer after you have created the web pages
- Labs are due at the end of the week.

Dropbox

The **web pages** you create will be *zipped* and submitted electronically.

Quizzes/Tests

Quizzes for lab documentation and questions are open book; you may use your notes.
Tests will be timed, and are usually due *during* the week.

The lowest test grade can be improved by doing well on the final

Note, just type in the **bold items** below, the rest is already there... refer to the practice web page on page 23 for the basics of the H2 H3 and IMG tags.

Switch back to your editor, and add the new content.

```
chem.htm-Notepad
File Edit Format View Help
<html>

<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>

<body text="blue">

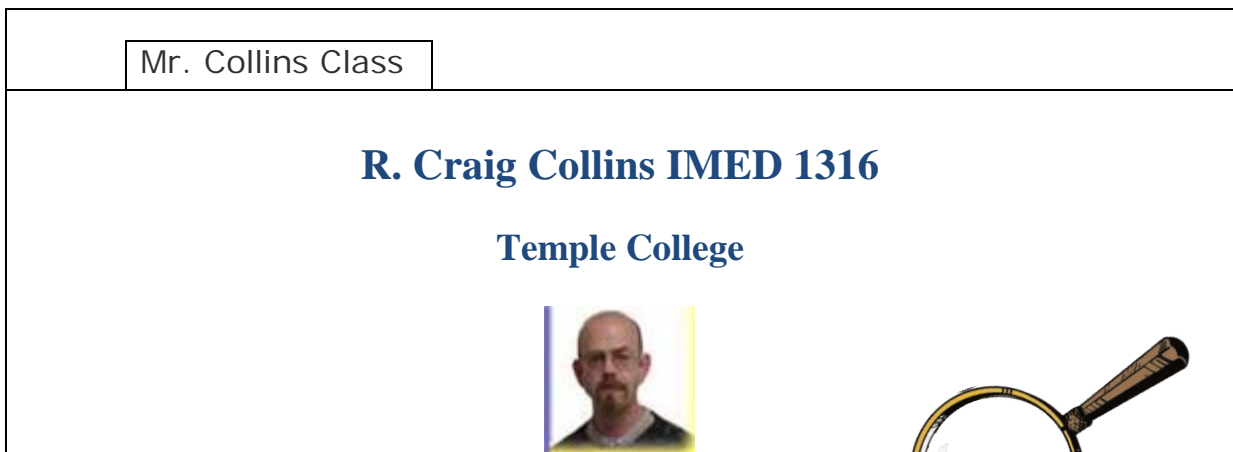
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>

</center>

</body>

</html>
```

Save your changes in the editor, then switch back to your browser and refresh. You should now see something similar to the following:



I hope you noticed we used a new attribute for the img tag: alt.

Alt is short for Alternative text, and provides a way for visually challenged visitors to your web site to have their software read a description of the picture that they can't see. This gives your web page a level of ADA (American's with Disabilities Act) compliance. It also provides something for regular users too; typically if you point to an image that has an alt with your mouse, you'll get a pop up box that displays the alternative text.

Switch back to your editor, and add the new content.

chem.htm-Notepad

File Edit Format View Help

```
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more
about class policies.
<h3>Participation</h3>
Online students must log into LMS at least twice a week.
Traditional students will sign in each class period, as well
as logging in on a regular basis
</body>
</html>
```

Log In once early in the week, and again at the end of the week, when things are due


Save your changes in the editor, then switch back to your browser and refresh. You should now see something similar to the following:

O:\Lab1\chem.htm

Mr. Collins Class

R. Craig Collins IMED 1316

Temple College



Welcome to the class. This handout will explain a little more about class policies.

Participation

Online students must log into LMS at least twice a week. Traditional students will sign in each class period, as well as logging in on a regular basis

<hr> creates a Horizontal rule, or straight line. The H3 added space after the line on class policies, and before the line about Online students.

Also notice, while we place *twice a week* on one line, and *Traditional students* on different lines, the browser ignored that white space. While we could use
 to create a line break, we see the sample handout is in the form of a bulleted list. There're 3 kinds of lists, definition (p. 192), numbered and bulleted. We'll focus on numbered and bulleted for now.

Just as headlines provide space around the text and some formatting, lists also provide space and formatting.

To create a list, you first indicate where the list starts, and where the list ends. If it is a numbered list (ordered list) you use .

If it is a bulleted list (un-ordered list) you use .

Where ever you want the number or bullet to occur within the list, you would use .

Let's try a number list first; we will add before and after the text that will be within the list, and we will add where ever there is to be a bullet.

Switch back to your editor, and add the new content.

chem.htm-Notepad

File Edit Format View Help


```
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more about class
policies.
<h3>Participation</h3>
<ol>
<li>Online students must log into LMS at least twice a week.
<li>Traditional students will sign in each class period, as well as
logging in on a regular basis
</ol>
</body>
</html>
```

Save your changes in the editor, switch back to your browser and refresh.

Mr. Collins Class

R. Craig Collins IMED 1316

Temple College



Welcome to the class. This handout will explain a little more about class policies.

Participation

1. Online students must log into LMS at least twice a week.
2. Traditional students will sign in each class period, as well as logging in on a regular basis

Now, change ` ` to ` `, to make the list a numbered list.

chem.htm-Notepad

File Edit Format View Help

```
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more about class
policies.
<h3>Participation</h3>
<u>
<li>Online students must log into LMS at least twice a week.
<li>Traditional students will sign in each class period, as well as
logging in on a regular basis
</u>
</body>
</html>
```

Save your changes in the editor, switch back to your browser and refresh.

R. Craig Collins IMED 1316

Temple College



Welcome to the class. This handout will explain a little more about class policies.

Participation

- Online students must log into LMS at least twice a week.
- Traditional students will sign in each class period, as well as logging in on a regular basis

Note the text is now a bulleted list.

Note: It is permissible to place a `` at the end of a line that starts with ``, but is not required.



What do I do if I need to stop editing my web page, and come back to it later?

Save all of your work, and close the documents.
Later, browse to where the file is saved, and double click to open the web page in your browser for viewing.
Next, start your text editor, and browse to open the same file for editing.

You can often open Notepad by right clicking the file, and select Open with... Notepad

- Notes: Problems? Zip the entire folder and attach to an email:
Notes on zipping found on page 80
- Send the mail to your instructor, cc yourself
- The subject line should include your name, your class, your section, and what you are submitting
- Make sure you attach the zipped file

Help with HTML errors is on page 42.

Continuing chem.htm

Now it is time to add the handout section on Labs. Add the new content.

```
chem.htm-Notepad
File Edit Format View Help
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more about class
policies.
<h3>Participation</h3>
<ul>
<li>Online students must log into LMS at least twice a week.
<li>Traditional students will sign in each class period, as well as
logging in on a regular basis
</ul>
<h3>Labs</h3>
<ul>
<li>Labs include documenting tags and attributes
<li>Labs include creating web pages
<li>Labs include a series of questions to answer after you
have created the web pages
<li>Labs are due at the end of the week </ul>
</body>
</html>
```

Save your changes in the editor, switch back to your browser and refresh. Verify the Labs headline and bulleted list are visible at the bottom of the web page.

Looking at the handout, notice that certain words have been formatted to be bold and or italic. To make text appear as bold, we have two options, we would surround the words we wish to make bold with `` `` or `` ``. To make text appear as italics, we also have two options, we would surround the words we wish to make italic with `<i>` `</i>` or `` `` (emphasis).

Strong and emphasis are *logical* processes, and bold and italic are *physical* processes. They look just the same in most browsers, but actually work a little differently.

As strong is a logical process, we could program strong to mean **bold** and **red** if we wished to redefine it that way, but bold is just **bold**, as in a word processor.

I prefer and <i> </i>, for two reasons:

- 1) these options are shorter, faster to type, and less likely to cause typos
- 2) they remind me of the [B] button and [I] button in Word Processors.

Warning: when using BOTH bold and italic, it is important **not** to cross tags... turn tags off in **reverse** order to maintain the sets of tags surrounding text.

Incorrect: <i>text</i>

Correct: <i>text</i>
 └ └ └ └
 └ └ └ └

Notice how the tags surround the italic tags.

Now it is time to format the handout section on Labs. Add the new content.

chem.htm-Notepad

File Edit Format View Help

```
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more about class
policies.
<h3>Participation</h3>
<ul>
<li>Online students must log into LMS at least twice a week.
<li>Traditional students will sign in each class period, as well as
logging in on a regular basis
</ul>
<h3>Labs</h3>
<ul>
<li>Labs include <b><i>documenting</i></b> tags and attributes
<li>Labs include <b><i>creating</i></b> web pages
<li>Labs include <b><i>a series of questions</i></b> to answer after you
have created the web pages
<li>Labs are due at the end of the week</ul>
</body>
</html>
```

Save your changes in the editor, switch back to your browser and refresh.

Mr. Collins Class

R. Craig Collins IMED 1316

Temple College



Welcome to the class. This handout will explain a little more about class policies.

Participation

- Online students must log into LMS at least twice a week.
- Traditional students will sign in each class period, as well as logging in on a regular basis

Labs

- Labs include *documenting* tags and attributes
- Labs include *creating* web pages
- Labs include *a series of questions* to answer after you have created the web pages
- Labs are due at the end of the week

Warning: If coded incorrectly, the text may still look correct in the browser, but it is actually the browser locating and fixing the mistake. If your browser is not as advanced, the default action when a browser encounters a tag it doesn't understand is to ignore the tag... which is not a good thing.

Now to add the Dropbox section of the handout; note that is section includes both ways to make text bold. One is the ` ` tag as we have been using, and the other is the ` ` tag set, previously mentioned. Again, while they look about the same in a web page, they are actually rendered a bit differently by the browser.

Now it is time to add the Dropbox section on Labs. Add the new content.

```
chem.htm-Notepad
File Edit Format View Help
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more about class
policies.
<h3>Participation</h3>
<ul>
<li>Online students must log into LMS at least twice a week.
<li>Traditional students will sign in each class period, as well as
logging in on a regular basis
</ul>
<h3>Labs</h3>
<ul>
<li>Labs include <b><i>documenting</i></b> tags and attributes
<li>Labs include <b><i>creating</i></b> web pages
<li>Labs include <b><i>a series of questions</i></b> to answer after you
have created the web pages
<li>Labs are due at the end of the week</ul>
<h3>Dropbox</h3>
The <b>web</b> <strong>pages</strong> you create will be
<i>zipped</i> and submitted electronically.
</body>
</html>
```

Save your changes in the editor, switch back to your browser and refresh.
Below is just the new section added

	Mr. Collins Class	
Labs		
<ul style="list-style-type: none">• Labs include <i>documenting</i> tags and attributes• Labs include <i>creating</i> web pages• Labs include <i>a series of questions</i> to answer after you have created the web pages• Labs are due at the end of the week		
Dropbox		
The web pages you create will be <i>zipped</i> and submitted electronically.		

Finally, when you hit the [Enter] key in a modern word processor, it doesn't just start a new line; it typically adds space between the new **paragraph** and the last paragraph.

([Shift]+[Enter] creates a new line, similar to
.)

HTML works in a similar fashion. To put space **around** a paragraph, and to have a tag that could be modified to apply formatting to the entire paragraph (rather than a single word), the <p> </p> tag set is used.

Now it is time to add the Quizzes/Test section. Add the new content.

```
chem.htm-Notepad
File Edit Format View Help
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more about class
policies.
<h3>Participation</h3>
<ul>
<li>Online students must log into LMS at least twice a week.
<li>Traditional students will sign in each class period, as well as
logging in on a regular basis
</ul>
<h3>Labs</h3>
<ul>
<li>Labs include <b><i>documenting</i></b> tags and attributes
<li>Labs include <b><i>creating</i></b> web pages
<li>Labs include <b><i>a series of questions</i></b> to answer after you
have created the web pages
<li>Labs are due at the end of the week</ul>
<h3>Dropbox</h3>
The <b>web</b> <strong>pages</strong> you create will be
<i>zipped</i> and submitted electronically.
<h3>Quizzes/Tests</h3>
Quizzes for lab documents and questions are open book; you may
use your notes.<br>
Tests will be timed, and are usually due <b><i>during</i></b>
the week.
<br>The lowest test grade can be improved by doing well on the
final.
</body>
</html>
```

Save your changes in the editor, switch back to your browser and refresh.

Mr. Collins Class

R. Craig Collins IMED 1316

Temple College



Welcome to the class. This handout will explain a little more about class policies.

Participation

- Online students must log into LMS at least twice a week.
- Traditional students will sign in each class period, as well as logging in on a regular basis

Labs

- Labs include *documenting* tags and attributes
- Labs include *creating* web pages
- Labs include *a series of questions* to answer after you have created the web pages
- Labs are due at the end of the week

Dropbox

The **web pages** you create will be *zipped* and submitted electronically.

Quizzes/Tests

Quizzes for the lab documentation and questions are open book; you may use your notes.

Tests will be timed, and are usually due *during* the week.

The lowest test grade can be improved by doing well on the final.

The last modification will be to make the last line a paragraph, so that space is put above and below the line...

Note, we will be REMOVING the
 that is currently in front of "The lowest test score ..." sentence.

Now it is time to add the paragraph to some text.
Again, remove the
 in front of "The lowest test score sentence...",
and add the new content.

```
chem.htm-Notepad
File Edit Format View Help
<html>
<head>
<!-- IMED Web Page
      Author  your name
      Date:   the date
-->
<title>Mr. Collins Class</title>
</head>
<body text="blue">
<center><h2>R. Craig Collins IMED 1316</h2>
<h3>Temple College</h3>
</center>
<hr>
Welcome to the class. This handout will explain a little more about class
policies.
<h3>Participation</h3>
<ul>
<li>Online students must log into LMS at least twice a week.
<li>Traditional students will sign in each class period, as well as
logging in on a regular basis
</ul>
<h3>Labs</h3>
<ul>
<li>Labs include <b><i>documenting</i></b> tags and attributes
<li>Labs include <b><i>creating</i></b> web pages
<li>Labs include <b><i>a series of questions</i></b> to answer after you
have created the web pages
<li>Labs are due at the end of the week</ul>
<h3>Dropbox</h3>
The <b>web</b> <strong>pages</strong> you create will be
<i>zipped</i> and submitted electronically.
<h3>Quizzes/Tests</h3>
Quizzes for lab documents and questions are open book; you may use your
notes.<br>
Tests will be timed, and are usually due <b><i>during</i></b> the week.
<p>The lowest test grade can be improved by doing well on the final.</p>
Touch&#233;
</body>
</html>
```

Optional If you wish to test including a special character, you could add *Touché* by typing é where the é will go.

(*Touché* is can be said to congratulate someone for being clever; you finished the web page, so you are becoming a clever web page designer :)

The completed lab should look like the following.

Save your changes in the editor, switch back to your browser and refresh.

Mr. Collins Class

R. Craig Collins IMED 1316

Temple College



Welcome to the class. This handout will explain a little more about class policies.

Participation

- Online students must log into LMS at least twice a week.
- Traditional students will sign in each class period, as well as logging in on a regular basis

Labs

- Labs include *documenting* tags and attributes
- Labs include *creating* web pages
- Labs include *a series of questions* to answer after you have created the web pages
- Labs are due at the end of the week

Dropbox

The **web pages** you create will be *zipped* and submitted electronically.

Quizzes/Tests

Quizzes for the lab documentation and questions are open book; you may use your notes. Tests will be timed, and are usually due *during* the week.

The lowest test grade can be improved by doing well on the final.

Touché

Optional test of the use of the acute é

QUESTIONS TO BE ANSWERED IN LMS

1. The tagset

- ☐ creates a line across the page
- ☐ creates a bulleted list
- ☐ creates a numbered list
- ☐ displays a graphic
- ☐ adds an item to a list

2. The tag

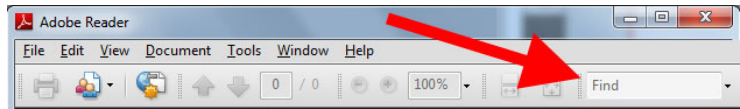
- ☐ creates a line across the page
- ☐ adds an item to a list
- ☐ displays a graphic
- ☐ creates a bulleted list
- ☐ creates a numbered list

3. The tag

- ☐ creates a numbered list
- ☐ creates a bulleted list
- ☐ displays a graphic
- ☐ creates a line across the page
- ☐ adds an item to a list

4. The tag

- ☐ creates an numbered list
- ☐ creates an bulleted list
- ☐ displays a graphic
- ☐ creates a line across the page
- ☐ adds an item to a list



5. The tag that displays a graphic requires an attribute to point to the location of the graphic file; that attribute is
- ☐ src
 - ☐ alt
 - ☐ style
 - ☐ img
6. The tag that displays a graphic requires an attribute for ADA compliance to display alternate text. This text is available in case the image doesn't download, when you point to the image, and when visually impaired users have the web page electronically read to them; that attribute is
- ☐ src
 - ☐ alt
 - ☐ style
 - ☐ img
7. The <p> tag set works identically to the
 tag
- ☐ True
 - ☐ False
8. In this class, you may use either
 or
 to create line breaks
- ☐ True
 - ☐ False
9. The <hr> tag
- ☐ creates a line across the page
 - ☐ creates a bulleted list
 - ☐ creates a numbered list
 - ☐ displays a graphic
 - ☐ adds an item to a list

10. To display special characters, such as é,
you start with the __ symbol,
and end with the ;

such as __#233; to make the é

- ☐ &
- ☐ %
- ☐ #
- ☐ !

11. What was the Internet originally called?

- ☐ arpanet
- ☐ Fred
- ☐ mosaic
- ☐ world wide web

12. Name the individual who developed the world wide web

- ☐ Bill Gates
- ☐ Vinton Cerf
- ☐ Marc Andreessen
- ☐ Tim Berners-Lee

13. What is another name for links?

- ☐ hyperlinks, or hypertext references
- ☐ Fred

14. What language are basic web pages written in?

- ☒ Greek o HTTP
- ☐ HTML o Visual Basic

15. Who creates the standards for web pages?

- ☐ Al Gore
- ☐ Microsoft
- ☐ W3C, the World Wide Web Consortium
- ☐ the US government

16. List the 8 required tags in any web page, in order

- | | | | | | | | |
|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|
| <input type="radio"/> | <code><html></code> | <input type="radio"/> | <code><html></code> | <input type="radio"/> | <code></html></code> | <input type="radio"/> | <code><html></code> |
| | <code><head></code> | | <code><head></code> | | <code></head></code> | | <code><body></code> |
| | <code><title></code> | | <code></head></code> | | <code></title></code> | | <code></body></code> |
| | <code></title></code> | | <code><body></code> | | <code><title></code> | | <code><head></code> |
| | <code></head></code> | | <code><title></code> | | <code><head></code> | | <code><title></code> |
| | <code><body></code> | | <code></title></code> | | <code></body></code> | | <code></title></code> |
| | <code></body></code> | | <code></body></code> | | <code><body></code> | | <code></head></code> |
| | <code></html></code> | | <code></html></code> | | <code><html></code> | | <code></html></code> |

17. How can you enter a comment in HTML?

- ☐ #This is a comment#
- ☐ <This is a comment>
- ☐ <!-- this is a comment-->
- ☐ <comment>This is a comment</comment>

18. What kind of program is used to create lab 1? Name the specific program you used. What kind of program is used to view lab 1? Name the specific program you used.

- ☐ Created with a text editor, such as Internet Explorer, and viewed with a browser such as Notepad
- ☐ Created with a browser, such as Notepad, and viewed with a text editor such as Internet Explorer
- ☐ Created with a browser, such as Internet Explorer, and viewed with a text editor, such as Notepad
- ☐ Created with a text editor, such as Notepad, and viewed with a browser such as Internet Explorer

19. How many different headings (headlines) are there, and what are they?

- ☐ 6: h1, h2, h3, h4, h5, h6
- ☐ 5: h1, h2, h3, h4, h5
- ☐ 5: h1, h2, h3, h4, h5
- ☐ 6: h1, h2, h3, h4, h5, h6

20. Name the three types of lists.

- ☐
 - ordered, or numbered
 - unordered, or bulleted
 - <dl> definitional
- ☐ Fred, Ginger, and Mr. Wiggles
- ☐
 - ordered, or numbered
 - unordered, or bulleted
 - linear
- ☐
 - ordered, or numbered
 - unordered, or bulleted
 - <dl> definitional

21. Match the following
(just type in the number)

- | | |
|---|--------|
| <input type="text"/> the tag to display a graphic | 1. img |
| <input type="text"/> the attribute to point to the graphic file | 2. src |
| <input type="text"/> the attribute to display alternate text for ADA compliance | 3. alt |

22. What does deprecated mean?

- ☐ The tag may be used, but is being phased out
- ☐ The tag may not be used, it was phased out

23. Which of the following is how to make the special character é?

- ☐ é
- ☐ é
- ☐ #233;
- ☐ é:

24. Why is the following not written to the book's tips for Good HTML Code?

```
<i><b>Homework</i></b>
```

Because nested tags were crossed.
True or false

☐ True

☐ False

SUBMITTING THE LAB

First, does your web page look like my example?
Next, have you answered ALL the quiz questions?

If so, you are now ready to submit the lab.
Recall, if you submit the dropbox item early, I can look it over, give you feedback, and you have the opportunity to fix it, and resubmit.
You may resubmit as many times as you like, until the due date.

To insure getting feedback, submit by early Thursday.

In Windows, zip the entire lab1 directory
that contains chem.htm AND collins.jpg

and rename the zip to
yourname-lab1.zip. Directions on page 80-81
and videos on the process available in LMS.

Log into LMS, choose this class, choose Dropbox, select Lab 1.
Browse to *yourname-lab1.zip* and upload it.
Videos on the process available in LMS.

You will then transfer your answers to the LMS Quiz for lab 1.
You SHOULD use your notes for this part of lab.
Choose the Quizzes menu, and locate Lab 1.

No need to submit your notes, the quiz lets me know if you made notes :)

See page 82 for everything that is due this week.

ZIPPING FILES (Additional information, and video on class web site)

ZIP: A file that can contain multiple files, or more importantly, a file that is compressed to take up less space; useful for emailing attachments, or for uploading.

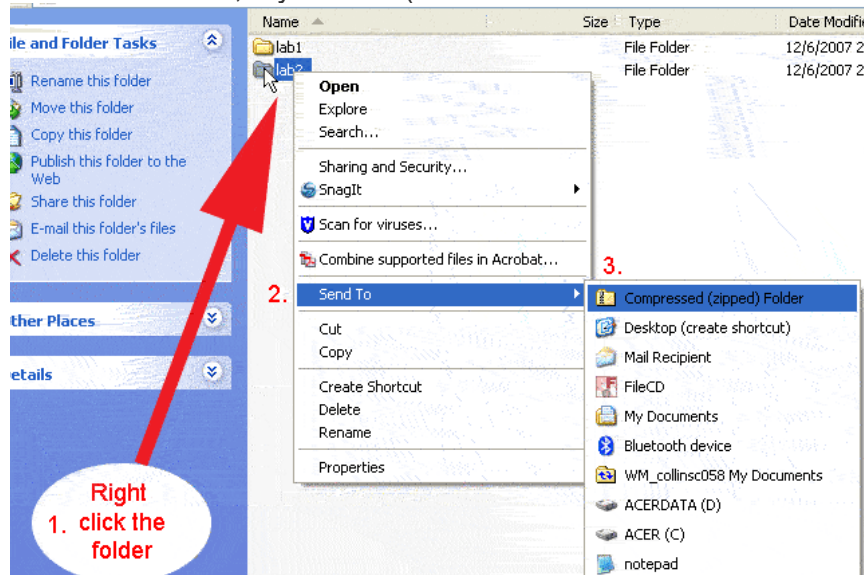


NOTE: the ZIP contents are not always usable as is. Thus, you should not try to read or edit zip files until you download them and extract them. If redoing a lab, delete the zip, and edit the original files.

How to Zip Windows:

Select the files you wish to zip (Additional information on class web site)

1. Right click the selected item (if you have selected several items, right click *one* of them)
2. Choose Send To
3. Choose Compressed (zipped) Folder
4. The new file will be created in the same location
5. Rename the file, if you like. (Additional information on class web site)



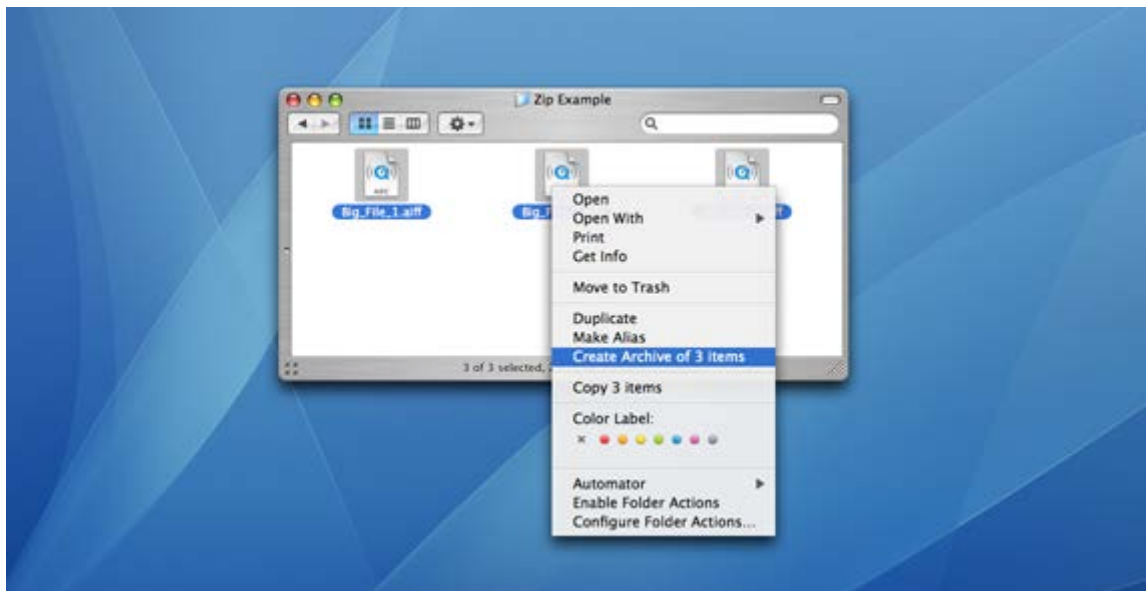
How to Zip Mac users

To create a compressed file, either Control-click on the file or folder, and choose **Create Archive**, or you can click on a file, then go to the Action menu (the button that looks like a gear), and choose **Create Archive** from there. Either way, it quickly creates a new item, with the file extension **“.zip.”** This is the compressed file.

You can also compress several different files (like two, for example) into one single archive file — just Command-click (or Shift-click contiguous files) on all the files you want included, then choose **Create Archive of *x* Items** from the Action menu. (See class website for more information)

A file will be created named “Archive.zip.”

If someone sends you a **ZIP** file, just double-click it and OS X will automatically decompress it.



Notes:

Completing Overview 3

- Submit by 11:59 am, Friday, of the current week
(see due dates on course web site)
 - Lab 1 as directed

MUD 3 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 3 Respond in the class LMS Discussion forum to the following:
Do you prefer using `` or ``?

For the next time frame:

- Read Overview 4
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 2

Overview 4

HTML Tags/Links

Templates and Links	84
Links	85
Local Links	86
Intrapage and Internet Links	87
Sample Templates	87
Comprehensive Template	88
Instructor Notes	89
Lab 2	91
Documentation	92
Activity	93
Coding help	95
Cheat-sheet	96
How to check for HTML errors	42
Questions?	101
Zip	70
LMS Dropbox and Quizzes	72
Completing Overview 4	104



	All links are made the same way
	<code>some text</code>
To link to:	
Local file	<code>some text</code>
Internet http	<code>some text</code>
Internet ftp	<code>some text</code>
eMail	<code>some text</code>
Named Anchor	<code>some text</code>
Named Anchor	is also called a bookmark

Templates and Links

All hypertext links connect to something, the destination of the link... another web site (example `http://www.templejc.edu`), another one of your web pages (example `page2.htm`), or a named anchor, or bookmark in your current web page (example `#topp`).

`Text that becomes the underlined, clickable link`

To begin any new web page, one way to be consistent, and save time, is to use a template. This is the type of template you created after doing My First Web Page (page 28).

```
<html>
<head> <title> Title goes here </title>
</head>
<body>
Stuff to display in the web page goes here
</body>
</html>
```

By now, you may wish to add a few more items, such as those mentioned when discussing HTML tags (page 48). To create a template, enter the following in your text editor, and save the file as **template.htm**, or edit your existing **template.htm**, if you have one, to look like the following.

```
<html>
<head>
    <title> Title goes here </title>
    <!-- your name goes here -->
</head>

<body>
    background="value"
    bgcolor="value"
    text="value"
    link="value"
    vlink="value">
```

Stuff to display in the web page goes here

```
<br>
<a href="value">clickable text</a>
<br>

</body>
</html>
```

You will replace = "value" with the appropriate color or URL. NEVER leave extra spaces inside of quotation marks, either before or after the value

A more comprehensive template with links is below the discussion on the anchor tag; a really **extreme template, for use later in the semester**, is listed at the end of this section .

Another set of templates, for use later in the semester, will be in Overview 10.

The next time you need to create a web page, open **template.htm**, and use **File/Save as** to create the new file. Add the colors and filenames needed to modify the way the body area displays. For hex numbers / colors, (Overview 6) don't forget the special handling indicator, the # (pound sign).

Links

To add links to your document, ***between the body tags***, enter in the text you wish to become the link and surround that text with the anchor tag structure... such as

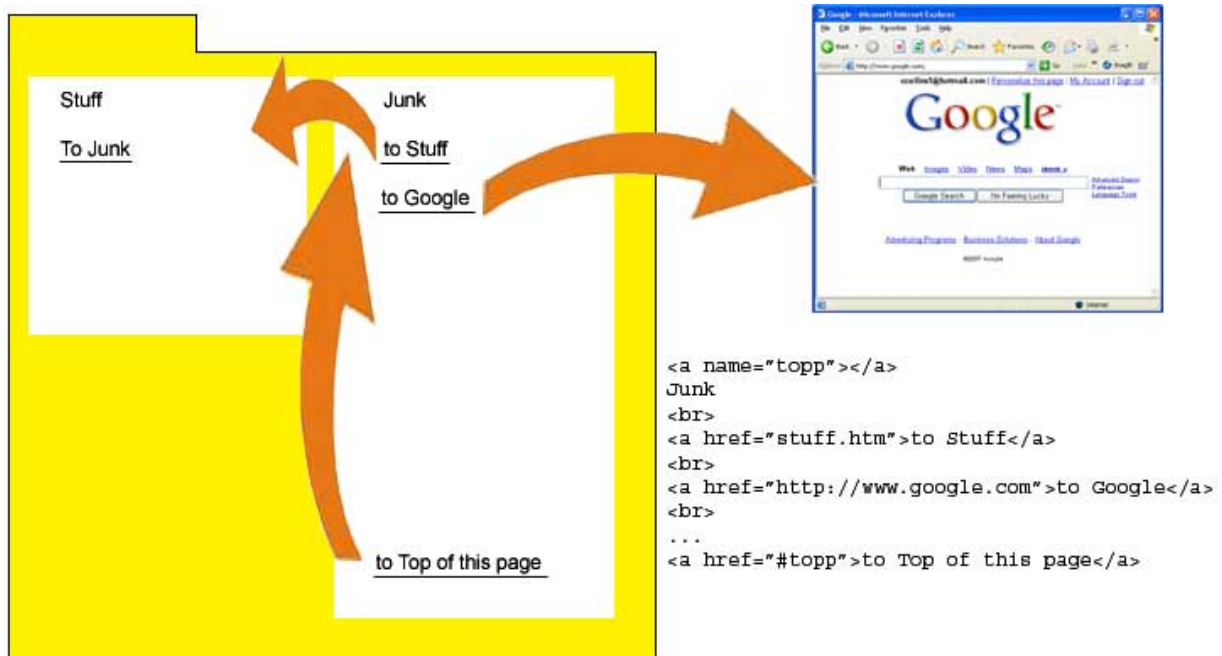
```
<a>
Click here
</a>
```

As with the `img` tag, the `<a>` by itself does not indicate where the link should connect, or refer to, so it is modified using the hypertext reference `href` attribute... making it

```
<a href="value">
Click here
</a>
```

There are three kinds of links

- local links (links to another one of ***your*** web pages)
- intrapage links (links to a different spot ***within*** the same document)
- internet links (links to web pages on the Internet)



To make your link open a page on ***your*** site, simply include the filename.

```
<a href="filename.htm">
Click here
</a>
```

To make your link open a page on **the internet**, start with `http://` and include the URL.

```
<a href="http://www.whatever.com">  
Click here  
</a>
```

To make your link jump to a different part of the **same page**, first create an anchor, also called a bookmark, using

```
<a name="bookmark-name">  
Optional Text  
</a>
```

That is, we have an ANCHOR NAMED that we can link to.

Then, create the link to the bookmark using

```
<a href="#bookmark-name">  
Click here  
</a>
```

Note: the pound sign is again used in the `href=` to indicate special handling... in this case to indicate that the link is on the same page... but the pound sign is NOT part of the named anchor or bookmark name.

The class website has working examples of named anchors, or bookmarks.

Links, continued

Local Link, or linking to another one of *your* pages

If the link simply lists the document,

```
<a href="page2.htm">
```

the browser knows the file is stored in the SAME FOLDER on the machine that it currently is reading.

Web browsers call this a relative address, that is, you describe where to find the file in relationship to the file you are currently reading.



Why shouldn't I use a drive letter when telling the browser where to find the file?

If your code says `a:\` then the computer reading the file will try to locate it on the only `a:\` drive it can see, which would be mine. This is called an absolute address, specifying exactly where to look. That works fine for you since you can read your own `a:\` drive, but since I don't even have an `a:` drive, the link fails. **Don't use absolute addresses in web pages.**

So if you leave out the drive letters, when you send me your files it doesn't matter where I save them, as long as you code the link properly without that sort of absolute address, such as

```
<a href="page2.htm"> </a>
```

it will work for us both just fine.

Internet Link, linking to someone else's web site

If the link is to a document on another web site, `` the browser knows to go on the internet (`http://`) to locate a certain web site (`www.templejc.edu`)

Intrapage Link, or link to a bookmark on the current page

If the link includes a `#`,

``

the browser knows to look for a bookmark named `topp` **IN** the document it is currently reading.

Extended template with links and bookmarks

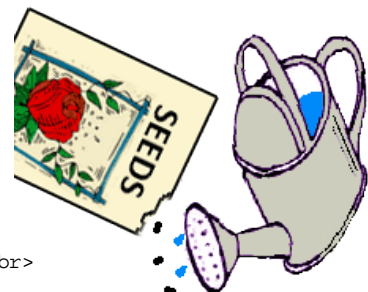
```
<html>
<head>
<title> Title goes here </title>
<!-- your name goes here -->
</head>
<body>
background="value"
bgcolor="value"
text="value"
link="value"
vlink="value">
Stuff to display in the web page goes here
<a href="http://url">text for a link to a Internet site</a><br>
<a href="pagename.htm">text for a link to a local web page</a><br>

<a name="bookmark"></a>
<a href="#bookmark">text for a link to a named anchor, or bookmark</a>
</body>
</html>
```

Sneak Peek Extended template w/ links/bookmarks & a simple table, for later use

```
<html>
<head>
<title> Title goes here </title>
<!-- your name goes here -->
</head>
<body background="value"
bgcolor="value"
text="value"
link="value"
vlink="value"> Stuff to display in the web page goes here
<a href="http://url">text for a link to a Internet site</a><br>
<a href="pagename.htm">text for a link to a local web page</a><br>
<!-- Sneak Peek -->
<table>
<tr><td> 1 x 1 Table </td></tr>
</table>

</body>
</html>
```



Planting seeds today...
...we will discuss this again

SNEAK PEEK, if you are interested

```
<!--Sneak peek: Sample Comprehensive Template, for use after lab 5-->
```

```
<html>
<head>
```

```
    <title>
        Your title goes here
    </title>
    <!-- your name goes here -->
</head>
```

```
<!--Only .gif or .jpg/jpeg images allowed-->
```

```
<body
background="filename.jpg"
bgcolor="#ffffff"
text="#000000"
link="#0000ff"
vlink="#ff00ff"
alink="#00ff00"
>
```

```
<!--Bookmark-->
    <a name="topp"></a>
```

```
<!-- H1-6 provides bold, size, and line break before/after-->
<h1>Headline text</h1>
```

```
<font color="#ff0000" size="+1">Large red words</font>
<br>
```

```

<br>
```

```

<br>
```

```
<a href="filename.htm">Link to local file</a>
<a href="http://URL">Link to default or index on web</a>
<br>
```

```
<!--Two by two table-->
    <table border="1" width="95%">
        <tr>
            <td>A1</td><td>A2</td>

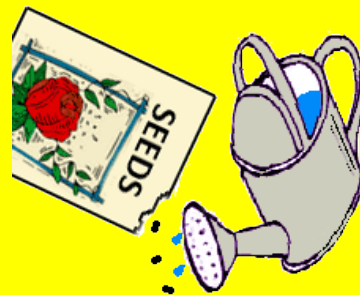
        </tr>
        <tr>
```

```
            <td>B1</td><td>B2</td>
        </tr>
    </table>
    <br>
```

```
<!--Link to jump to top of page-->
    <a href="#topp">To top</a>
```

```
</body>
```

```
</html>
```



Planting seeds today...
...we will discuss this again

How much of this can you
figure out? Don't worry, we'll
get there...

Another set of templates, for use later in the semester, in Overview 10.

Instructor Notes

One of my big issues with other text books is that one reason people began using the Web, instead of say Gopher, was the fact that Marc Andreessen envisioned web pages as more than just typed documents... they have color, as well as Tim Berners-Lee's idea of links to other documents. Other books ignore both of these aspects, leaving the `<body>` tag too barren, and ignoring the tag to create hypertext links. (However other books can be a good reference, even if I don't like the order in which they address items!)

Lab 2 begins to address the three types of hypertext links, the basic structure of which is

` `. The tutorial also covers path statements, the ability of your web page to find local files, but files not stored in the same folder as the current web page.

Hypertext links are best explained if you have ever gone fishing; you drop anchor, do a little fishing as the boat drifts, and then you pull on the anchor chain to get back where you were... so hypertext links allow you to drop an anchor, go someplace else, then jump back to where you began; hence the tag is `<a>` for anchor. You modify the tag with an attribute that points to the hypertext reference (href) you wish to jump to, as in

` `.

When creating bookmarks, please refer to **my links page** for how it is will be done in my class; other books may use a different method (that other method is addressed in Web Design II). For now, we will stick with traditional HTML 3.



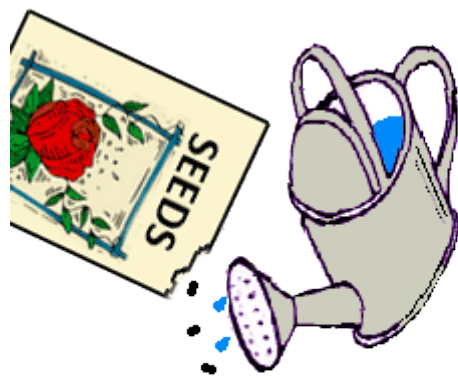
If you wish to link to a different spot in the **same document**, you name the section you wish to be able to anchor to, or be able to jump to, similar to a bookmark in MS Word, using ``, to *name* the anchor, or bookmark. No text is needed for a named anchor in between.

Then you may create links to that named anchor spot by using ` text to click on...` Please note, you only use # with the href if the link is to a named anchor section within a document, **not** a link to another page, or web site! Also note, these named areas are case sensitive, so `click here` will not be able to link to ` `

One last note, again the user needs something to click on, to follow the link... so whatever word goes between the `` and the `` becomes underlined in the web page, and that link is activated by the user clicking that underlined item. So you surround the word or words you wish to be links with the `` and the ``, such as ` To page 2 `

Avoid Notepad Goggles

Too many people start up notepad, and just start typing when making a web page... and are then surprised by how it looks! To prevent this, you need to design your page first, then create the code to bring your idea to life. The same should now apply to how you intend to organize your site, to make jumping from one page to another easier for you to code. The book lists several ways of laying out your structure, such as linear and hierarchical.



**Planting seeds today...
...we will discuss this again**

Also, just as a text color is automatically set, even if you don't include `<body text="color">` (the default is black), links can behave in different ways, not just the standard "replacing old page with the linked page."

As you hopefully have noticed, the default is to open the linked document into the same window; that is, the new document replaces the previous document. To actually code the default action of replacing one page with the linked page (what typically happens), you would use

`a href="URL" target="_self".`



But you can also create a new browser window, and open the linked document there... this is done with

`a href="URL" target="_blank".` More uses of `target` is in Lab 7.

Lab 2

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59PM
(see due dates on web site)

- **NOTE:** Do NOT use CAPITAL letters OR spaces in file names ever.
- **NOTE:** Do NOT use curly quotation marks, such as ”; only use straight quotation marks, such as ".



- Note: If you need to stop work on a web page:
Save your changes in your text editor (Notepad)
When ready to resume,
open the file in notepad
and
double click web page to open browser

Lab 2 Overview

- Document tags introduced in Lab 2
(You will later transfer this information into a LMS quiz)
- Tags to document must include: and , , <hr>, <p>, and how to form special characters, such as é

DOCUMENTATION BEGINS ON PAGE 92

- Begin coding and testing Lab 2
(You will later zip and transfer this information into a LMS dropbox)

THE DIRECTIONS ARE ON PAGE 93, plus Coding help and a cheat sheet

- Answer questions concerning topics covered in Lab 2
(You will later transfer this information into a LMS quiz)

THE EXACT QUESTIONS THAT APPEAR IN THE QUIZ ARE ON PAGE 101

At the end of this process,

- 1) you will submit the web page files by zipping them, and placing them in the Your LMS dropbox area. Instructions on zipping are below.
- 2) you will be 'turning in' your documentation and Q&A by taking the IMED Lab 1: quiz in the Quizzes area of Your LMS. So, to get the best score, complete the documentation and Q&A as directed below, first.

Part 1, Documentation (30%) You will later transfer this information into a LMS quiz

While information on tags and attributes are included in the appendix, a great way to learn HTML is to write down what each tag does, how it works, list useful attributes, and perhaps include an example.

Tag: Anchor `<a>` `` (15 points) What does it do?

Syntax (required and [optional attributes]; include href= and name=)

What does href do?

What does name do?

Example:

`<a` `>` ``

Notes:

Tag: Body `<body>` `</body>` (15 points) What does it do?

Syntax (required and [optional attributes]; include text=, bgcolor=, and link=, vlink=)

What does text do?

What does bgcolor do?

What does link do?

What does vlink do?

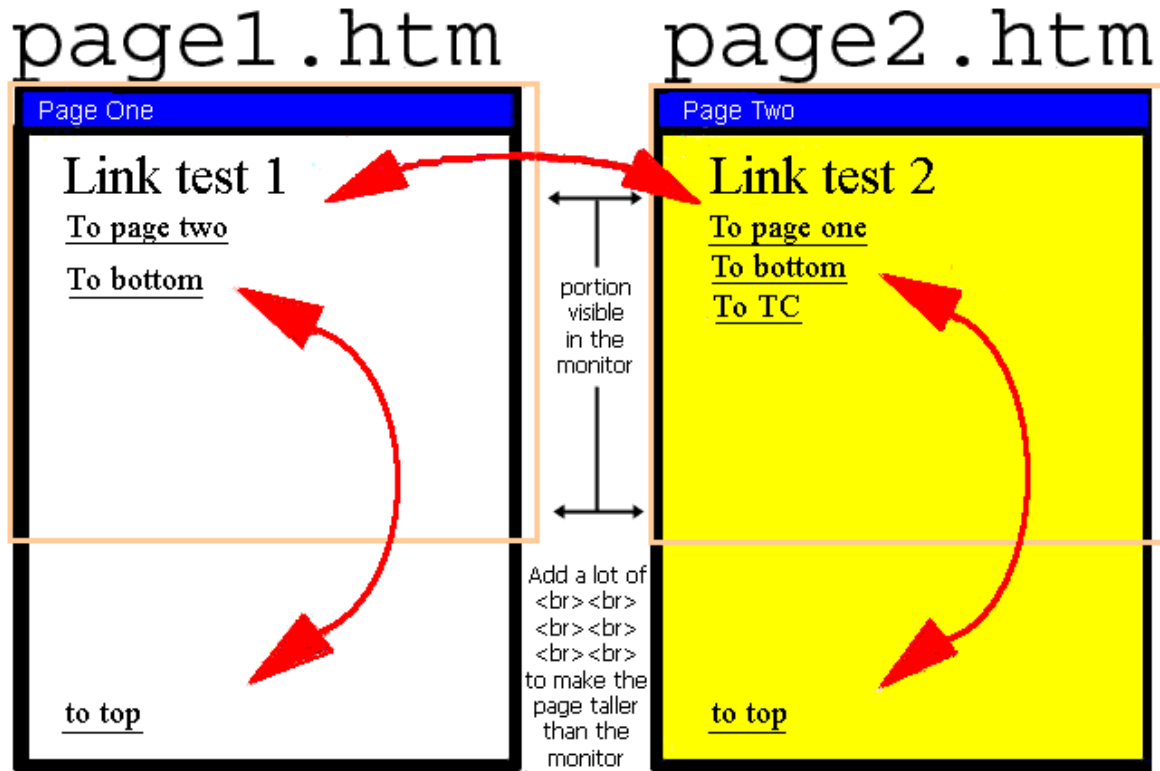
Example:

`<body` `> ... </body>`

Notes

Part 2, Activity (40%): You will later transfer this information into a LMS dropbox

- Create a folder named lab2
- Using a text editor, create two pages, **page1.htm** and **page2.htm**
- The end result should look similar to the images below.



You may need 50 or 60
 tags

Grading Points

(1 point per item, per page, unless otherwise noted)

- Set titles to 'Page One' and 'Page Two' (do not use the *file names* of page1.htm or page2.htm for your *titles*)
- Set page1.htm to bgcolor="white", Set page2.htm to a yellow background
- Set page1.htm to link="black", Set page2.htm to link="black"
- Set page1.htm to vlink="navy", Set page2.htm to vlink="navy"
- Add a heading (head line) size 2 to each page, as shown in the illustration, saying 'Link test 1 (or 2)'
- Link page1.htm to page2.htm and Link page2.htm to page1.htm
- Place each link on a separate line, using
 (or
)
- Add a LOT of
 (or
) to the middle of both pages to put space between the links, and so that the pages are taller than the browser window

- In both pages, add a book mark at the top of the page, name="very-top" (Do not make the book mark visible, that is, place no text between the anchor tags)
- In both pages, add a book mark at the bottom of the page, name="very-bottom" (Do not make the book mark visible, so **do not put any text** between the anchor tag set to a named bookmark. ``)
- In both pages, add a link from the bottom of the page which will jump to the top of the page
- In both pages, add a link from the top of the page which will jump to the bottom of the page
- On page2, add a link to the college web site
- Pages should appear similar to the illustration
- All links work properly
- Correctly coded (10 points)

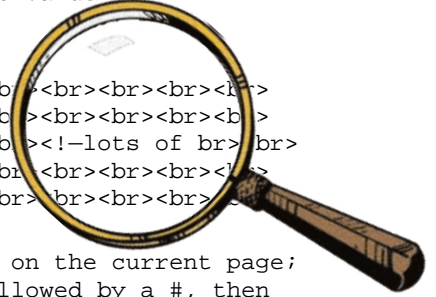
Zip then entire lab folder, and rename yourname-lab2.zip

Coding Help

Coding help... your html should have similar features as those shown below.
The `<!--comment: -->` explain the nearby html.

```
<html>  
<head>  
<title>Change this to your title</title>  
</head>  
  

```



Lab 2 Cheat-sheet (available as pdf on class website)

1. Update your template as discussed in the Links and Templates, **save as template.htm**

template.htm
<pre><html> <head> <title> Title goes here </title> </head> <body bgcolor=" " text=" " link=" " vlink=" "> Stuff to display in the web page goes here </body> </html></pre>

2. Save your template with the required names; **save as page1.htm**, then **save as page2.htm**

Notepad-page1.htm	Notepad-page2.htm
<pre><html> <head> <title> Title goes here </title> </head> <body bgcolor=" " text=" " link=" " vlink=" "> Stuff to display in the web page goes here </body> </html></pre>	<pre><html> <head> <title> Title goes here </title> </head> <body bgcolor=" " text=" " link=" " vlink=" "> Stuff to display in the web page goes here </body> </html></pre>

[Make sure page1.htm is open in your text editor, and in your browser.](#)

3. Change the title to Page One (note: the filename is different that the document title)

Save your change, switch to the Browser, and refresh; it should look similar to the following

Notepad-page1.htm	Internet Explorer - Page One
<pre><html> <head> <title> Page One </title> </head> <body bgcolor=" " text=" " link=" " vlink=" "> Stuff to display in the web page goes here </body> </html></pre>	Stuff to display in the web page goes here

4. Switch back to your editor. Add the body modifications required:

Bgcolor is white

Text is black (since not specified in lab)

Un-used link colors are black

Visited link colors are navy

Save your changes, switch to the Browser, and refresh (should look the same)

Notepad-pagel.htm	Internet Explorer - Page One
<pre><html> <head> <title> Page One </title> </head> <body bgcolor="white" text="black" link="black" vlink="navy"> Stuff to display in the web page goes here </body> </html></pre>	Stuff to display in the web page goes here

5. Switch back to your editor. Change the text to that required:

Link Test 1

To Page Two

To Bottom

To top

Save your changes, switch to the Browser, and refresh (should resemble item below)

Notepad-pagel.htm	Internet Explorer - Page One
<pre><html> <head> <title> Page One </title> </head> <body bgcolor="white" text="black" link="black" vlink="navy"> Link Test 1 To Page Two To Bottom to top </body> </html></pre>	Link Test 1 To Page Two To Bottom to top

6. Switch back to your editor. Change the Link Test 1 to a headline, size 2, by surrounding it with the <h2> set

Save your changes, switch to the Browser, and refresh (should resemble item below)

Notepad-pagel.htm	Internet Explorer - Page One
<pre><html> <head> <title> Page One </title> </head> <body> bgcolor="white" text="black" link="black" vlink="navy"> <h2>Link Test 1</h2> To Page Two To Bottom to top </body> </html></pre>	Link Test 1 To Page Two To Bottom to top

7. Switch back to your editor. Add
s to get everything on different lines

Save your changes, switch to the Browser, and refresh (should resemble item below)

Notepad-pagel.htm	Internet Explorer - Page One
<pre><html> <head> <title> Page One </title> </head> <body> bgcolor="white" text="black" link="black" vlink="navy"> <h2>Link Test 1</h2> To Page Two
 To Bottom

 to top </body> </html></pre>	Link Test 1 To Page Two To Bottom to top

8. Switch back to your editor. Add a lot of
 to make the page taller than can be displayed in the window

Save your changes, switch to the Browser, and refresh
(should resemble item below, **with scroll bar**)

If no scroll bar is on the browser, add more
s.

Scroll down to verify 'to top' is still there

Notepad-page1.htm	Internet Explorer - Page One
<pre> <html> <head> <title> Page One </title> </head> <body bgcolor="white" text="black" link="black" vlink="navy"> <h2>Link Test 1</h2> To Page Two
 To Bottom

 to top </body> </html> </pre>	<p>Link Test 1</p> <p>To Page Two To Bottom</p>

9. Switch back to your editor. Add a bookmark to the top, and bottom of the page, using

Save your changes, switch to the Browser, and refresh (should resemble item below, no change visible)

Notepad-page1.htm	Internet Explorer - Page One
<pre> <html> <head> <title> Page One </title> </head> <body bgcolor="white" text="black" link="black" vlink="navy"> <h2>Link Test 1</h2> To Page Two
 To Bottom

 to top </body> </html> </pre>	<p>Link Test 1</p> <p>To Page Two To Bottom</p>

10. Switch back to your editor. Turn each item into links as described on the Template and Links web page

Recall, all links start with and surround the text you are turning into the clickable link,

To create a link to one of your pages, simply include the filename, such as

To Page Two

To create a link to one a bookmark, simply include the # and then the name of the bookmark, such as `to top`

Don't just copy the code below into Notepad... type it step by step, as shown above.

Save your changes, switch to the Browser, and refresh

(should resemble item below, test the links)

Notepad-page1.htm	Internet Explorer - Page One
<pre><html> <head> <title> Page One </title> </head> <body> bgcolor="white" text="black" link="black" vlink="navy"> <h2>Link Test 1</h2> To Page Two
 To Bottom

 to top </body> </html></pre>	Link Test 1 <u>To Page Two</u> <u>To Bottom</u>

Now, modify page2.htm to the correct text, background color, etc.

The only additional difference is a link to Temple College.

To create a link to an Internet site, simply include the FULL URL, such as

`To TC`

Save your changes, switch to the Browser, and refresh

(should resemble item below, test the links)

Notepad-page2.htm	Internet Explorer - Page Two
<pre><html> <head> <title> Page Two </title> </head> <body> bgcolor="yellow" text="black" link="black" vlink="navy"> <h2>Link Test 2</h2> To Page One
 To Bottom
 To TC

 to top </body> </html></pre>	Link Test 2 <u>To Page One</u> <u>To Bottom</u> <u>To TC</u>

You should now be able to jump back and forth from page1 and page2, from top to bottom and from bottom to top on each page, and from page2, link to Temple College, then click [Back] to return.

Part 3: Hands On (30%) You will later transfer this information into a LMS quiz

Posers, could you answer the following on the test?

1. What attribute changes the color of a web page's background?
2. What attribute changes the color of a web page's text?
3. What attribute changes the color of a web page's link color?
4. What attribute changes the color of a web page's visited link color?
5. What tag creates a break?
6. What tag set surrounds a paragraph?
7. What tag creates a link?
8. What attribute must be used to point to the link's hyper-text reference?
Describe the three types (how they are similar, how they differ.
9. What tag set creates a bookmark called verytop?
10. What tag set creates the largest headline? The smallest? A line across the page?

QUESTIONS TO BE ANSWERED IN LMS

1. What is `<a> ` used for?
Pick the single best answer
 - ☐ is used to create named bookmarks
 - ☐ is used to both create links or create named bookmarks
 - ☐ is used to create links
 - ☐ is used to contain what displays in the main browser window
 - ☐ is used to contain the area of a web page read by the computer, and not displayed
2. What is `<body> </body>` used for?
Pick the single best answer
 - ☐ is used to create links
 - ☐ is used to create named bookmarks
 - ☐ is used to contain what displays in the main browser window
 - ☐ is used to both create links or create named bookmarks
 - ☐ is used to contain the area of a web page read by the computer, and not displayed

3. Match the following

- | | |
|--|--|
| <input type="checkbox"/> example of creating an intrapage link to a bookmark | 1. href |
| <input type="checkbox"/> example of creating a bookmark | 2. name |
| <input type="checkbox"/> example of an internet link | 3. <code>to page 2</code> |
| <input type="checkbox"/> example of a local link | 4. <code>to T C</code> |
| <input type="checkbox"/> the anchor tag attribute to create a link | 5. <code></code> |
| <input type="checkbox"/> the anchor tag attribute to create a named bookmark | 6. <code>to Top</code> |

4. Which of the following is coded properly?

<code><body> text="green" bgcolor="yellow" link="black" vlink="gray"></code>	<code><body text="green" bgcolor="yellow" link="black" vlink="gray"</code>
<code><body text="green" bgcolor="yellow" link="black" vlink="gray"></code>	<code>body text="green" bgcolor="yellow" link="black" vlink="gray"</code>

5. Match the following

- | | |
|---|------------|
| <input type="checkbox"/> the body tag attribute used to change the default color of a link that has not been clicked on | 1. text |
| <input type="checkbox"/> the body tag attribute used to change the default color of a link as it is being clicked | 2. bgcolor |
| <input type="checkbox"/> the body tag attribute used to change the default color of text | 3. link |
| <input type="checkbox"/> the body tag attribute used to change the default color of the entire web pages background | 4. vlink |
| <input type="checkbox"/> the body tag attribute used to change the default color of a link that has been previously clicked | 5. alink |

6. Match the following

- ☐ What tag set surrounds a paragraph?
- ☐ What tag creates a break?
- ☐ What tag creates a link?

- 1. `
 or
`
- 2. `<p>...</p>`
- 3. `<a ...>...`
- 4. `<!--break>`
- 5. `é`
- 6. `<link ...>...</link>`

7. Match the following

- ☐ attribute used to point to the link's hyper-text reference
- ☐ form used to make an intrapage link (to a different part of the same page)
- ☐ form used to make a local link (one of your web pages)
- ☐ form used to make an Internet link

- 1. `href`
- 2. `= "http://URL"`
- 3. `= "#bookmark"`
- 4. `= "pagename"`
- 5. `herf`

8. What tag set creates a bookmark called verytop?

- ☐ ``
- ☐ ``
- ☐ ``
- ☐ ``

9. Match the following

- ☐ The tag that creates a line across the page?
- ☐ The tag set that creates the largest headline
- ☐ The tag set that creates the smallest headline

1. `<h1>...</h1>`
2. `<h6>...</h6>`
3. `<hr>`
4. `<h1>...</h2>`
5. `
`
6. `<h4>...</h4>`
7. `<h1>...</h1>`
8. `<h6>...</h6>`
9. `<h4>...</h4>`
10. `<line>`

Completing Overview 4

Submit by 11:59 am, Friday, of the current week

(Check your Learning Management System (LMS) for specific due dates)

Details on your LMS are in the College Specific Appendix at the end of the book.

- Lab 2 as directed, submitting yourname-lab2.zip, and taking quiz

MUD 4 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 4 Respond in the class LMS Discussion forum to the following:

All links use `Clickable text`;

Explain how the browser knows to look on the same page for an intrapage link,
on your computer for another one of your local files,
or to go to the Internet to find someone else's web page

For the next time frame:

- Read Overview 5
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to start preview Lab 3

Overview 5

Folders and Paths

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There are videos related to this chapter and lab on the class website, in Overview 5

Quick reference for later use:

How to tell the computer where to find your web pages or images

If files are in the same folder, simply name the files

```
= "filename.htm"
```

if files are in a folder below, name the folder and then name the file

```
= "folder/filename.htm"
```

if files are above, get out of the current folder with `../` , then name the file or folder, and then name the file

```
= "../foldername/filename.htm"
```

or

```
= "../filename.htm "
```

For Overview 5

Instructor Notes

The rest of the chapter discusses linking to documents stored in different directories, or linking to non-webpage parts of the Internet... read over this section to get a rough idea of the process, and we will cover directory use in my notes on Paths, and included is a handy reference.



`text` to send an email, but using this has two problems... if you use a web based email program, the link to send an email won't work. It also opens you to a lot of spam if you include a mailto.

We will revisit **ftp** `` later in the semester... let's focus on creating pages before we start transferring (ftp'ing) pages. (While great at downloading large files for guests at a web site, the real value of ftp is that it is the most robust way to **upload** to your account, such as delivering your finished web pages to the server.)

Folders and Paths

In order to better organize your files, say web pages in one place, and images in another, the easiest thing to do is to create folders. However, this will change how you reference web pages for links, and images to display. Instead of simply listing the file name, you will direct the browser to locate the appropriate folder, and then select the file. This is called the path. In Windows you use absolute paths... that is, what drive, what folder, what filename. Example: O:\IMED1316\Lab2\page1.htm tells the computer exactly where the file is on the computer..

But that doesn't work in web pages. If someone asks you where a room is, you don't begin your directions from downtown; instead you would begin your directions *where you are now*. This is called a relative address. In web pages, we **ONLY** use relative addresses; where is it, in relationship to what the computer is looking at right now.

Navigating (relative, web page) paths

If files are in the same folder, simply name the files

```
"filename.htm"
```

if files are in a folder below, name the folder and then name the file

```
"folder/filename.htm"
```

if files are above, get out of the current folder with `../` , then name the file or folder, and then name the file

```
"../foldername/filename.htm"
```

or

```
"../filename.htm "
```

(similar to clicking Back or Up when using Windows to browse for files not in the current directory... this is based on the old DOS and UNIX command to change directories back one step: **cd ..**)

Example A (the old fashioned way, as in lab 2):

Web page saved in Lab2

image1.gif saved in Lab2



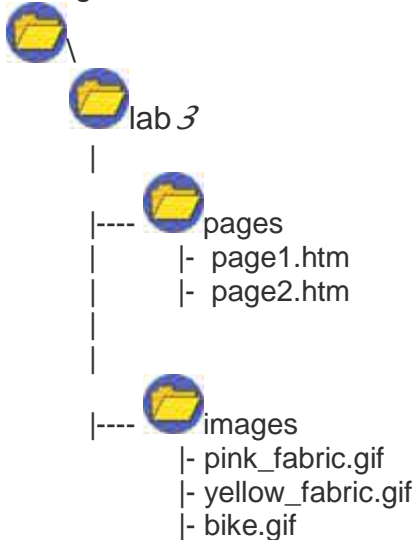
`` or add height, width, and alternative text information

``

Example B: (as in Lab 3)

Web page saved in a folder inside of Lab3 called pages, Windows path: Lab3\pages

bike.gif saved in a folder inside of Lab3 called images, Windows path: Lab3\images



This requires the browser to go UP from the pages folder, then down the path toward bike.gif

`` or add height, width, & alternative text information

``

The '../' characters direct the browser to go UP one level, then drop back down into the folder images, and find the file named 'bike.gif'

Note: the links from page1 to page2 remain the same in lab 3:

`click here`, as they are in the same folder



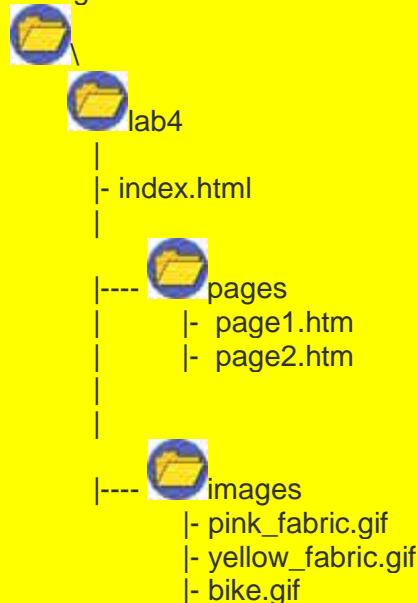
Note: we will use both a bgcolor AND a background image in lab3;
We use both in case the background image doesn't download, we still have color.

Imagine the following scenario: you are using a picture of the night sky, so you change your text color to white. If the picture fails to download, you now have a white background and white text... so always set the bgcolor to be similar to the color of the background image, as insurance.

Sneak Peek at more advanced examples, *but not needed right now*

Example C: (as in Lab 4)

Web page saved in a folder inside of Lab4 called pages, Windows path: Lab4\pages
bike.gif saved in a folder inside of Lab4 called images, Windows path: Lab4\images



For index.html to display an image requires the browser to open the images folder, then open bike.gif

`` or add height, width, and alternative text information
``

For index.html, to link to a web page, such as page1.htm, you apply the same logic: open the pages folder, then choose page1.htm

`Click here`

(For page1.htm to link to index.html, use `Click here`)

Sneak Peek at more advanced examples, *but not needed right now*

Note Example D: Web page saved in LabX

bike.gif saved in a folder inside of LabX called images, Windows path: LabX\images



```

```

The '/' character directs the browser to first find the folder named 'images', then look inside for the file named 'bike.gif'

Example E: bike.gif saved in LabX

Web page saved in a folder inside of LabX called pages, Windows path: LabX\pages



```

```

The '../../' characters direct the browser to leave the current folder and back, or go "up" one level, then look inside that folder for the file named 'bike.gif'

Summary, repeated once again

If files are in the same folder, simply name the files

```
= "filename.htm"
```

if files are in a folder below, name the folder and then name the file

```
= "folder/filename.htm"
```

if files are above, get out of the current folder with ../, then name the file or folder, and then name the file

```
= "../foldername/filename.htm"      Or      = "../filename.htm"
```

Visualizing paths for Lab 3

The important thing to realize is, one a web site such as mine, I have thousands of files; it would be a nightmare to store them all in one single folder, as I wouldn't be able to find them easily. A path is just a series of folder that have to be opened until you locate the file.

Starting point, your Lab 2 folder structure.

```
C:\
└─lab2
    page2.htm
    page1.htm
```

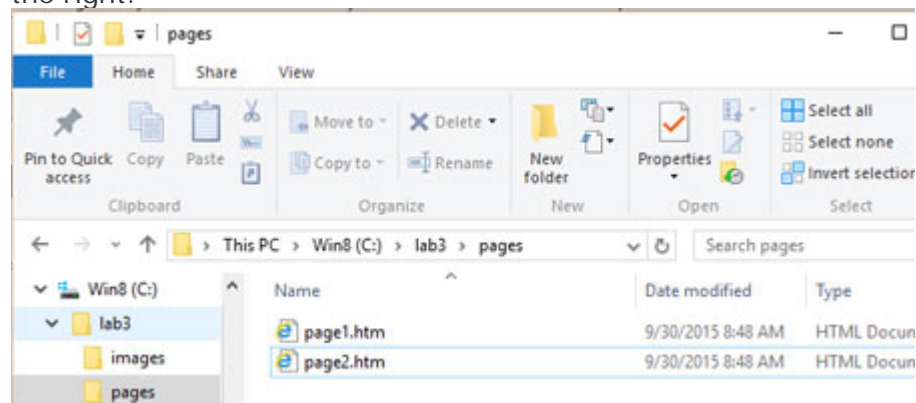
Open My Computer/This PC, and create the lab3 folder.

Inside the lab3 folder, create a folder named 'pages', and a folder named 'images'.

Copy your page1.htm and your page2.htm files into the 'pages' folder. You will also copy two graphics files from the class web site, into the 'images' folder.

```
C:\
├─lab2
│   page2.htm
│   page1.htm
└─lab3
    └─images
        pink_fabric.gif
        yellow_fabric.gif
    └─pages
        page1.htm
        page2.htm
```


When working in Windows, it may help to click the > button to open the contents (icon will change from > to V), so you can see folders on the left, and the folder contents on the right.



Note: The 'pages' folder on the left is highlighted, meaning the files displayed on the right are its contents.

Note: The Address bar indicates the full or absolute path to the files.

> This PC > C: > lab3 > pages or C:\lab3\pages

Note: For the Internet, you use  instead of \

Since the two files can 'see' each other, all that is required to link to the other file is to name the file in the href, such as

```
<a href="page2.htm">to page 2</a>
```

But you will be saving the graphics in the images folder. So,

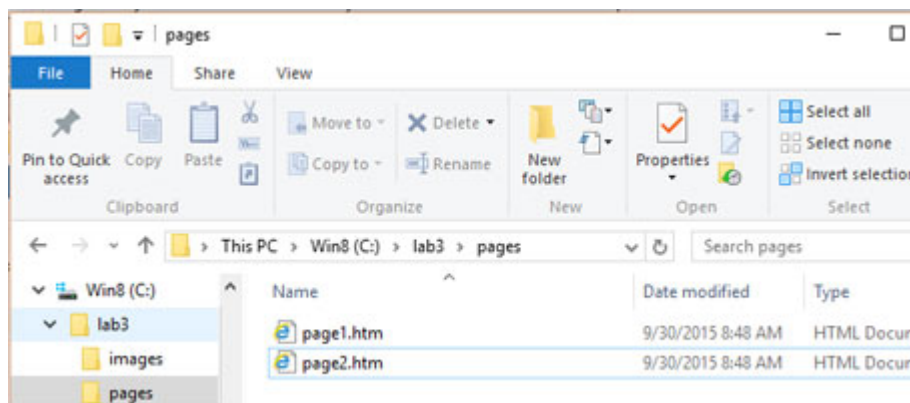
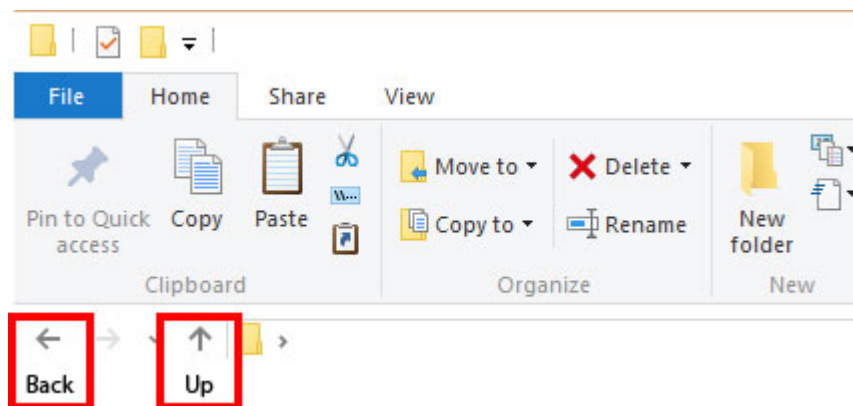
```
<body background="yellow_fabric.gif" etc> won't work.
```

For the page2.htm to 'see' that file, you need to code its **relative** address.

That is, how to find the file, from **this** location.

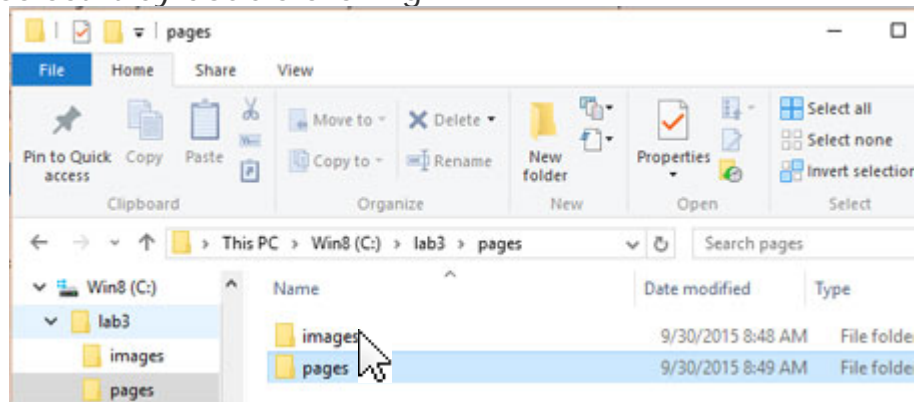
If you can locate the file in 'My Computer', you can *code those steps* into your web page. In DOS, we used **cd ..** to go back to a previous folder, so

1.) Starting in 'pages' you need to click the "←Back" or "↑Up" folder button to get closer to seeing the graphics files.



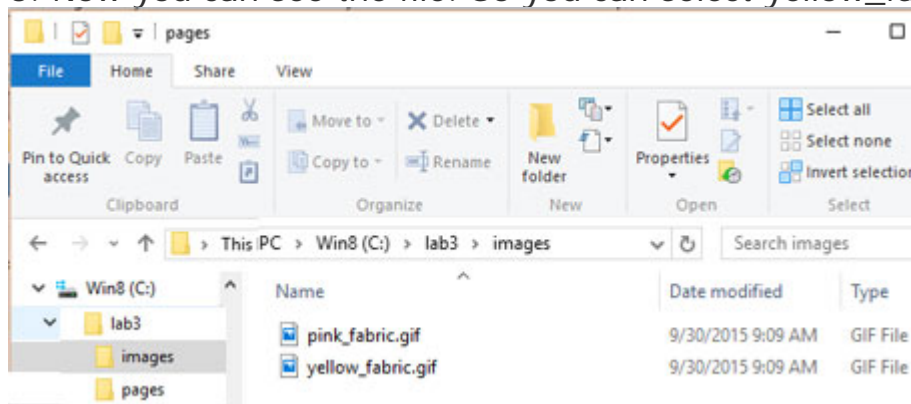
Going "Back" or "Up" is coded  in HTML, very similar to the DOS **cd ..**

2. Now you can see the images folder. To see the contents, you would select it by double clicking.



To select the images folder in HTML, you add images/ to your prior code, going from
../ to ../images/

3. Now you can see the file. So you can select yellow_fabric.gif



To select the file in HTML, you add the filename yellow_fabric.gif to your prior code, giving you
../images/yellow_fabric.gif to the finished line, giving you the finished product:
<body background="../images/yellow_fabric." etc>

Just remember, just code the same steps you would use, if you were locating the file using 'My Computer'/This PC

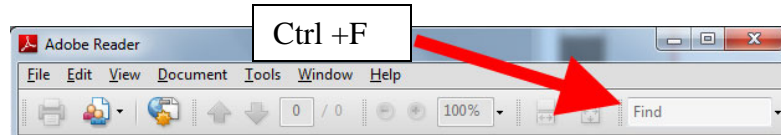


There are videos related to this chapter and lab on the class website, in Overview 5

Lab 3 starts on page 117. But first, a word about getting TEST ready

Test 1 Review

Don't forget you can search the pdf version to locate answers



Before continuing, verify you are caught up with class participation discussions and MUDs. To check your progress: in the LMS, choose the Arrow ▼ by your name; to check your Discussion progress, use the dropdown Tool and select Discussions... choose Apply.

You will need to scroll down to see which discussions you have and have not posted to. Your participation grade will be penalized at the end of the semester for discussions you have not posted to.

Feel free to send your completed review to me... I won't give you the right answers necessarily, but I'll let you know where you still need a little work. The test is open book, but timed (35 minutes); so you won't have time to look it all up.

PS, The first part of the final will include the same information as Test 1.

- What happened in 1957 that started the Internet ball rolling? (Hobbe's Time Line)
- What was the Internet called in 1969, when it first started?
- Who wrote the 1990 law that funded the Internet when the military formed their own network?
- Who devised the World Wide Web, the prototype web browser?
- Who created the first web browser for personal computers, and what was it called?
- Who created the first commercial web browser, and what was it called?
- Name several Netiquette rules, and explain.
- What language are basic web pages written in?
- How can you enter a comment in HTML? Give an example
- Fill in the following web page to include the required tags

```
< >
< > < > < > < >
< >
< >
< >
```

- What tag set holds the entire web page?
- What tag set holds the computer use portion?
- What tag set holds the user viewable portion?
- What tag set displays words on the blue bar above the web page?
 - What attribute changes the color of a web page's background?
 - What attribute changes the color of a web page's text?
 - What attribute changes the color of a web page's link color?
 - What attribute changes the color of a web page's visited link color?
- What tag creates a break?
- What tag set surrounds a paragraph?
- What tag creates an image?
 - What attribute must be used to point to the image's source?
 - In `img src="file" alt="text"`, what is alt used for? Who is it important for?

- Are links the same as hyper-text links?
- What tag creates a link?
- What attribute must be used to point to the link's hyper-text reference?
- How many different headings (headlines) are there, and what are they?
- What tag creates a horizontal rule?
- What tag creates a numbered list?
- What tag creates a bulleted list?
- What tag is used to introduce an item into a list?
- What tag creates a link to pagetwo.htm, on your web site?

< >

< >

- What tag set creates a bookmark called verytop?
- What tag set creates a link to a bookmark called verytop, on the same web page?

< >

< >

- What tag set creates a link to Temple College's web site?

< >

< >

- What does deprecated mean?
- What typed characters do special characters begin with? What typed characters do special characters end with?
- List the Carey's tips for Good HTML Code (page 44 of this book)
- Previously, we used body bgcolor; now we add background. Why use both?
- For lab 2, page1.htm and page2.htm were together. In lab 3, images are in one folder, and pages in another. Question: why didn't we have to change the a href statements from lab 2?
- Continuing from above, we just need to specify a file we are linking to, so why do we have to add a path in order to display images for lab 3?
- What is an absolute address?
- What is a relative address?
- Using relative addresses, how do you navigate paths to folders above, or below?
- You can also link to an ftp server. How do you change the URL?
- By the way, what is ftp?
- What is added to the URL if you want your link to send email?
- What are the problems with using a link to an email?
- By default, a href will open the linked document in the same window (similar to target="_self"). What does target="_blank" do?

Don't forget you can search the pdf version to find answers



How To: Study

Most learning is easiest to recall in a similar environment to where you learned it... meaning if you only study at night, taking a test during the day, at a foreign location, testing can be a problem.

To minimize this, follow the following guidelines.

- Don't Cram
- Don't load up on caffeine
- Don't load up on sugar
- Don't change too much of your routine

Cramming isn't learning, as the info just goes into short term memory, which evaporates like RAM when you write your name on the test. Instead, try to really learn the material by reviewing daily, and making a list of things that give you trouble. Focus on those items, instead of confusing things you actually already know. The next day, make a new list, which should be shorter, until you get to test day, and you are comfortable with all the material. Do some gentle review around the time of day you plan to take the test, to overcome the foreign testing situation even further.

Some of you will still cram, though. You'll stay up late, and then you'll show up at the testing center dead tired... don't go get some coffee! Caffeine is actually a depressant that will drop you after it gives you a case of hyper nerves.

But you're still tired... (because your crammed, and didn't sleep) so if you can't have a coffee or cola, maybe you're tempted to have a dozen Krispy Kreme donuts for some quick energy, instead. DON'T! Sugar is muscle food, not brain food. You'll have plenty of energy to run to the testing center, but you will have diverted blood flow away from your brain.

But what if you normally stay up until 3:00 am, get up to a gallon of coffee and a box of Ding Dongs? Well, don't break your routine... stay in routine as much as possible... again, night owl may need to practice getting up a day or two before the test.

Test taking is about decisions, here are a few tips on actually selecting the right answer.

- Read the whole test... it is almost impossible to make a test that doesn't reveal some answers somewhere else.
- Look for distracters and keywords... distracters are important looking words that have nothing to do with what is really being asked. Keywords on the other hand should alert you to the meat of the question.
- Go with your first reaction, it is usually right.

Finally, no one will care what you made on a test in five years... so don't stress. In a well designed class, a test is a learning tool, not punishment. It points out where you still need work, and gives you the opportunity to actually do what school is supposed to be about: learning!

PS After you take your test, you can start calculating your GPA. You may use the Excel spreadsheet on the class website, if you like.

How To: Take a Collins Test

1. Make sure you go over the review material... you may submit the review for instructor's feedback
2. Take the practice test in LMS, to see how they work
3. There is no such thing as a multiple choice job interview, expect the tests to include fewer multiple choice questions and more fill in the blank and short essay questions as the semester progresses.
(The test material isn't harder, but I expect you to be able to supply more information)
4. Look over the entire test before you begin answering questions
5. Read the question thoroughly before answering;
some fill in the blank questions may specify a choice of answers;
some questions specify using a single word, tag, or command.
Part of the real world is following directions...please don't expect me to give you credit because you didn't follow directions
6. Save your answers by clicking the disk icon.
If the save button doesn't work, verify you are submitting the appropriate type of answer... such as numbers instead of letters for matching.
7. If the answer still will not save, IMMEDIATELY close the quiz WITHOUT submitting.
Return to the quiz and choose **Continue Quiz**.



For tests I am trying to see how much of all the material you are retaining, so the test by design covers a very broad area with fairly deep coverage; I consider it both an assessment and a learning opportunity... trying to let us both see what you have mastered, and what you may need a little more work on...
So, as with the SAT, you are not expected to make a perfect grade on my tests; below is how I make the test grades fair

8. Typos are auto-graded as incorrect. If the computer operation in the real world wouldn't accept an instruction or command, the test won't either.
Note: I do manually review each test, and award credit where appropriate (I can't foresee all valid responses)
9. Resist the urge to change the answer to a question unless you realize you misread the question, or another question reminds you of the correct answer; often (but not always) your first choice is the correct choice
10. Questions that include the word DISCUSS imply I am looking for **more** than two or three words. Be thorough, but no need to be long winded
11. Short answer/short essay are marked incorrect immediately after taking the test... I will manually review each test, and add back in points.
12. After taking the test, you will have the opportunity to review the questions... recall, **the grade shown is not valid** until the tests are reviewed by me. The class will be notified when the grades are correct.
13. The highest grade in the class sets the curve mark... if the highest test grade is a 97, everyone gets 3 points added as the curve
14. If the majority of students miss a question, I will often determine the question was bad, and not count it against you, but still award points for those who got it right.
15. If you do poorly on a test, recall from the syllabus and appendix that the lowest test score can be improved if you do well on that section of the final.
16. The final exam is basically taking the same three tests again... so review your individual test study guides, and review your tests in LMS.
Your lowest test score can be improved by doing well on that part of the Final
17. To look over a previously taken test in LMS, choose the Quizzes area, select the test, then go to the submissions tab.

Lab 3



A video similar to completing lab 3 is available on the class web site.

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59PM
(see due dates on web site)

•**NOTE:** Do NOT use CAPITAL letters OR spaces in file names.

•**NOTE:** Do NOT use curly quotation marks, such as ”;
only use straight quotation marks, such as ”.

- Note: If you need to stop work on a web page:
Save your changes in your text editor (Notepad)
When ready to resume,
open the file in notepad
and
double click web page to open browser

Part One: Documentation (30%)

Attributes to document must include:

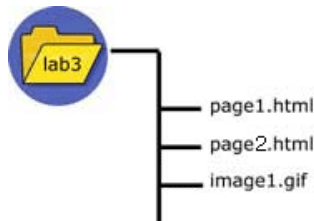
target

(modifies the anchor tag, as in)

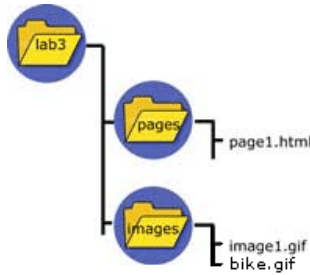
background

(modifies the anchor tag, as in <body background="filename">)

Fill in what goes in the blank below, based on the situation



If two pages are in the same folder, to link to a web page named page2.html, use _____



The web page is in lab3/pages, the images are in a lab3/images, to display one of the images named bike.gif, use ``

Update your documentation of the `<a>` tag to include the `name=` *and* `target=` attributes, etc., and expand documentation of the `<body>` tag to include the `background=` attribute

Tag: Body `<body>` `</body>` (10 points)

Syntax (required and [optional attributes]); include `text=`, `bgcolor=`, `link=`, `vlink=`, **and** `background=`

What does each of these do?:

Example:

```
<body  
    >
```

```
</body>
```

Notes:

Tag: Anchor `<a>` `` (10 points)

Syntax (required and [optional attributes]); include `href=` `name=` **and** `target=`

What does each of these do?:

Example:

```
<a  
    >
```

```
</a>
```

Notes:

We use both `bgcolor` and `background` from now on...

The `background` places an image behind the text.

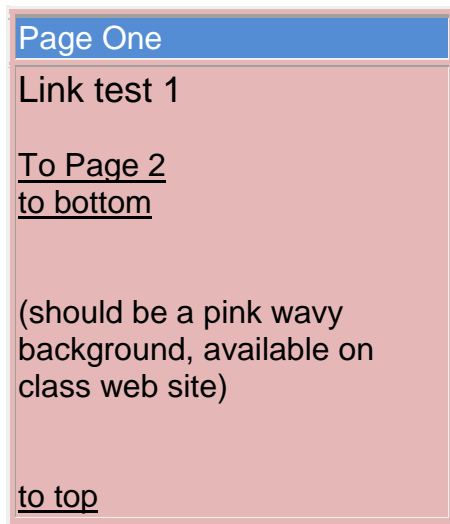
You should pick a similar `bgcolor` to approximate the image color, in case the image doesn't download.

Example: you have a night sky picture, so you set your text to white so it shows up. But if the image does not download, you would have white text on a default white background.

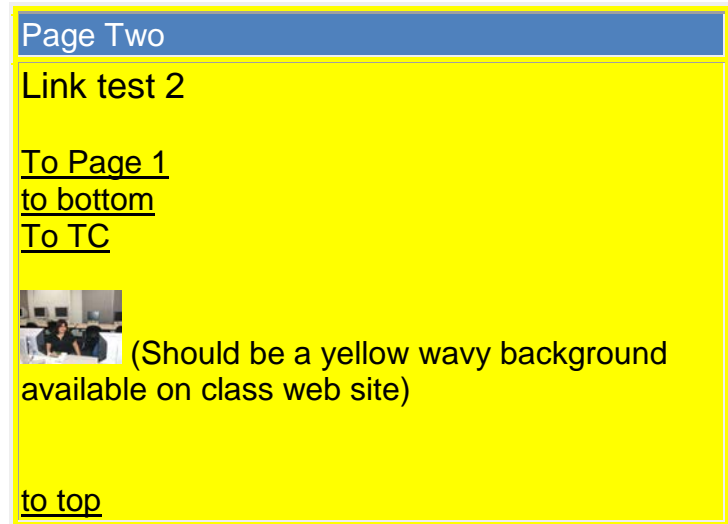
Part Two: Activity: (40%)

- Create a folder named lab3
- Using a text editor, create two pages, **page1.htm** and **page2.htm** in the lab lab3 folder (QUICKSTART ALTERNATIVE: copy your lab2 FOLDER, and rename the copy to lab3)

page1.htm



page2.htm



Grading Points (Lab 3)

Modifications :

- **10 points Make Folders**
Create a folder in lab3 named pages
Create a folder in lab3 named images
- **10 points File placement**
move page1.htm and page2.htm into pages
copy pink_fabric.gif from the class website to images
copy yellow_fabric.gif from the class website to images

Reminder: to copy a file, right click.
You did this with dube.jpg in lab 1...
So, either
right click the images above and choose
Save Background As
or
right click the links above and choose
Save Target As

make sure you save the files in the images folder

- **10 points add backgrounds**
To the page1.htm body add `background="../../images/pink_fabric.gif"`
To the page2.htm body add `background="../../images/yellow_fabric.gif"`

- **10 points Add image**

Copy a picture, **preferably of you**, to the images folder
(you may come by and I'll take your picture if you don't have one)
On page2.htm, include this picture somewhere below your links;
use img with src="../images/filename and alt parameters.

*You may also want to use the
width=,
if your picture displays very large, perhaps width="144"
(72 pixels to an inch on most monitors)*

(Look in the Paths section, page 98, of this book for examples)
(How to check for HTML errors, page 42)
We'll discuss modifying the picture during the next tutorial

Part 3, Hands On Questions (30%)

Be prepared to show the functionality of your web page, and discuss/demonstrate new tags and attributes used in this lab.

You may download an [acrobat or word processing](#) document to help you with this.

At the end of this process, you will be turning in answers using the Quizzes area of [Your LMS](#), based on the following questions. So, to get the best score, fill in all the answers in this document first.

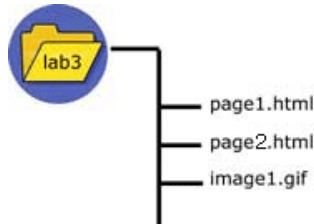
Posers, could you answer the following on the test? (Specific Lab questions below.)
Answer the following questions

- Previously, we used body bgcolor=; now we add background=. Why use both?
- Why didn't we have to change the a href statements from lab 2?
- If we had an img src in lab 2, why would we have to change the img src statements in lab 3?
- What is an absolute address?
- What is a relative address?
- You can also link to an ftp server. How do you change the URL?
- By the way, what is ftp?
- What is added to the URL if you want your link to send email?
- What are the problems with using a link to an email?
- By default, a href will open the linked document in the same window (similar to target="_self"). What does target="_blank" do?

Some questions on this lab are from earlier chapters, but added here to reinforce the item, and to help prepare you for the upcoming test.

Actual questions from the LMS Quiz follow

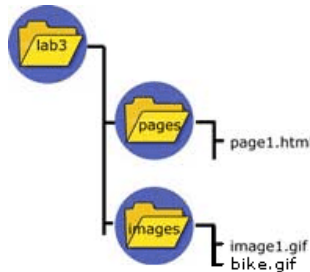
Question 1



If two pages are in the same folder, to link to a web page named page2.html, use

- ☐ c:\page2.html
- ☐ images/page2.html
- ☐ pages/page2.html
- ☐ page2.html
- ☐ c:/page2.html

Question 2



The web page is in lab3/pages, the images are in a lab3/images, to display one of the images named bike.gif, use

- ☐ bike.gif
- ☐ /bike.gif
- ☐ ../images/bike.gif
- ☐ pages/bike.gif
- ☐ images/bike.gif

Question 3

Match the following (just type in the number)

- ☐ the body tag attribute used to change the default color of a link that has been previously clicked
- ☐ the body tag attribute used to change the default color of the entire web pages background
- ☐ the body tag attribute used to change the default color of a link that has not been clicked on
- ☐ the body tag attribute used to change the default color of text
- ☐ the body tag attribute used to change the default color of a link as it is being clicked
- ☐ the body tag attribute used to display a background image

- 1. text
- 2. bgcolor
- 3. link
- 4. vlink
- 5. alink
- 6. background

Question 4

Match the following (just type in the number)

- | | |
|--|--|
| <input type="checkbox"/> the anchor tag attribute to control if a link opens in the same web browser window, or a different web browser window | 1. href |
| <input type="checkbox"/> the anchor tag attribute to create a named bookmark | 2. name |
| <input type="checkbox"/> the anchor tag attribute to create a link | 3. <code>to page 2</code> |
| <input type="checkbox"/> example of creating an intrapage link to a bookmark | 4. <code>to T C</code> |
| <input type="checkbox"/> example of an internet link | 5. <code></code> |
| <input type="checkbox"/> example of creating a bookmark | 6. <code>to Top</code> |
| <input type="checkbox"/> example of a local link | 7. target |

Question 5

Previously, we used
`body bgcolor=`
now we add
`background=`
Why use both?

To control the background color in case the background image does not download. True or false?

- ☐ True
- ☐ False

Question 6

Why didn't we have to change the `a href=` statements from lab 2?

- ☐ Because the background image is different for both pages
- ☐ Because the files have now been segregated into different folders, meaning images and pages are in different folders; so, we would need to specify a path
- ☐ Because the pages are still in the same folder, so the path didn't change

Question 7

If we had an
`img src=`
in lab 2, why would we have to change the
`img src=`
statements in lab 3?

- ☐ Because the pages are still in the same folder, so the path didn't change
- ☐ Because the files have now been segregated into different folders, meaning images and pages are in different folders; so, we would need to specify a path
- ☐ Because the background image is different for both pages

Question 8

Match the following (just type in the number)

- | | |
|--|-----------------------|
| <input type="checkbox"/> an example of an absolute address, which is not allowed in web pages | 1. absolute address |
| <input type="checkbox"/> an example of a relative address, which is required in web pages | 2. relative address |
| <input type="checkbox"/> The specific location of a file, without considering present location | 3. c:\images\bike.gif |
| <input type="checkbox"/> Directions to find another file location, from current location | 4. ../images/bike.gif |

Question 9

You can also link to an ftp server. How do you change the URL?

- ☐ <a href="http:// ... target="ftp"
- ☐ <a link="ftp:// ...
- ☐ <a href="ftp:// ...
- ☐ <a ftp="www. ...

Question 10

By the way, what is ftp? ftp stands for **forward to page**, and is used to upload files from your computer to a web server

- ☐ True
- ☐ False

Question 11

What is added to the URL if you want your link to send email?

- ☐ <a href="mailto: ...
- ☐ <a href="mailto: ...
- ☐ <a href="mailto: ..."
- ☐ <a href="mailto: ..."

Question 12 What are the problems with using a link to an email?
(Choose the one best answer)

- ☐ you open yourself up to increased spam
- ☐ people with web based email won't be able to use the link
- ☐ you open yourself up to increased spam **and** people with web based email won't be able to use the link
- ☐ Users complain about increases in spam

Question 13

What does target="_blank" do?

- ☐ Opens the link in a new browser window
- ☐ Opens the link in the same browser window
- ☐ Splits the browser into two windows, and opens the link in the second window
- ☐ Opens a blank email window

SUBMITTING THE LAB

In Windows, zip the entire lab3 directory, and rename to yourname-lab3.zip. Directions on page 80.

Log into Your LMS, choose this class, choose Dropbox, select Lab 3. Browse to yourname-lab3.zip and upload it. (See page 80 or class website for detailed instructions)

You will then transfer your answers to the LMS Quiz for lab 3. You may use your notes for this part of lab. Choose the Quizzes menu, and locate Lab 3.

Completing Overview 5

- Complete Review for test 1, page 113. Test due early in Week 6
- Submit by 11:59 am, Friday, of the current week (see due dates on course web site)
 - Lab 3 (p. 117) as directed, submit yourname-lab3.zip, and taking lab 3 quiz

MUD 5 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 5 Respond in the class LMS Discussion forum to the following:
 - It seems so much simpler to just store all your files in one place, and not have to use paths; name at least one benefit from storing files in different locations

For the next time frame:

- Read Part one of Tutorial 3
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 4

Overview 6

Numbers and Colors

Test 1 Review	113
Numbers	126
Instructor notes on Tutorial 3	144
Colors	146/See website
Start Lab 4 (due end of Overview 7)	177/See website
Completing Overview	138



Videos related to this chapter and lab are on the class website in Overview 6

Mindset for this chapter: while it would be great if you loved and understood the theory of numbers, the takeaway here is everything can be easily done using a calculator.

You just need to understand everything in a computer is a number, so **colors=numbers**, and we will be using an odd numbering system, Hexadecimal, or base ₁₆.

Again, I show you some number and color mumbo jumbo, then you just use a calculator to convert from base ₂ or base ₁₀ or base ₁₆.



MORE ON THE WEB

Check out the class web site for Image map hot spot example

Don't forget the TEST! Check class website for details

Numbers



After you have read this, the next section will show how to use a calculator to verify your answers. This and other videos related to numbers and colors are available on the class web site.

Why are there different numbering systems? Just as different countries use different words for the same item, there are different numbering systems that represent the same thing in a different way.

Why are numbers important? Computer only really use 1s and 0s, so from a theoretical point of view, you should be able to convert our human base ₁₀ numbers to a computer friendly base ₂ number. But from a practical point of view: if you are making web pages, and you don't want to be stuck with 16 word colors, you have to be able to express mixtures of red, green, and blue in numbers. The most widely available graphics program is Paint, but it gives the numerical values of red, green, and blue in base ₁₀... but web pages use base ₁₆, hexadecimal. So, just to be able to use a lot of colors, you need to be able to convert the numbers. So, you *should* know the process.

But I know what most of you will do: use a calculator to convert; that's fine, IF you understand the theory.

The three rules of modern numbering systems:

1. Begin with 0 (zero)
2. The base indicates the number of different characters used to represent the numbers (examples base ₁₀ has 10 characters, base ₂ has 2 characters)
3. When you run out of different characters, add a decimal place to the left, and start over.

Decimal (base 10)		Binary (Base 2)	Hexadecimal (Base 16)
0		0	0
1		1	1
2		10	2
3		11	3
4		100	4
5		101	5
6		110	6
7		111	7
8		1000	8
9		1001	9
10		1010	A

Extended to 16_{10}

Decimal (base 10)		Binary (Base 2)	Hexadecimal (Base 16)
0		0	0
1		1	1
2		10	2
3		11	3
4		100	4
5		101	5
6		110	6
7		111	7
8		1000	8
9		1001	9
10		1010	A
11		1011	B
12		1100	C
13		1101	D
14		1110	E
15		1111	F
16		10000	10

You should be able to recreate the above chart.

There is a video available to demonstrate counting. The link is below, at the end of the building a 'powers of 2 number line' discussion.

Click class web site for a chart that that goes to 32_{10} , and includes base₄ and base₈.

Notice how large the binary numbers get; we need a way to represent those numbers that takes up less space, and is more distinctive. If you were to look at the larger example, you can see that base 4, 8, or base 16 are quick ways to represent the same base 2 number with less space. Especially base 16. But decimal, base 10, does not easily fit in this pattern.

Let's find out why.

Look at the numbers in the binary column. Notice the numbers that begin with one, and are followed by nothing or zeros... and compare those to the decimal equivalent.

1	10	100	1000	10000	100000
1	2	4	8	16	32

The decimal values are doubling. This becomes the basis of a quick to build **powers-of-two number line**.

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1

There is a video available on counting, and the Powers of 2 number line [here](#).

This number line is a quick key to converting decimal to binary, and binary to decimal; this is the hardest conversion as the number 10 does not occur on the powers of two number line.

The Harder Stuff, part 1: Converting decimal to binary.

After you have read this, you may wish to go to p. 134 see how to use a calculator to verify your answers.

115_{10} converts to $?_2$

1. Always build a powers-of-two number line. You don't need to calculate it, just start with 1, then double!
2. Notice the subscript is getting smaller... that is our clue to 'subtract'.
3. Computers use 1 to represent success (yes) and 0 to represent failure (no). We will always write our successes and failures (1s and 0s) under the powers-of-two number line.

The largest number on the powers-of-two number line we can **subtract** from 115 is 64. Put a one under the 64 to represent "yes, I can subtract this," then do the math... subtract $115 - 64 = 51$

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
				1						

Can we subtract the next number to the right from 51? Yes! Record the success with a 1, and do the math. $51-32=19$

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
				1	1					

Can we subtract the next number to the right from 19? Yes! Record the success with a 1, and do the math. $19-16=3$

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
				1	1	1				

Can we subtract the next number to the right from 3? No! Record the failure with a 0, and continue.

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
				1	1	1	0			

Can we subtract the next number to the right from 3? No! Record the failure with a 0, and continue.

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
				1	1	1	0	0		

Can we subtract the next number to the right from 3? Yes! Record the success with a 1, and do the math. $3-2=1$

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
				1	1	1	0	0	1	

Can we subtract the next number to the right from 1? Yes! Record the success with a 1, and do the math. $1-1=0$

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
				1	1	1	0	0	1	1

There are no more subtractions possible, but we have our number! 115_{10} converts to 1110011_2

Note: since 115 is odd, it must end in 1.

After you have read this, you may wish to go to p. 134 see how to use a calculator to verify your answers.

The Harder Stuff, part 2: Converting binary to decimal.

After you have read this, you may wish to go to p. 134 see how to use a calculator to verify your answers.

11101_2 converts to $?_{10}$

1. Always build a powers-of-two number line. You don't need to calculate it, just start with 1, then double!
2. Notice the subscript is getting larger... that is our clue to 'add'.
3. Computers use 1 to represent success (yes) and 0 to represent failure (no). We will always write our successes and failures (1s and 0s) under the powers-of-two number line.

Write the 1s and 0s under the powers-of-two number line.

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
						1	1	1	0	1

Add the value **above** the successes (1s) and ignore the failures (0s).

$$16+8+4+1 = 29$$

We have our number! 11101_2 converts to 29_{10}

After you have read this, you may wish to go to p. 134 see how to use a calculator to verify your answers.

The Really Easy Stuff, part 1: Binary to Octal, see class website

The Really Easy Stuff, part 2: Binary to Hexadecimal

After you have read this, there is a section on how to use a calculator to verify your answers.

110001011101_2 converts to $?_{16}$

Divide the number into blocks of four, starting from the right. If you don't have enough numbers, add 0s to the left.

1100 0101 1101

Put a short powers-of-two number line above each of the blocks of four; remember, the 1s and 0s always go under the powers-of-two number line.

8 4 2 1	8 4 2 1	8 4 2 1
1 1 0 0	0 1 0 1	1 1 0 1
12	5	13
12 in hex from the chart , C	5 in hex from the chart , 5	13 in hex from the chart , D

There's our number! 110001011101_2 converts to $C5D_{16}$

After you have read this, you may wish to go to p. 134 see how to use a calculator to verify your answers..

Hexadecimal, a BAD numbering system, to Binary

BAD_{16}

B	A	D
11 in hex from the chart or	10 in hex from the chart or	13 in hex from the chart or
1011	1010	1011

$1011\ 1010\ 1101_2$

After you have read this, you may wish to go to p. 134 see how to use a calculator to verify your answers.

Just for jollies, Hexadecimal, a BAD numbering system, to Decimal (just use all the skills he have learned)

BAD₁₆

B	A	D
11 in hex from the chart or	10 in hex from the chart or	13 in hex from the chart or
1011 in binary from chart of conversion	1010 in binary from chart of conversion	1101 in binary from chart of conversion

Put 101110101101 under a powers-of-two number line, add the successes to get 298910!

PRACTICE QUESTIONS

Converting decimal to binary.

13₁₀ converts to ?₂

255₁₀ converts to ?₂

5₁₀ converts to ?₂

Converting binary to decimal.

1011₂ converts to ?₁₀

111₂ converts to ?₁₀

111010₂ converts to ?₁₀

Converting hexadecimal to binary.

25₁₆ converts to ?₂

1F₁₆ converts to ?₂

F1₁₆ converts to ?₂

Converting hexadecimal to decimal.

25₁₆ converts to ?₁₀

1F₁₆ converts to ?₁₀

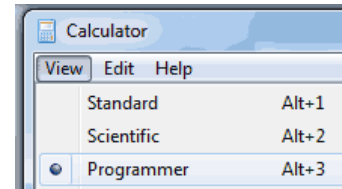
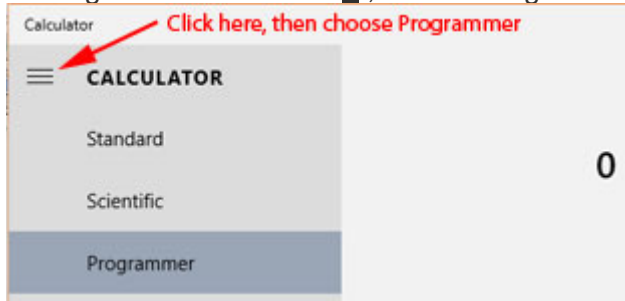
F1₁₆ converts to ?₁₀

You might want to check your answers with the Windows calculator.

Windows 10 Start > All Apps > Calculator, In earlier versions of Windows, Start > Calc
Class website has videos on Starting the Windows Calculator/Using the Windows Calculator



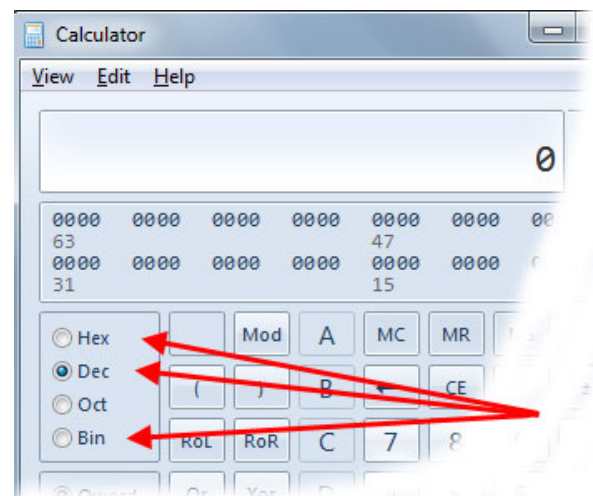
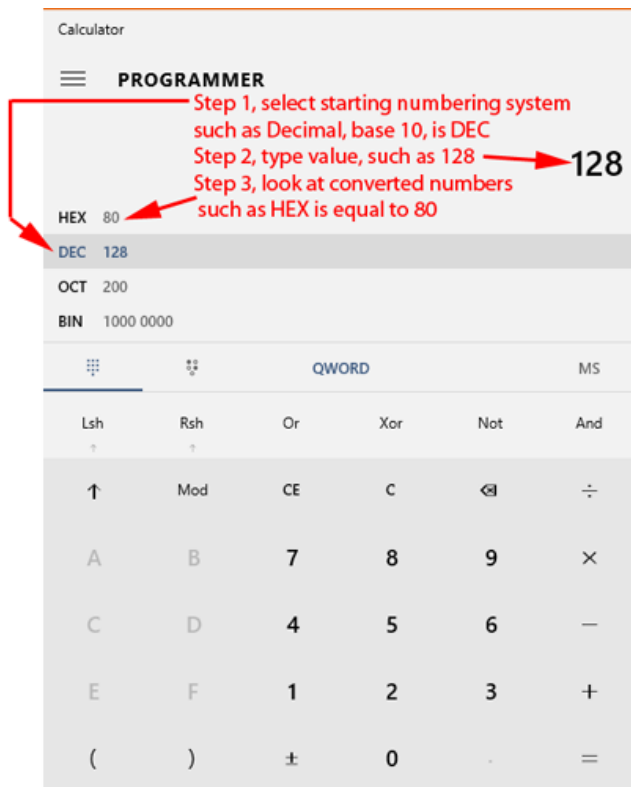
If using Windows 10 click , choose Programmer View. Win 7/8 choose View\Programmer



Mac: Macintosh HD\Applications\Calculator and then go to View ► Programmer.

- 1) If the starting number is in base $_{10}$, set the button to Dec (if base $_2$ Bin, if base $_{16}$ Hex)
- 2) enter the number to convert,
- 3) Windows 10, simply view the converted numbers
Earlier Windows: click to Bin, Dec, or Hex to convert & display the number. It's that easy

Example $128_{10}=?_{16}$ (in Win 7 the Hex, Dec, and Bin buttons are on the side, all else same)



Again

- 1) If the starting number is in base ₁₀, set the button to Dec (if base ₂ Bin, if base ₁₆ Hex)
- 2) enter the number to convert,
- 3) view result or click to Bin, Dec, or Hex to convert and display the number. It's that easy

Exponents

If you are trying to solve something like $2^8 \cdot 2^8 \cdot 2^8 = 2^{24}$, and you want to know what 2^{24} is, Type in 2

then click the x^y button (you may have to be in Scientific mode)

then type the exponent, 24

then press =, or hit the enter key to calculate



Instructor notes

Overview 6, adding color and images

I hate working in black and white for 5 weeks, so as a class, we began using color much earlier than many other books. You were lightly introduced to number theory, and hex a previously, so you had access to more color choices than the 16 word colors. (Practice web page)

You may then use the color numbers, as we have been learning, to define 16.7 million different colors, using hex values to control the red, green, and blue values.

```
<body bgcolor="#rrggbb" text="#rrggbb" link="#rrggbb" vlink="#rrggbb">
...
</body>
```

```
<body background="filename">
```

```
<body background="woodgrain.jpg">
```

Put an image BEHIND your text to add visual interest

A background image repeats to fill the entire web page.



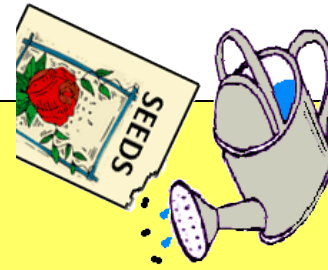
Yet another extension to the `<body ...` family of attributes is `background`, which will allow you to place an image behind your text, basically covering up the `bgcolor`. (Choose a similar `bgcolor` and use it, even with `background=`, in case the image doesn't download... your contrast is protected.) Background images should be small, to download quickly. If the image does not cover the web page, it will repeat until it does cover the page. The image should also not be so busy as to interfere with reading the contrasting colored text.

Other book may mention some other add-ons for `<body...>`, such as

`bgproperties="fixed"` so an background image does not scroll, or specifying in pixels values for `bottommargin`, `topmargin`, `leftmargin`, or `rightmargin`.

Overview 7 New Term definitions / SNEAK PEEK

Controlling text appearance in individual words



Planting seeds today...

...we will discuss this again

Aside from deprecated ``, coming up in Overview 7, something that can always change the face successfully is to use `<tt>` `</tt>`, which displays the text as a typewriter would, using a monospace font, such as Courier New, which is made to look like Courier New by using the `<tt>` `</tt>` in my code.

Another similar trick is to use `<pre>` `</pre>` (preformatted). This will display as typewriter text, but will also display the text **as typed** in Notepad, **including line breaks, spaces, and tabs**. But avoid overdoing typewriter text, it is harder to read, as it is any monospace font.

Another useful tag is the non-breaking space... this can be entered into your html to accomplish what hitting the space bar cannot, as spaces and other white space are usually ignored.

Example: the space to the left could be created with several ` ` tags.

Please note, the font tag is deprecated, meaning there are newer ways to do this in HTML 4.x. That's fine, we'll learn some of those news ways later... but this is a quick and simple way to do things now, and is still widely used.

We have been using the `` for awhile, but we can also use `` to control how big the image displays and where; but if the display is huge, requiring us to lower the height and width just to see the entire picture without scrolling, it probably means to file size is big. A file of over 20 or 30 KB will take longer to download, and a file of 1MB will drive dial up users away from your site. We need to be able to actually **adjust** the image. (Coming up in Overview 7.)

About Graphic: SNEAK PEEK

Imaging background info

See class website for links to Photoshop (Trial Version of Photoshop), GIMP (Free download of GIMP) or a similar graphic editor, to adjust images for web pages requires you to use just a few menu items...typically:

File	Edit	Image	Select
Save	Copy	Adjustments	Deselect
Save As	Paste	>Auto...	
		>Brightness...	

Save for Web Crop

Other linked readings on will introduce you to making backgrounds, gif animation, editing digital images, optimizing pages.

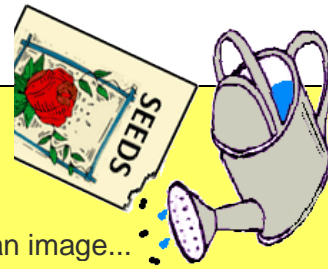
Overview 7 New Term definitions SNEEK PEEK, con'd

Image Maps and Hot spots, Definition and Sneak Peek

Image maps will be discussed more fully later.

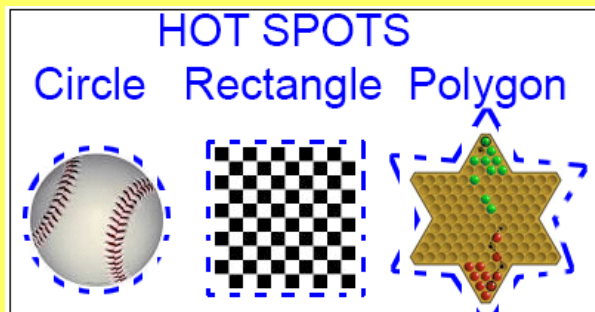
At least know that an image map places invisible *hotspots* on an image... and these hotspots are links to web pages.

That is, Image maps can allow *different parts* of an image to link to different web pages.



Planting seeds today...

...we will discuss this again

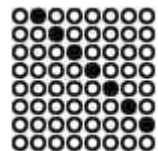


MORE ON THE WEB
Check out the class web site

On the class web site for overview 6, you will see an Image Map example.

Again, image maps will be discussed more fully during the run up to lab 7, where at that time you may refer to Image Maps on the class web site.

Colors



If you zoom in on a digital image, you would see something like the image to the left... a series of dots. The most simple image might be black and white dots... to tell the computer how to save this, you might just say white=1 and black=0.

Now think of a box of crayons, maybe then white=7, red=6, magenta=5, yellow=4, green=3, turquoise=2, blue=1, and black=0.

So numbers can represent colors. The more shades you want, the larger the number would be for each dot. But better than 8 colors would be about 200 colors, or 65,000 colors.

But in modern digital images, color is about mixing wavelengths of light to form **millions** of colors. When discussing color and computers, you normally are discussing combining various values, or intensities, of: **red, green, and blue.**

A computer monitor typically creates the colors you see with thousands and thousands of pixels, or picture elements. These tiny glowing points of light that cover your screen consist of three tiny points, one that controls the intensity or red, one for green, and one for blue.

For each dot or pixel you see on a screen, a series of 1s and 0s is being feed to the computer, indicating the values to be fed to the red, green, and blue pixel components. When you mix these pixel parts, your eyes see different colors. Normally, to get about 16 million colors, this would be sent to the computer as twenty four 1s and 0s

eight 1s and 0s for red,
eight 1s and 0s for green, and
eight 1s and 0s for blue.

Something like

110010110011110011001010
└ Red part ┘ └ Green part ┘ └ Blue part ┘

While not a problem for computers, all of these numbers get quite out of hand for people, so the three color octets are normally represented with their hexadecimal equivalents, which range from 00-FF, or 256 possibilities per primary color. (See numbers for an explanation on hex earlier in this chapter.)

And again, these primary colors are combined to generate the 16 million odd shades, and on the Internet are represented with the three hex values for red, green, and blue in sequence, such as bgcolor="#ff0000" to color the background a bright red. (Think full red, no green, and no blue)

How computers mix colors

Above, there is a binary color chart with three components involved: Red Green Blue.

In hex, it would be

XX XX XX XX
Red part Green part Blue part

that is, the amount of each color ranging from 00 (none) to FF (all) that are mixed together.

The mixture behaves like light:

add full values of red, green, and blue light,
in equal parts, and you have white light (FF FF FF).

Add no red, green or blue light, and you would be in the dark, or black (00 00 00).

See the Colors web page on the class website in Overview 6 for colorful charts on mixing 8 simple colors, up to 216 colors.

Completing Overview 6

- Submit by Test 1, check class website for due date
- Submit by 11:59 am, Friday, of the current week
(Check your Learning Management System (LMS) for specific due dates)
Details on your LMS are in the College Specific Appendix at the end of the book.
 - Lab 4 is not due until the next overview, but you should be working

MUD 6 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What topics, if any, during this time frame do you feel very comfortable with? Why?

What topics, if any, during this time frame do you not feel comfortable with?

Please include feedback on additional content provided

- Participation Discussion 6 Respond in the class LMS Discussion forum to the following:
There is no set discussion topic for overview 6, but drop a line on any topic

For the next time frame:

- Read Overview 7
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 4



Overview 7


Fonts and Graphics

Graphics and Fonts	140
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Graphics and Fonts

How Monitors Create Images


There are two real concepts in computer graphics, and they both deal with how a computer represents a line that used to be drawn on paper.

The earliest attempt at this concept is how a TV screen 'draws' pictures. If you look carefully at a TV, you see the image is actually made up of tiny dots of color, called pixels.  The proximity of certain dots of light are then interpreted by our eyes as lines and solid shapes.

The term for this simple collection of dots is bitmapped. Originally computer screens were very much like typewriters, and could only create predetermined shaped like letters on the screen.

But as the technology improved, it was decided to mimic TV and represent letter shapes by a series of dots, and if you could represent a letter, you could also represent other kinds of shapes and computer graphics were born.

You could now display a picture, or print out a picture, instead of just words.

Bitmapped means that each pixel has a value assigned to it, which is translated by us as the shape or color. So 111000111 might darken some pixels on the monitor like this , or from a distance it might look like - -.

Raster images are where the shades of an image are converted to 1s and 0s at the place where the shapes covers a particular pixel.



But the problem with this is when you try to magnify the image. A diagonal line like \ may look fine, until it is 10 times larger, and suddenly looks like a staircase.

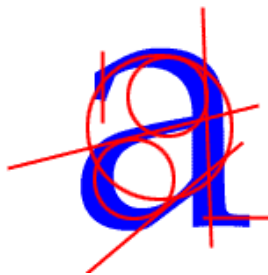
It was never really smooth, so magnifying it makes things worse.

The solution for this is was to stopped describing a line with dots, and instead describe a line with a line, or at least a formula that was understood by the computer to represent a line. That is tell the computer a line starts at the second pixel on the first row, and runs at a 35 ☐ angle to a particular pixel on the 68th line.

What was nice about this is that formulas can be manipulated to magnify the line without jagged edges.

Typed Characters (Fonts)

And since a letter of text on a screen could be described with formulas for circles and lines, we could now have scalable text, as with True Type Text.



A little bit about text shapes on computers, usually called fonts. A font is actually a collection of information, such as the shape of the letter, the thickness of the letter, the attribute of the letter, and the size of the letter. So Times New Roman, Bold, Italic, Black, and 10 pt. describes most Microsoft word characters.

(There are 72 points to an inch; so 12 pt is 1/6 of an inch high letters, measured from the highest point that any letter reaches, to the lowest possible point. Such as the top of an 'h', and the bottom of a 'y'.)

Some letters have extra doodads called serifs, which give a letter more shape, making it easier to read. A serif 'g' is a lot less likely to be read as a 'q' that the san serif version of a 'g'.

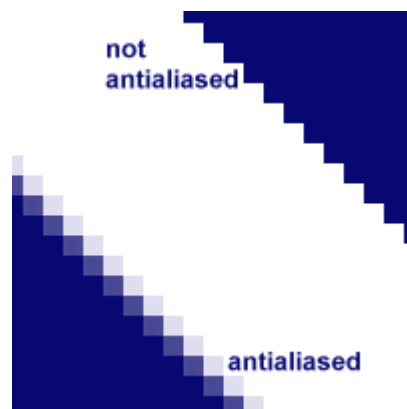
serif	san serif
g	g
1 (one) 1 (L)	l (one) l (L)
monospace	proportional
i l l	i l l
W O W	W O W

Originally computers used seven 1s and 0's to represent about 128 different shapes, or letters to display on the screen.

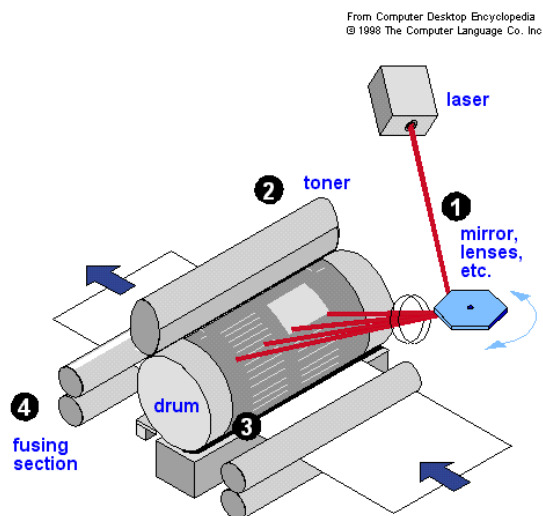
Example: 'A' was 100001 and 'a' was 110001.

Today, the Open True Type fonts use Unicode, sixteen 1s and 0s, which can represent tens of thousands of different shapes, to include not only English, but Russian, Japanese, Arabic, etc.

A final note, while True Type fonts improve scaling and display, the monitor is still a series of dots... limiting the ability to display smooth curves. This can be overcome to an extent, using partial shading of pixels to simulate smooth lines and curves... this is called anti-aliasing.



Finally, for the words and images to be printed, a ink jet printer sprays ink onto paper, using magnets to guide the ink. Laser printers use a laser to change the magnetic properties of a rolling drum where words are to appear; the magnetic toner sticks to the drum until paper passes under it, where the toner is transferred to the paper, and set with heat by a fuser.



Web Page considerations

On a web page, these attributes are controlled with the some formatting tags and the tag set, such as

```
<font size="3" face="arial"><b><i> some text </i></b></font>
```

Also, there are two options for the spacing of the letters...the difference between Times Roman and Courier for most systems. The default for Word processing and web pages is the easier to read proportional Times. Courier is the monospace option, like a typewriter, and is set with <tt> or <pre>. Monospace adds extra white space around letters, making it harder to read, and is often avoided.

(<pre>, or preformatted, also 'reads' line breaks, tabs, and spaces in text.

<tt>, or TeleType simply uses the monospace font the browser has available.)

More details on the tag set, will follow.

Graphic formats for the web

In computer images, different tools work in different ways to represent a line. Most computer graphics are created on the monitor just as you would on paper... dots of color that when viewed from a little distance look like lines and shapes. The technical term for this is a raster image. A raster based program usually creates files like Windows bitmaps (.bmp), Tagged Image File Format (.tiff), or the web usable .gif or .jpg. The latter two formats work well on the Internet because they are both compressed, meaning they take up less space than the equivalent bitmap. However, neither format scales well, so they can be difficult to magnify.

gif

The Graphic Interchange Format, or .gif, is very well suited for line drawings and solid colors, whereas .jpg is well suited for photographs that have a lot of blended colors and indistinct lines. One of the ways that .gif files stay small is that they are limited to 256 colors. For a time, graphic editors were required to pay to use the patented gif format, but that patent has since expired. When Internet connections were slower, .gif files were interlaced, meaning that not every line of the image downloaded in sequence. A rough approximation might be that on the first pass at 'drawing' a .gif, only every other line was downloaded, and then the rest of the image was 'drawn' on the second pass. Thus, the image started to display quickly, but was not clear until the entire file had downloaded. A variant of .gif is called .gif89. This variant supports

transparency as a 'color,' and also supports cartoon style animation. Many people suspect that gif will be surpassed as the format of choice for simple line drawings by png, but that has yet to happen, especially since the .gif patent has expired.

jpg

The Joint Photographic Experts Group, or .jpg (or .jpeg) format is well suited for photographs that have a lot of blended colors and indistinct lines, where the .gif is very well suited for line drawings and solid colors. The .jpg format allows files to be compressed by actually taking out part of the image. As the human eye cannot really distinguish between the subtle changes of a 4.3 billion tone rainbow that can be generated using 32 bit (2^{32}) color, simply storing color information for every pixel using 24 bits (2^{24}), or 16.7 million colors (which hex can represent) may suffice... making the file smaller, while not really changing the way the file 'looks.' You may compress a file further by going to 16 bits (2^{16}), or 65536 colors, or even less. Further, you may reduce resolution, making the image a little less crisp, to reduce a .jpg file's size... Many graphic editing programs can compress, or 'optimize,' files so that they look good, but take up less space for web delivery. More on optimization coming up.

png

The png, or Portable Network Graphics format, was designed to replace .gif, by supporting up to 48 bit (281 trillion colors), so that an image losses no information to compression, unless the user wishes to compress it, allowing the format to be used for both an original, and then a web appropriate format. It has however, not really gained a lot of support for the time being.

Bitmapped/Raster vs. Vector

While .jpg or .gif are well suited to monitor only deliver, as the monitor after all is just a bunch of dots, they may not print well, or scale. Just as True Type fonts replaced the old bitmap fonts, there is a move to stop defining pictures as simply a flat surface with dots on it. Vectors are formula based images that manipulate shapes in three dimensions, meaning you can move a shape around. Try moving a part of a printed picture... it really can't be done.

An example of a vector is a .wmf file, that clip art in Office that can grow and shrink without losing information about the shapes that were used to build the image. Unfortunately, these images don't work on the Internet, so must be converted from the vector format to a raster format. Even worse, once converted, an image cannot be changed from a raster to a vector very well.

So a rule of thumb: convert a copy of your file, leave the original alone.

Illustrator is one of the more popular vector editors.

Image Layers

One of the ideas that can be borrowed from vectors and used while editing raster images is the idea of working in three dimensions. Thus the really big difference between a simple bitmap program such as Paint, and a full featured editor such as Photoshop is layers.

This is similar to drawing one part of an image on a clear transparency, and then another part of the picture on a different transparency. That way if you want to erase part of the drawing, it doesn't necessarily mess with the other part.

When viewed together, they form a complete image which can then be 'flattened' and then turned into a .jpg or .gif. Note the image below is comprised of several layers, visible at the lower right.



A few tips

For web pages, you can only use .gif or .jpg (or perhaps png) files, others must be converted (perhaps by using GIMP, more on GIMP to come).

You may right click on an existing image on another web page, and choose Save Picture As...

or you may right click on a background image, and choose Save Background As...

but please remember copyrights!

You may search for images on most search engines, or try www.Corbis.com.

Background images should be in the background, so avoid patterns or colors that will interfere with the text on the page... and note that background images smaller than the window will tile to fill the screen. If you can't find a background you like, creating backgrounds is coming up.

Gif (more info on the class website)

Graphics Interchange Format, or gif, is an 8 bits per pixel bitmap; this means the image can have no more than 256 different shades, making it best suited for line drawings and charts.

The low number of bits yields smaller file sizes than bmp, but gif files can also be compressed, to further reduce the file size. (More about compression coming)

Originally, gif was under a patent, meaning it cost companies to add gif support to digital image editors... so there were several attempts to replace the format on the Internet. Now that the patent has expired, gif is freely distributed, and remains popular on the Internet for simple files that don't use a lot of color.

Other features that made gif popular are:

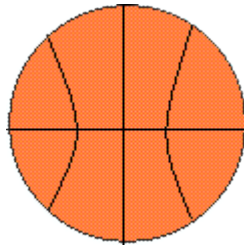
transparency

interlacing, and

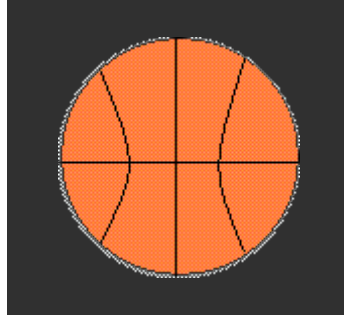
animation, and the fact that Microsoft Paint can save a simple line drawing as a gif.

Transparency

Transparency is telling the computer to ignore part of an image, so whatever is behind it shows through



File with transparent
background on
bgcolor="white"



Same file with
transparent
background on
bgcolor="black"

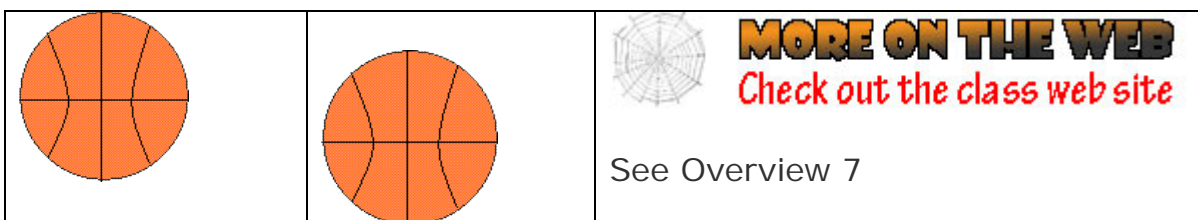
Interlaced

Interlacing is a method of displaying an image that was used primarily for slow Internet connections. Normally, an image won't display until it fully downloads. If a file was interlaced, parts of the file would display almost immediately, and the image would continue to "fill in" until the whole file was downloaded. The faster your internet connection, the faster the image would "fill in."

See the class web site for an animation on interlaced files; it continually repeats, and is actually an example of the next topic, animation.

Animation

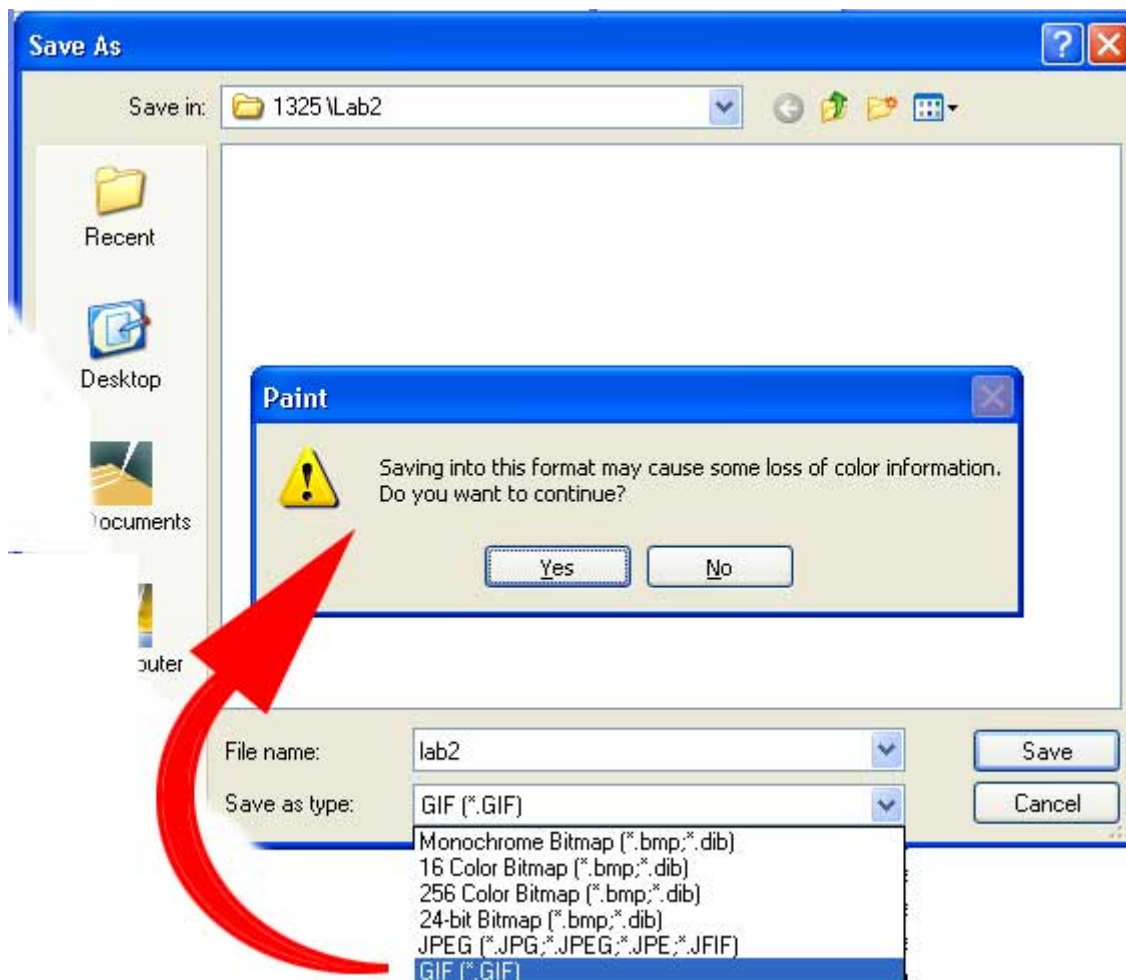
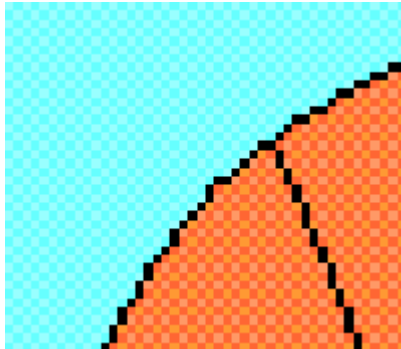
Animation with gif is the ability to store multiple images in the same file, and display them one at a time. This behaves just like a flip book kids often make... draw several images on separate sheets, then flip through the pages to see animation. (More on animation is coming up.) The animation on the class web site is just two images (ball at the top, ball at the bottom, and the as soon as it shows both, it starts over), the interlaced animation above is about 30 images. See also p. 152



Using Microsoft Paint to save as gif

If you open an existing image in Paint, you can choose File\Save As ... gif

Since the image you opened is 24 bit color, and gif is limited to 8 bit color, the computer will attempt to mix colored dots to approximate other colors, this is called dithering. Below is a close up of how Paint will dither from the limited palette.



Later, the discussion will include tools better suited to gif than Paint, such as GIMP and Photoshop

jpeg and png

Aside from gif, the only file formats that can be used by standard web browsers are jpeg and png. Not only are both jpeg and png are full color formats, both have standard feature sets... meaning most graphics editing software can be used.

The older of the two formats is jpeg, also known as jpg. The format derives its name from the Joint Photographic Experts Group, so the format is obviously well suited to photos, where as gif certainly is not. The downside for jpeg is that it does not support transparency or animation, and that to reduce file size it loses some information when being saved; this can make it harder to re-edit later. Many people will take a TIFF, edit it, then save the result as a jpeg for use on the web, keeping the TIFF in case they want to make changes in the future.

The newer of the two formats is png, which was designed from the very beginning to be an alternative to gif. Probably the biggest driving force was that the gif format at the time was legally protected, and vendors had to pay fees for its use in software they were selling. As with many open source ideas, or software that can be freely distributed without vendors (or users) having to pay money, the actual derivation of the name is subject to debate. Some say it was originally stood for **Png, Not Gif**, but these days the moniker is **P**ortable **N**etwork **G**raphics.

The png format will not replace either gif or jpeg, though it can be an alternative. The png files, like TIFF, retain all information, meaning the files remain in great shape even after editing, but the resulting file will be larger than a similar jpeg. Larger files are not popular on the Internet as they waste storage space and take longer to download, meaning jpeg will probably remain the favorite option for the time being.

Speaking of file size, when compared to gif, a png will be smaller, normally, than a similar gif. The png format not only supports transparency, but it also provides a unique translucent feature. The one thing the png lacks when compared to gif is a standard method of animation, meaning again gif will probably remain a favorite option.

So, how does one decide on which format to use? It might be a good idea to save your original files as a png file. Like TIFF, it will serve as platform that retains information, but can be used by almost any editing program. Again there should be no loss if you open your camera or scanner's full color, high quality image, and save it as a png. After editing, if the image is to be used on the web, save the new file as both a png and a jpeg;

place the smaller of the two files on your web site, as that is the file that will download the fastest.

If the image lends itself to the gif realm of simple line graphics, or you want to use transparency, after editing save the new file as both a png and a gif; place the smaller of the two files on your web site, as that is the file that will download the fastest.

This discussion keeps mentioning the "editing" of files... the bulk of the the next discussions will cover exactly what a good graphics program should be able to do with images. By and large, our output will have two paths... high quality for printing (png), or smaller file size for use on the web (jpeg). There is no difference in the editing, the only difference is what file format we save it as.

Check the class web site in Overview 7 for a comparison of jpeg and png.

Subsequent discussions will not only focus on getting the smallest file for the web, but also balancing file size with the quality of the file... this is called optimization.

HTML [Deprecated]

The tag set is used in HTML 3 coding to change the attributes of a single word or phrase, whereas the <body text="..."> </body> tag/ attribute set the default value of the document's text color.

To modify a single word or phrase to be a different color than the default value, surround the text to be modified with the
 tag and attribute set.

Example

And some text goes here

would display as

And **some text** goes here. (*some* and *text* are blue, but only those words.)

Other attributes to use with

 where the value is an absolute size, such as 4 (the default is 3, so size="4" would make the text slightly larger than the default), or a relative size, such as "+1"
(this would make any surrounded text one size larger than it was before... including some text that already had the size altered).

You can also mix or match ` `, such as
` `

Example

And `some text` goes here

would display as

And some **text** goes here (both *some* and *text* are larger, but only *text* is blue.)

Note, two `` tags were used, so two `` tags are required.
The size is increased for two words, and the color is changed for just one, based on where the tag was started.

The last attribute to use with ` `

` `

Note, this changes the typeface of the characters, but **MUST** use a typeface installed on the USER'S computer... if they don't have the typeface specified, the browser will pick what IT thinks is close, and your page will look very different on the user's machine. Most Windows computers have Arial, Times Roman, Courier, etc., but Mac users do not. You can specify a series of typefaces to try, but you will still typically have users who can't see the page the way you do, so use this attribute **VERY** sparingly, and string together other options to try.

Example

`Here is Arial`
`
`
`And some text`
`
`
`goes here`

would display as

Here is Arial
And some text
goes here.

Note: the second line is typewriter style text, and the third line is newspaper style text.

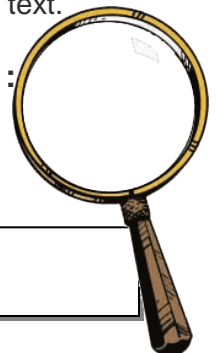
Putting them together (HEY, this looks like part of a lab; hint, hint...) :

`Small blue Times`

would display as

Small blue Times (everything Times, everything blue, everything small.)

NOTE: `` is deprecated, and is being phased out by `<style>`.
But, you have to learn to walk before you run, so we **WILL** practice ``



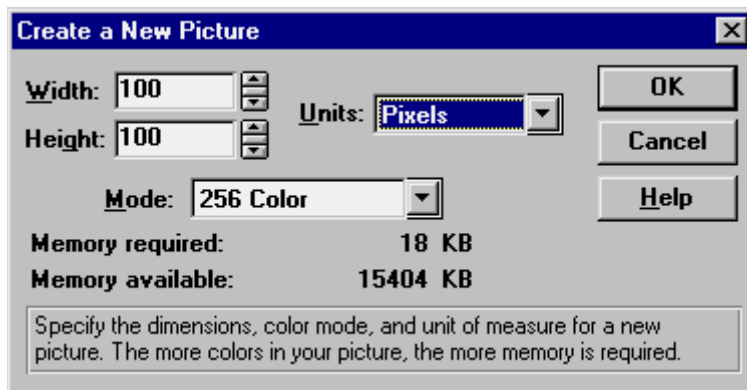
Gif Animation

Creating an animated .gif file is actually a pretty straight forward proposition, requiring just three basic steps: create the original images, import the images into an assembly program (such as Gifcon32 or unFREEz), then optionally add controls.

An important note is that many graphic programs cannot display the resulting animation... **you may need to use your browser to view any animation you create. (Right click the file, Choose View With and choose your browser)**

Note: If you don't want to create animations, many are available online, just be careful that you don't violate a copyright.

Step 1) Create a new image, defined at 256 colors*, in the size desired; the smaller the better. For this example, an image, below, was defined about 100 by 100 pixels.



*Paint will not let you set color depth in advance, the color depth control will occur when you save the image using the gif format.

Step 1 if using the old version of Paint

Differences between old Paint and newer versions follow, on page 159.

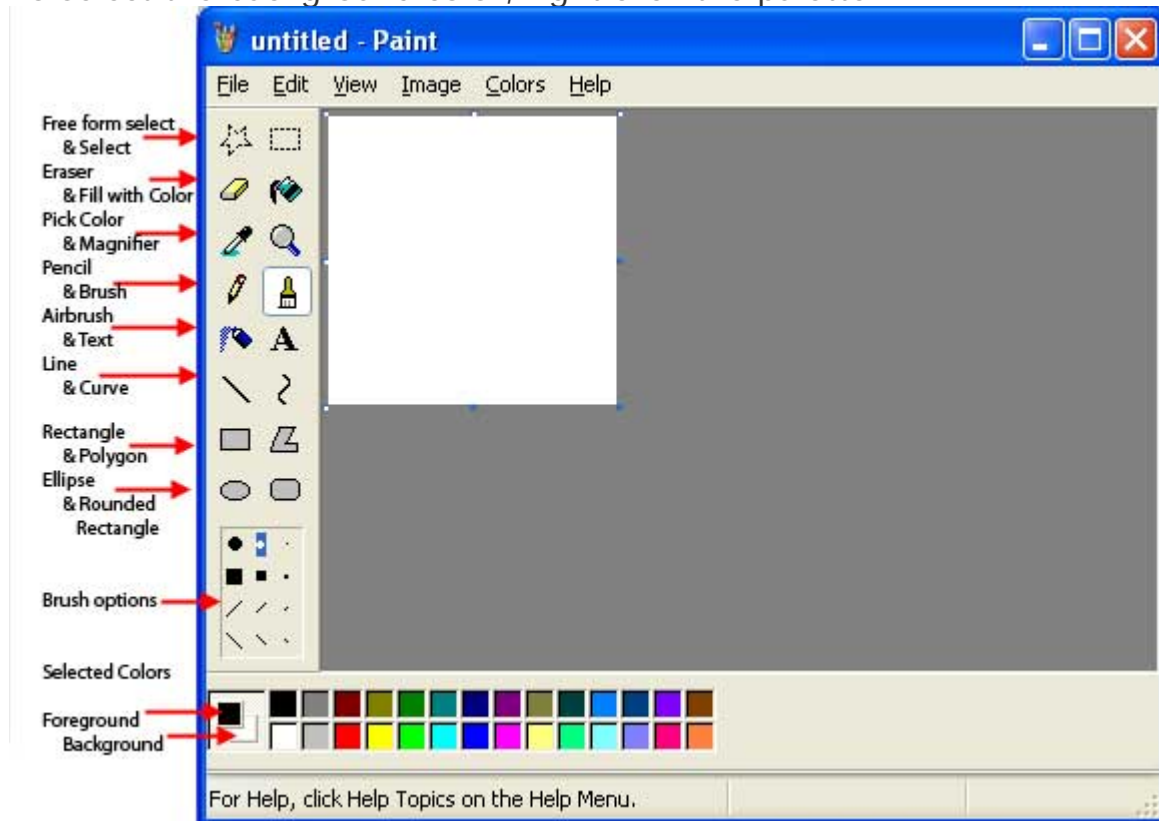
Below is a list of the tools found in Paint. These are similar to tools found in almost all digital image editing software.

Note: the Options part of the window changes, depending on what tool is selected.

The class website of Overview 7 also includes a link to a video on this topic.



To select the foreground color, click the palette
To select the background color, right click the palette

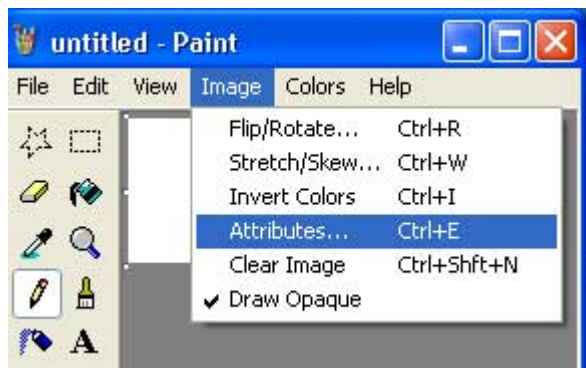


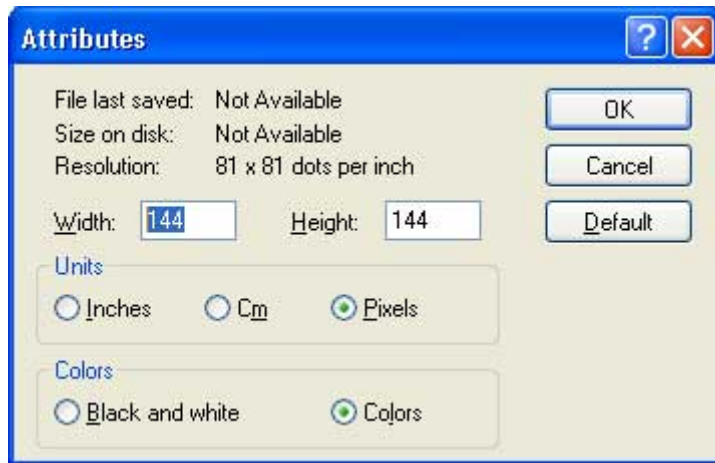
Experiment with the tools and options before beginning activity.

Create a folder named ani. You will be saving the Paint file in this folder.

For the lab, begin by setting the size of the image.

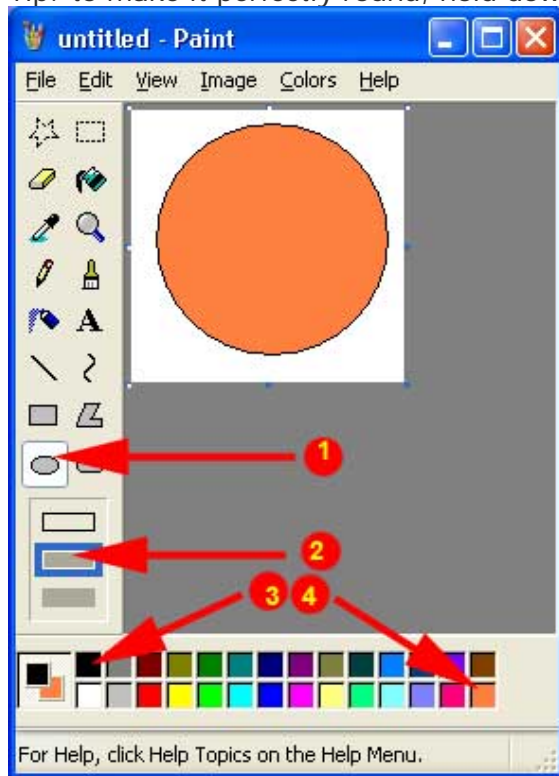
This can be measured in pixel, inches, etc. We will use pixels. Many times the screen resolutions is between 72 and 96 dpi, so an image 144 pixels by 144 pixels would be about 2 inches square.





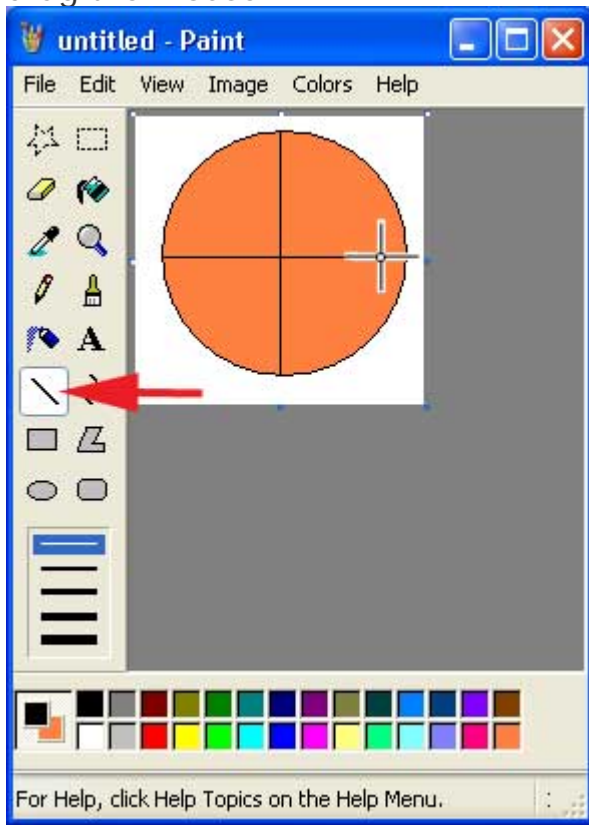
To get a round shape that has a black outline and an orange interior:

- 1) Choose the Ellipse tool
 - 2) In the options area, choose the middle box.
- This will use the foreground color for the outside, and the background color for the inside.
 (The top option would be just the black outline, the bottom option would be a solid color)
- 3) Choose black as the foreground color by clicking the black square on the palette.
 - 4) Choose orange as the background color by RIGHT clicking the orange square on the palette.
 - 5) Click the left mouse button and drag the mouse to form the oval.
- Tip: to make it perfectly round, hold down the Shift key as you drag the mouse.



Now choose the Line tool and draw the vertical and horizontal lines by dragging the mouse

Tip: to make the lines perfectly straight, hold down the Shift key as you drag the mouse



Now, choose the Curve tool.

Draw a straight line to the left of your vertical line

Click in the middle of the new line, and drag it toward the vertical line to curve it.

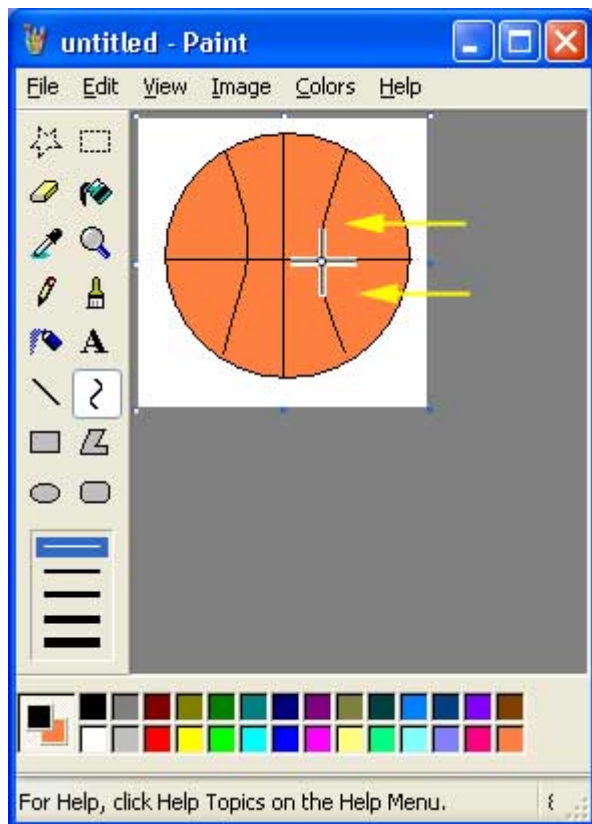
IMPORTANT: to lock in the new shape, click on some other tool, like the selection tool.

Now, choose the Curve tool again.

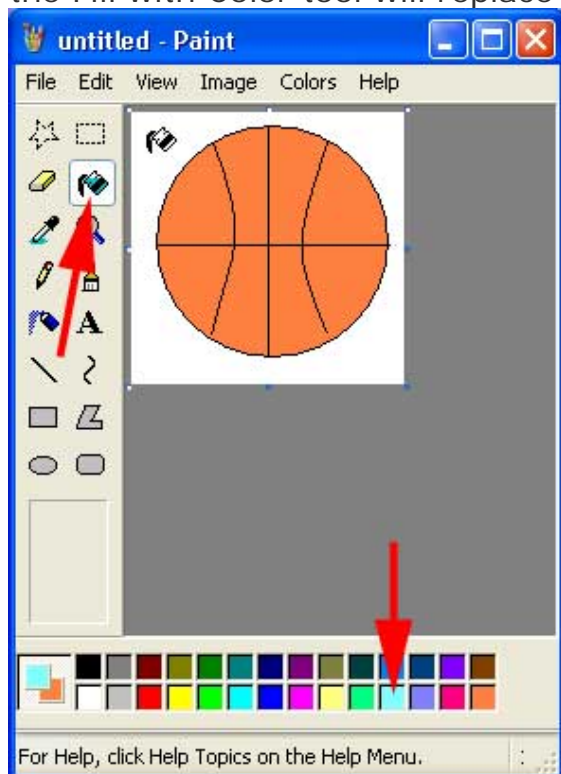
Draw a straight line to the right of your vertical line

Click in the middle of the new line, and drag it toward the vertical line to curve it.

IMPORTANT: to lock in the new shape, click on some other tool, like the selection tool.



Optional, to fill the white canvas with a different color. The Fill with Color tool will flood a connected area with the color you choose. Note: if there is any gap in any lines or circles, the Fill with Color tool will replace the old color

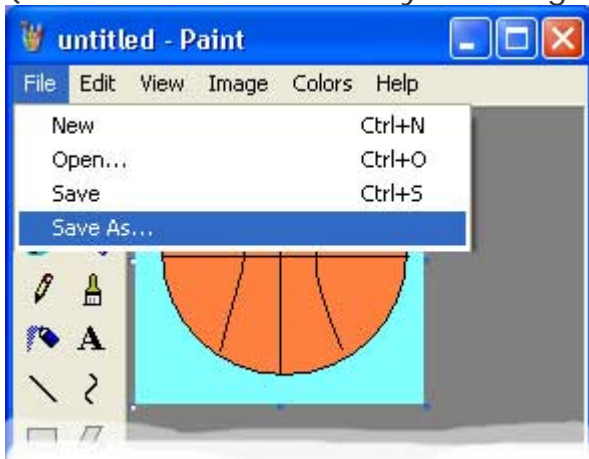


The final product should look something like this:

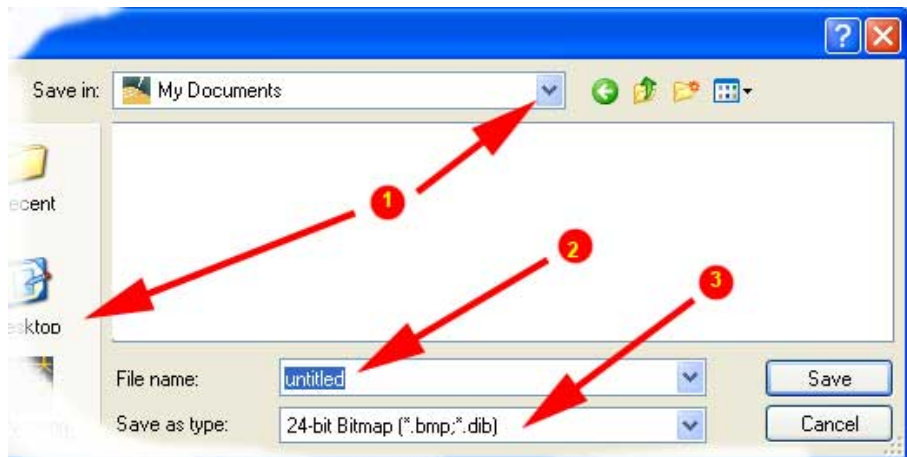


Now, to save our masterpiece.

Since this is a new file, we will use File/Save As
(File/Save is used when you change an existing file)



- 1) Choose where you want to save your image (ani folder)
- 2) Choose the name you wish to use (ball.gif)
- 3) Make sure it will be saved as .gif (which can be animated)

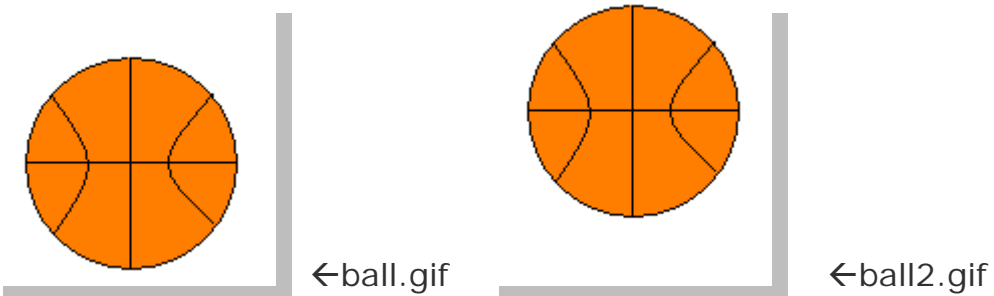


NOTE: For item 3, DO NOT USE THE DEFAULT .bmp, choose .gif

Once you choose Save, you'll see the name of your image on the title bar.

Now, create a slightly different image, perhaps with the ball in a different position, and save this as ball2.gif.

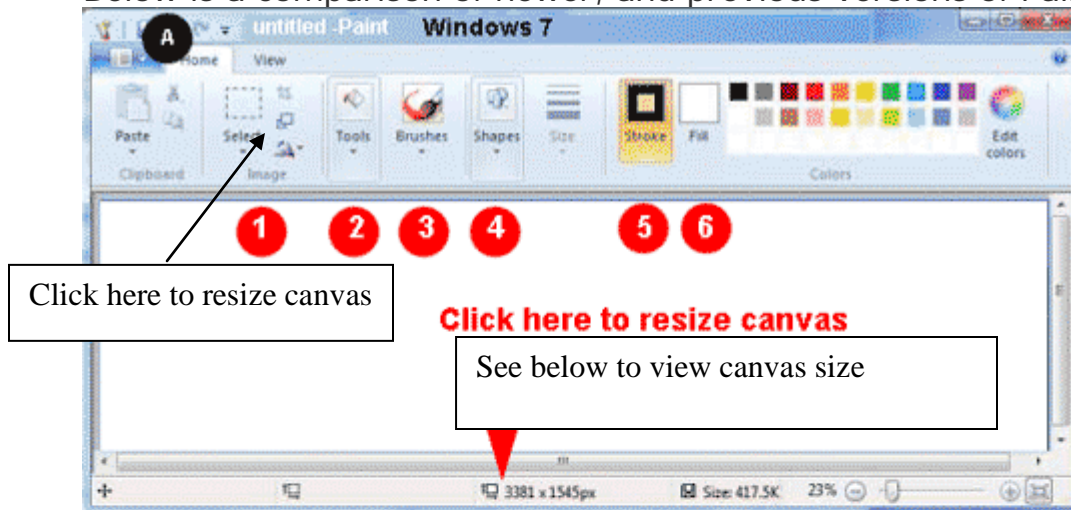
You may also open your original image, and modify that image so that the ball is in a slightly different position, then save as ball2.gif.



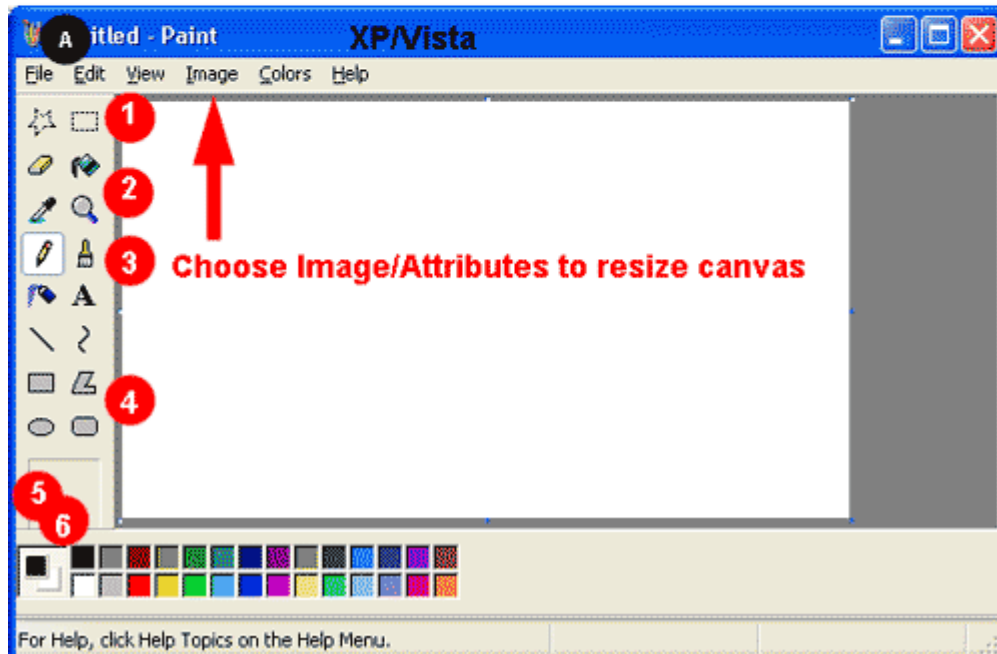
All we need to create a simple animation is a minimum of two different images.

Notes:

Below is a comparison of newer, and previous versions of Paint



- A) File menu
 1) Selection tools
 2) Other tools
 3) Brush
 4) Shapes
 5/6) Foreground/background color



The class website version of the lab also includes a link to a video on this topic.

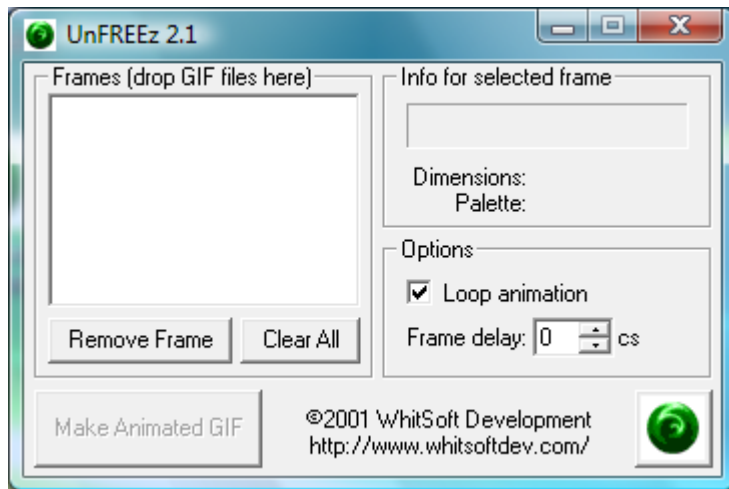


Step 2) Animating .gif's

There are many tools that you may choose to animate the above files. A simple, free program, is unFREEz, available at <http://www.whitsoftdev.com/unfreez/>

You simply drag your .gif files in, and optionally set the frame delay between the images. Save your file in the ani folder, and call your fill

aniball.gif. Add the path to this file to an existing web page to see the result.



The class website of Overview 7 also includes a link to a video on this topic.

Backgrounds

Why use a background image?

Background images add visual interest to a page.

Why use a background image AND a background color?

Image you have chosen to use a photo of a star field at night for your background. In order for your text to show up, you set

`text="white" OR text="#ffffff"`

so that the text shows up again is the mostly black image. But what if your background image doesn't download? Then you have white text against the default white background... and no one can read it. So, you should always set your bgcolor to approximate your background image, in case the background doesn't make it to the user's computer, to afford the same contrast and legibility.

If you have photographs, these can be scanned to disk, then converted, as well. Most film developing stores can convert film or photos to disk

A few rules of thumb on backgrounds...

Backgrounds should not detract from your words, choose 'soft' colors. To decrease download time, create small images that will tile (repeat) across the browser window.

To create a background image:

Open Paint or Paintbrush in the Accessories area



or



or Photoshop, if you are familiar with it.

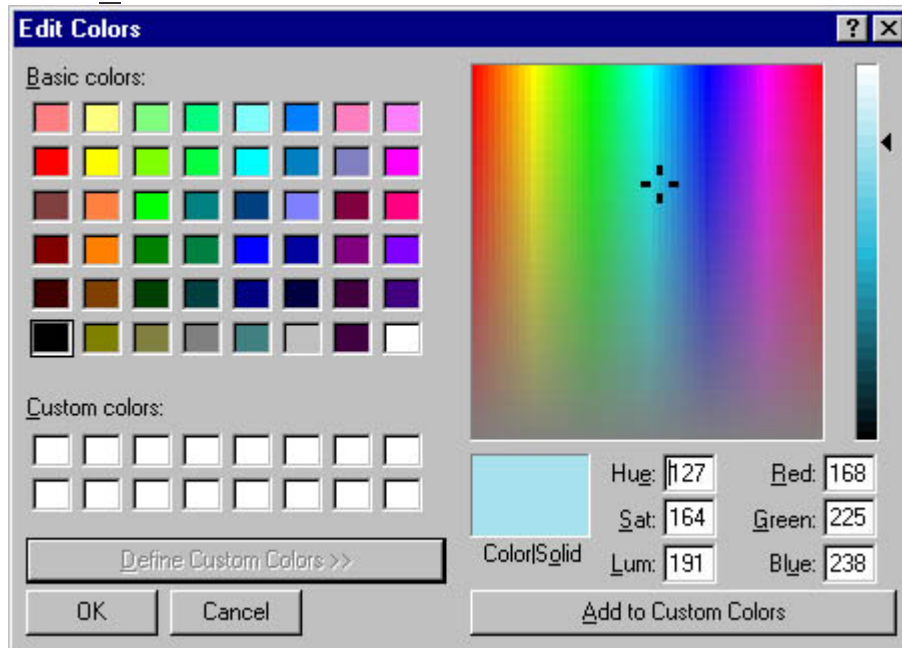
As before, set the image attributes, this time to perhaps 72x72 pixels.

Edit a color to make it softer, by going to Options / Edit Colors.

Choose Define Custom Colors >> ,

and move the crosshair, slider, or adjust the RGB to the desired color.

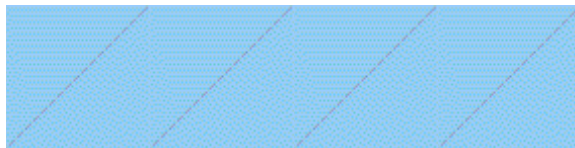
Then Add to Custom Colors.



Fill the area with the chosen color, then perhaps draw a diagonal line in a complementary color across the palette. Save as a gif file, and set as a background



The single image above will tile, that is, repeat, until it fills the screen



Tiled Image

The class website of Overview 7 also includes a link to a video on this topic.

The class website of Overview 7 also includes a link to some free background images.



Editing Digital Images

Many times the images you have collected, whether by camera or by some other means, are not quite suitable for your presentation. The colors may be off, or the image is too small, or perhaps something distracting in the image needs to be removed. Most cameras come with some basic photo editing software. There are also software packages that are a little more fully features available as well. Some popular photo editing software (if your camera's package isn't what you need).

- Photoshop (<http://www.adobe.com>)
 - The current standard. On the expensive side. Try out versions available.
Photoshop Elements is great for Web Page support, and is quite a bit cheaper.
- GIMP (<http://www.gimp.org>)
 - FREE, Not as slick as PhotoShop, but very powerful.
How to use GIMP:
- Paint
 - Most computers come with a paint program. Often these tools can open, crop, resize, and save images to a new format. Not great, but already on your machine.

The most basic steps in photo editing are: crop, resize, adjust brightness and contrast, adjust color balance or hue/saturation, and changing the resolution. While photo editing differs from package to package, they use similar steps that apply to all.

Note: the following steps permanently change your images. If you wish, you can make a copy of your image, then apply the changes you need for a particular presentation. .

Crop: Removing unwanted areas of an image



To crop an image

Choose the selection tool. Often the icon is a dashed rectangle.



1. Place the pointer at the top left area that you want to include
2. Hold down the left mouse button
3. Drag the mouse to the lower right corner of the area you want to include. The area should now be surrounded by a flashing dashed rectangle.
4. Issue the crop command, often under the image or edit menu. Only the selected area remains.

Many packages come with a circular selection tool as well. Some editing software will also let you define an irregular area. However, when round or irregularly shaped cropped areas are cropped, they typically are dropped into a white rectangle.

Resize

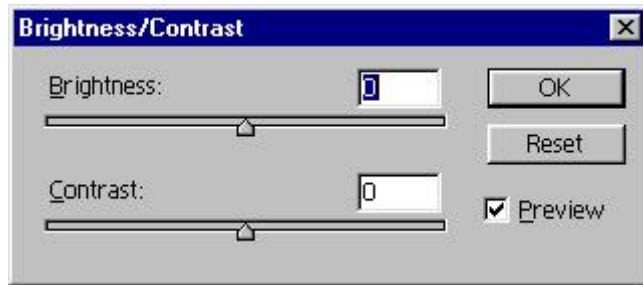
- Changing the dimensions of an image. Images typically can shrink well, but unless it is a very high resolution image, they do not grow well
- If you are planning on printing the image, no other steps need to be done in the resize arena. However, if you are planning to only use the image for monitor or projector viewing, you may be able to reduce the resolution of the image without a noticeable change in the quality of the image, as monitors aren't capable of delivering the sharpness of photographs. A resolution of between 72 and 96 dpi (dots per inch) works well for monitors. Do this step first, before resizing.



To resize an image, select the resize command from the edit or image menu. You may keep the proportions locked, or skew the image by changing the height and width separately.

Brightness and contrast

If an image was captured in a poor lighting situation, either too much or too little, you may be able to compensate a little by adjusting the brightness and contrast. This is normally done with sliders found under the Image/Adjustment menu item, or something similar. Many packages allow you to preview the results as you move the slider. As a rule, you should adjust both values, alternating between one and then the other.



Color balance

If an image was captured in a poor lighting situation, either too much or too little, you may be able to compensate for the resultant changes in color by adjusting the color balance, or hue/saturation. This again is normally done with sliders found under the Image/Adjustment menu item, or something similar. Many packages allow you to preview the results as you move the sliders. As before, it will be a trial and error process, and you should make small changes to all values, alternating between one and then the other.

Saving changes

There are many formats you may save your edited photos in. Some create very sharp files, but also take up a lot of disk space. If the image is for printing, this is desirable, so you might choose the TIFF format. If the image is for a monitor or projector screen, you don't need all of that data. JPG or JPEG works very well, and takes up less space than TIFF. GIF works well only for non-photographic images, such as charts. Only JPG and GIF are widely supported if you plan to use the image on the web.

Other Methods to Acquire Images

While a digital camera certainly allows you to capture digital images to add to your presentations, there are other ways to get images.

Print Screen. If you wish to capture some computer output on your monitor, Windows users can press the [PrtScn] (Print Screen) button on their keyboards. This copies the image on the monitor to the computer's memory, where it can be pasted into an image in your photo editing software.

Scanner. If you have an image, but it is not in digital form, you may be able to scan it. Working with the same technology as digital cameras, they function very much like a copy machine.

Steps to scan. Note, just as with cameras, your scanner and software may vary slightly. These steps should be similar to your system, whether it is a \$49 bargain, or a pro 32 bit drum scanner.

1. Place the image to be copied on the glass, and cover.
2. Press the preview button.
3. Move the selection area in order to just scan the rectangular area of what you need.
4. Set the color depth
 - *Line art (black and white)
 - *Gray Scale (usually 256 shades of gray)
 - *Full Color (May range from 256 colors to the millions, the more the better for photographs, but the larger the file size becomes).
5. Set the resolution.

Again, the higher resolution settings are needed for printing, but 72-96 dpi works well for monitor, web, or projection.
6. Set the scale.

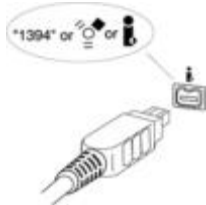
High-resolution scans grow, so your 3x5 image may scan 15x25 inches! You may wish to choose 50%, to keep image, and the file size, down.
7. Save the scanned image, and edit with your software, as before. A rule of thumb: start with the best scan you can store, then reduce the size and resolution with your photo editing software package, using trial and error to avoid losing too much detail in the capture process.

Other types of presentation media

While still images are the most common addition to a presentation, software such as PowerPoint can also display many other types of media, such as sound, animation, and video. These digital files are inserted in just the same fashion as still images. As with still images, there are several ways to acquire presentation media. One is to create it. Learning to use Flash or Shockwave can be beyond your comfort range, but recall, many digital cameras act as video systems too.

Optional: Capturing Video

Start the video software that comes with your camera. A 'postage stamp' window should open, and you will be able to see what the camera is pointed at. Locate the record button, and when ready, depress it. When you are finished, press the stop button, or toggle off the record button, just as you would a VCR. You may be prompted to enter a file name and location. Most cameras saving video on Windows machines will use the avi format. Macintosh users will likely get a QuickTime format. To get better quality video, you may be able to simply plug your digital 8 mm digital camera into a USB 2 or Firewire (IEEE 1394) port on your computer, especially if you have a Macintosh. The latest releases of the Windows and Macintosh actually come with software to edit the video, such as cutting out scenes, moving scenes, adding titles, etc.



Firewire connection and symbols.

Web Search.

Another way to get media for presentations is pull it off the Internet. Remember copyright!

One of the key aspects to creating potent presentations is the ability to include powerful images to augment your talking points. Many times you will not have a photo available of your slide topic, but digital cameras allow digital capturing of images to fill that gap. Or perhaps you have an image, but it is too dark, or the wrong size for use. The Photo editing software that comes with a camera, or which can be acquired separately, can make those corrections happen.

Optional: Digital Camera Features

Digital Cameras vary, not only in features, such as capacity, resolution, flash and zoom, but also with the method of retrieving, saving, and erasing images. Another difference will be in the software that comes with the camera, and how limited or feature rich the software is. The following is a generic guide to the operation of cameras and editing software, from the \$49 models to the pro versions.

- Taking pictures

- Most digital cameras operate exactly as traditional film cameras, though digital cameras may have a noticeable delay from the time the shutter button is pressed, until the picture is taken. Almost all digital cameras include a sound effect to let you know when the image has been captured. Some cameras have a screen to review the images in memory.
 - Instead of light hitting film to capture an image, digital cameras use a semiconductor to collect information. Today's digital cameras typically use a CCD (*charge-coupled device*) for high-end cameras, and CMOS (*complementary metal oxide semiconductor*) systems for low-end cameras.
- Resolution
 - Refers to the amount of data collected for an image, which is reflected in how clear the image is. The sharper the image, the more memory that is required. Cameras with higher megapixel values are capable of capturing more detailed photographs.
 - Resolution also refers to the size of the image that will display on your computer monitor, such as 640 x 480 pixels, or 1280 x 768 pixels.
- Capacity
 - Most digital cameras come with a set amount of memory to store the digitally captured images. If a lower resolution is chosen for a picture, it will require less memory, allowing more pictures to be taken.
 - Some cameras have removable memory, allowing a replacement memory stick to be swapped with the original, much like carrying extra rolls of film for a traditional camera.
- Lighting
 - Many digital cameras will allow you to adjust for various lighting situations, such as for taking pictures in the following situations:
 - Sunshiny daylight
 - Cloudy daylight
 - Normal indoor lighting
 - Fluorescent lighting
 - Fluorescent lights often add a yellowish tint, this adjustment compensates for the color difference.
 - As with a traditional camera, to compensate for any low light situation, the shutter collects the image for a longer time, which may lead to blurry images.
- Special Digital Camera Features
 - For an additional cost, you can find cameras with the following features
 - Built in Flash. These may accelerate the drain on the camera's battery.
 - Rechargeable batteries. Many digital cameras can recharge while in their cradle connected to the computer.
 - Zoom lens
 - Sound recorder and microphone. Allows users to add a voice note to a picture; however this mode typically reduces the number of images that may be taken, as the memory is now divided for sound and images.
 - Video. Some digital cameras can capture a few seconds of video to the memory, or if connected to a computer, may use the computer's hard drive to capture video. Video captured to the camera's memory may be choppy. Video delivered to the hard drive is not full screen, but typically very good quality. These types of cameras may also be used as a web cam, to send video across the Internet. The quality of these video on the receivers end is typically poor, but suitable for long distance chatting.

- Retrieving images
 - Camera connections
 - Most digital cameras today use a USB (Universal Serial Device) connection, either from the camera to the computer, or from the camera's cradle to the computer. Most new computers have two or more USB slots. A special driver that comes with the camera may need to be loaded on the computer.



- Viewing
 - Part of the installation process for the digital camera system is to load included software on the computer. Once the camera is connected to the computer, often pressing the shutter or a special button on the cradle will start the software for the digital camera. You can also start the software in the typical application fashion.
 - Many times if automatically started from the camera, the computer will retrieve all the images in the cameras memory, and place them in some sort of thumbnail views album. If this is not automatic, there will be a Get Pictures from Camera command, usually under the file menu.
 - Normally, you can click on a thumbnail to view the image full size.
 - Digital camera systems vary, in some systems you are viewing the images from the cameras memory, other times the images are copied to the computer. If you are using a system that simply displays the images from the camera's memory, you **MUST** save the images you wish to keep to the computer before you erase the cameras memory.
- Saving
 - Typically, to save an image, select the thumbnail, then use the standard File/Save As command, and choose a filename and location to save the image.
- Erasing
 - Once the image has been saved, there is usually no reason to take up space in the camera's memory. Most cameras will allow the memory to be cleared both from the camera itself, and from the software package. Some cameras can only clear memory from one or the other.
 - Some, but not all, cameras will allow you to select only certain images to delete, others will erase all the images... check the particulars on your system. The ability to remove a bad picture from memory right after taking it, to free up space, before transferring to the computer is a very nice feature to have.

Using GIMP or Photoshop

See Class web site.



The class website of Overview 7 also includes links to videos on this topic.

Bandwidth

How long does it take to fill a kiddie pool with a garden hose with the spigot mostly closed? (Analog phone line, say.)

How long would it take to fill the same pool with a garden hose with the spigot opened all the way? (ISDN digital phone line, say.)

How about with a fire hose? (Broadband.) The water isn't moving any faster than the garden hose, there is just more water being moved.



Bandwidth is the amount of information that can be moved across the Internet in a given amount of time; usually measure in bits per second. Just as with the garden hose vs. the fire hose, at some point you just can't move stuff any faster... but you can move **more of it at a time**.

So bandwidth is less about speed (the transfer rate of an individual bit per second) than it is about quantity (the total number of bits transferred per second); the more you move, the faster it appears!

An analog phone line's 'speed' is measured from about 28 kilobits to 56 kilobits per second. A digital phone line can be about 128 kilobits per second. But most **broadband** connections all can move at about 1.544 megabits per second. What separates DSL from T1 and T3 broadband connections is the additional capacity... a T1 has perhaps the capacity of about 24 ISDN 'hoses' while a T3 has the capacity of perhaps 28 T1 'hoses.'

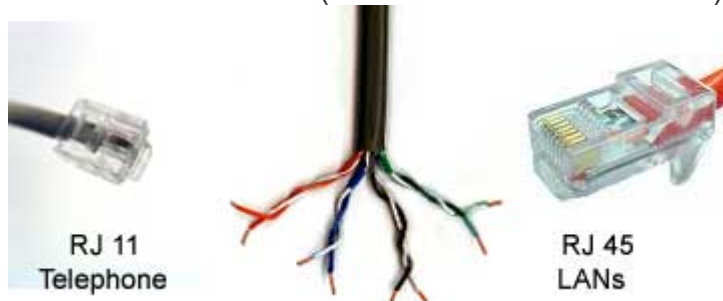
Connection	Capacity	Time to download 3 MB	Time to download 30 MB
Dial Up	14.4 to 56 Kb	7 minutes to 31 minutes	69 minutes to 5 hours
ISDN	~128 Kb	3 minutes	30 minutes
DSL/Cable	128 Kb~1.544 Mb	37 seconds at 640Kb	6 minutes at 640Kb
T1	1.544 Mb	15 seconds	2 minutes 30 seconds
Wireless LAN	to 10 Mb	1 second	24 seconds
T3	44.736 Mb	less than one second	5 seconds
Wired LAN	100 Mb	less than one second	2 seconds
Fiber Optic	to 2.488 Gb	less than one second	less than one second

Again, a lot of the bits travel about the same speed, but a T3 can move many more bits at a time, giving it a faster download time. Fiber Optic does not have the 1.544 Mb limit, but rather is limited by how fast the sending device can put information into the network.

Note: LANs are fast at retrieving local data, but will be limited to the Internet connection method speed for downloads.

Dial up Phone line (Cat 3 Twisted Pair) uses RJ11 connectors

Ethernet network line (Cat 5 or Cat 6 Twisted Pair) uses RJ45 connectors



Coax (coaxial) cable and connector



Fiber Optic cable (normally many cables bundled) and FDDI connector



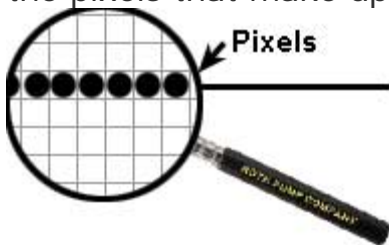
Compression

Zippping reduces file size, called compression. But some files are compressed when saved, especially images.

Again, compression is about reducing file size; smaller files take up less space on hard drives, and download faster. Basically, there are two ways to compress a file, to remove redundant or superfluous data.

Redundant data is repeated data; as computers are very good at detecting and repeating patterns, this is a favorite method of compression.

Example: Let's say we point a digital camera at a white board, and snap a picture. The camera detects colors at various points, usually by dividing the image to be captured into rows and columns, then collecting color information at the intersections. VGA resolution is 640 points along the horizontal, and 480 rows, for just over 30700 pixels, or picture elements. Below is a magnified view of a line on that white board, so you may see the pixels that make up the image.



Each pixel is represented by a series of 1s and 0s that dictate the color... some cameras will assign twenty four 1s and 0s to each pixel, allowing up to 16.7 million colors to be represented at that single point. That means you have $640 \times 480 \times 24$, or a total of 7372800 1s and 0s for that one image. That is just over 7 megabytes! Obviously, we need to compress the image, and one way is to get rid of the redundancy. On the rows that are just white pixels, instead of saying 'white pixel,' 'white pixel,' 'white pixel' over and over, why not just tell the computer to repeat the white pixel 640 times. And if you have 400 or 500 similar rows, why not tell the computer to repeat the 'white row' 400 or 500 times? This immediately gets rid of a lot of 1s and 0s, making the file smaller. The file has not changed, just how we describe it. This is called loss-less compression.

Another way to compress a file is to remove 'extra' information.

Example: consider $2+2=4$. Is there any part of that statement that does not need to be stored? The computer can add $2+2$, so why store the answer? The answer will not change the next time it is added, to the answer is superfluous, or extra.

Now, consider a picture of a rainbow. Can you really detect the 16.7 million shades, or would 256 shades get your point across? Moving from

24 bit color to 8 bit color, thus removing some of the 1s and 0s that indicate color, you can compress a file by removing the 'extra' color information, and a lot of 1s and zeros that make up the file. The file has changed, but perhaps not in a meaningful way. This is called lossy compression.

The image below on the left is a jpg; while still compressed, it is still a good image. (More about jpg later.) However, on the right, that image has been stripped down to 216 colors; now, there is no smooth transition between shades. This would NOT be a good compression, as TOO much info was removed.

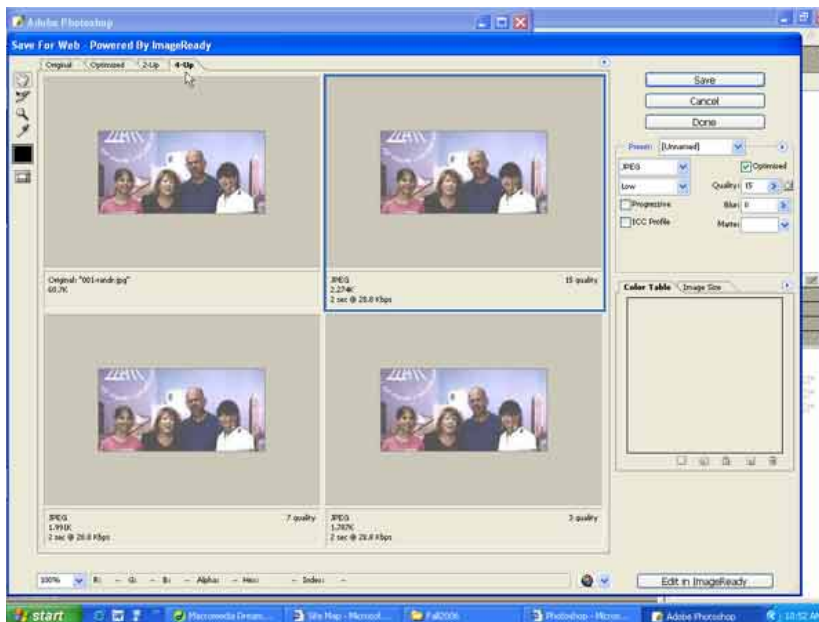
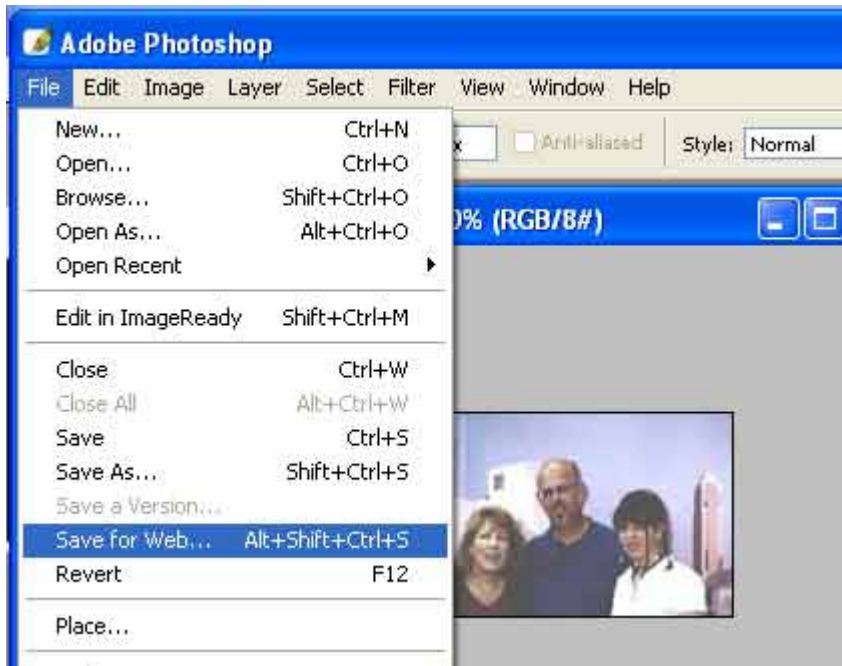
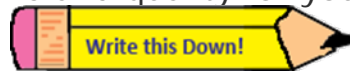


In images, a .bmp file is lightly compressed, and not good for say Internet downloads as the files stay large. So instead, you could use .gif, if your file is limited to 256 colors, as in a pie chart. If it is an photograph, as above, use .jpg which allows for more colors, but still has good compression.

PS, that 7 MB picture of the white board can compress to 900 KB (24 bit 16.7 million shades bitmap image), or 37 KB (monochrome bitmap image)... or a 5 KB jpg file... but since we don't need a lot of colors, it is best suited to be a gif, which comes in at mere 1.7 KB! From 7 MB to 2 KB without losing the meaning... that is about 2400% improvement in storage space, and download time.

Optimizing

Photoshop: Aside from simply using the Photoshop (or similar product) **File Save As** option, to save the image as a jpg (or gif, if a simple chart or drawing), better yet, **File/save for web...** to optimize the file; that is, to get the right blend of file size and quality for your web page, and the best possible download time.



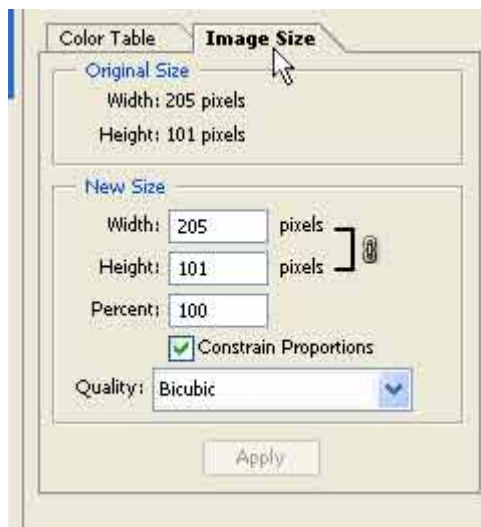
In Photoshop, Image Ready is started if you choose to save as a web page. I prefer to choose the 4 up display, where I can try different scenarios on three images aside from the original, to preview quality and file size. Select one of the 'test' images, and make sure JPEG is selected in the upper right hand. Then choose 'High.'

Select another of the 'test' images, and make sure JPEG is selected in the upper right hand. Then choose Medium.

Select the last 'test' images, and make sure JPEG is selected in the upper right hand. Then choose Low.

Below each image will be the file size if that option is selected, and the approximate download time.

You may also shrink an image, by selecting the 'test' image, and then choose Image Size on the tab to the right.



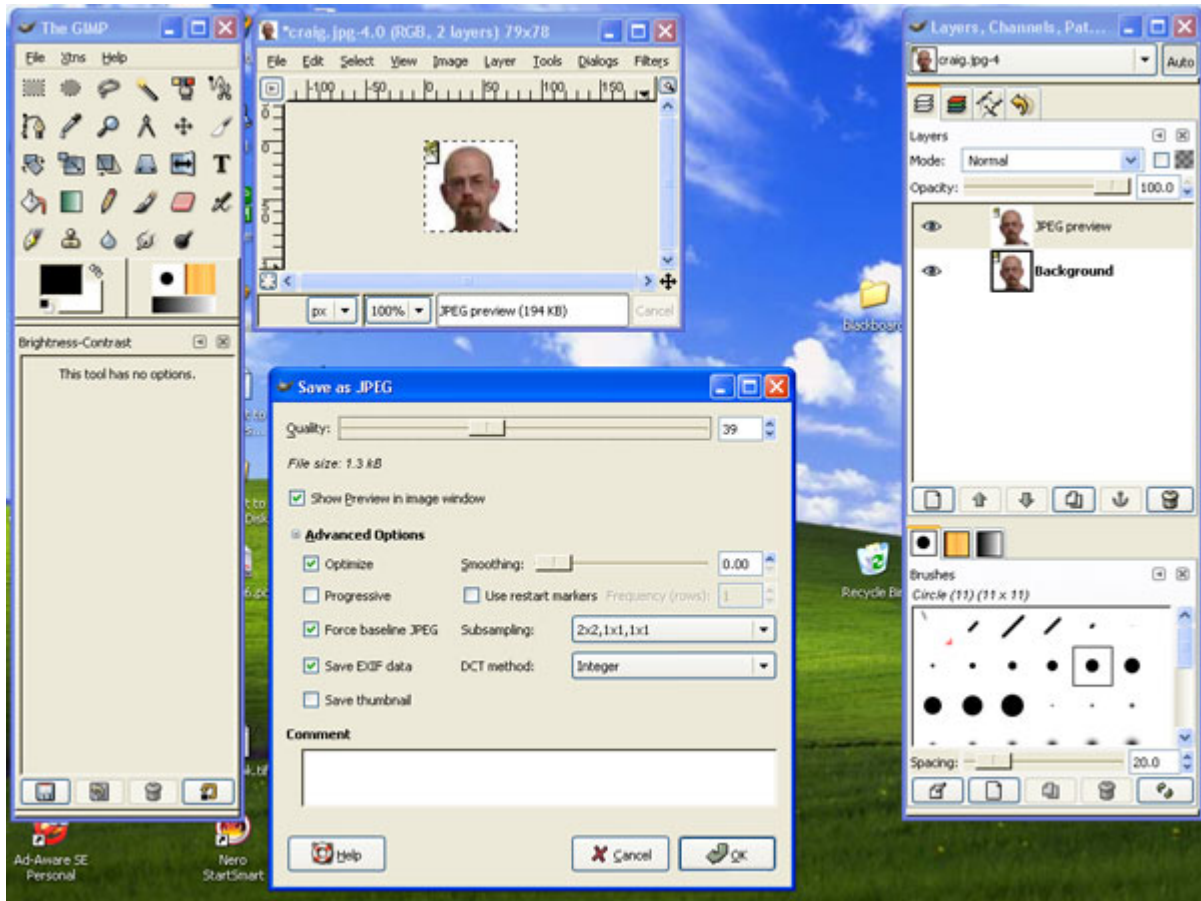
You lose quality if you try to make the image larger, but you can see the impact on file size if you make the image smaller... again, you are looking for the best quality balanced with the smallest file size.

When finished, select the file you wish to save, then click the [Save] button; choose a new file name (so as not to replace the original) and you are ready to use `img src=` to bring in the new file to your web page.

GIMP Optimization: Note: Newer versions may only let you Export

After you choose [Save] or [Export], a dialog box opens with the Save As options. Click the little [+] sign to open the 'Advanced Options'

Make sure Optimized is selected, make sure that 'Show Preview in image window' is selected, and then drag the Quality slider while watching the preview until the image still looks clear, but you have the smallest possible file size.



You should now have just the part of the image you want, plus a compact file that will download quickly.

The class website of Overview 7 also includes a link to a video on this topic.



NOTE: When using GIMP, close the program by closing the image window; do NOT close the Toolbox-Tool Options window or the Layers-Brushes window. If you accidentally close one of these windows go to Windows/Recently Closed Docks

Instructor Notes (Repeat of end of Overview 6)

Fonts

Aside from deprecated ``, something that can always change the face successfully is to use `<tt>` `</tt>`, which displays the text as a typewriter would, using a monospace font, such as Courier New, which is made to look like Courier New by using the `<tt>` `</tt>` in my code.

Another similar trick is to use `<pre>` `</pre>` (preformatted). This will display as typewriter text, but will also display the text **as typed** in Notepad, **including line breaks, spaces, and tabs**. But avoid overdoing typewriter text, it is harder to read, as it is any monospace font.

Another useful tag is the non-breaking space... this can be entered into your html to accomplish what hitting the space bar cannot, as spaces and other white space are usually ignored.

Example: the space to the left could be created with several ` ` tags.

Please note, the font tag is deprecated, meaning there are newer ways to do this in HTML 4.x. That's fine, we'll learn some of those news ways later... but this is a quick and simple way to do things now, and is still widely used.

We have been using the `` for awhile, but we can also use `` to control how big the image displays and where; but if the display is huge, requiring us to lower the height and width just to see the entire picture without scrolling, it probably means the file size is big. A file of over 20 or 30 KB will take longer to download, and a file of 1MB will drive dial up users away from your site. We need to be able to actually **adjust** the image.

About Graphic: Preview

Imaging background info

See class website for links to Photoshop (Trial Version of Photoshop), GIMP (Free download of GIMP) or a similar graphic editor, to adjust images for web pages requires you to use just a few menu items...typically:

File	Edit	Image	Select
Save	Copy	Adjustments	Deselect
Save As	Paste	>Auto...	
		>Brightness...	
Save for Web		Crop	

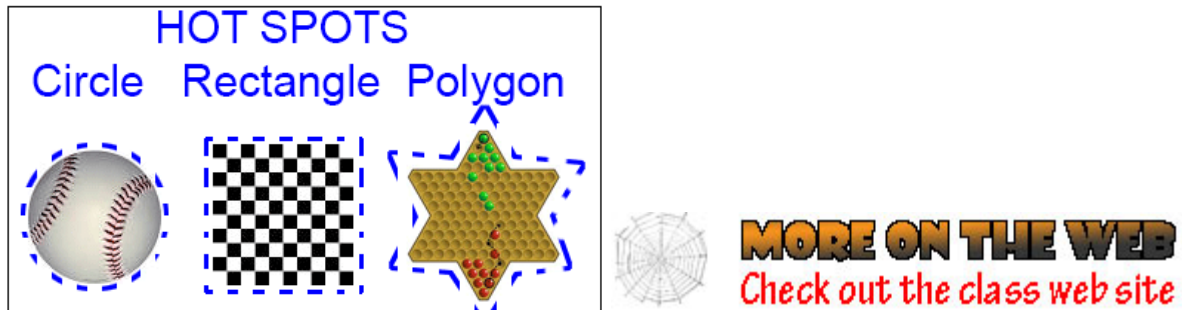
Other linked readings on the class website will introduce you to making backgrounds, gif animation, editing digital images, optimizing pages.

Planting seeds for later, Image Maps and Hot spots

Image maps will be discussed more fully later.

At least know that an image map places invisible *hotspots* on an image... and these hotspots are links to web pages.

That is, Image maps can allow *different parts* of an image to link to different web pages.



On the class web site for overview 6, you will see an Image Map example.

Again, image maps will be discussed more fully during the run up to lab 7, where at that time you may refer to Image Maps on the class web site.

Lab 4

An eight minute video is available on the class website (Overview 7) that illustrating the following steps. I recommend you **read over this overview first**, then watch the video to see the steps being performed.



General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59PM
(see due dates on web site)

•NOTE: Do NOT use CAPITAL letters OR spaces in file names.

•NOTE: Do NOT use curly quotation marks, such as ”;
only use straight quotation marks, such as ”.

- Note: If you need to stop work on a web page:
Save your changes in your text editor (Notepad)
When ready to resume,
open the file in notepad
and
double click web page to open browser

Part 1 p. 178, Part 2 p. 179, Part 3 p. 181

Part One: Documentation (30%) At the end of this process, you will be turning in answers using the Quizzes area of Your LMS, based on the following. So, to get the best score, fill in all the answers in this document first.

Tags and Attributes to document must include: height, width, and align

(modifies the image tag, as in <body align="center">)

Tag: font

Syntax (required and [optional attributes]; including face=, size=, and color=)

What do these do?: Example:


Tag: Image

Syntax (required and [optional attributes]; including src=, alt=, height=, width= and align=)

What do these do?: Example:

Preview of the finished lab 4:


Lab 4



index.html


a web page made with notepad that links to page1.htm & page2.htm with a and a background image, colored text, etc. ...

Example code below



pages (folder)

Example code added to <body>
contains page1.htm (background="../pink_fabric.gif")
contains page2.htm (background="../yellow_fabric.gif")



images (folder)

contains pink_fabric.gif
contains yellow_fabric.gif
contains your image (example: me.jpg)
contains a background for index.html

Sample code from new webpage, created in notepad, named index.html (with an L at the end)

```
<html>
<head>
<title>My Stuff</title>
</head>
<body text="white" link="gray" vlink="yellow" background="images/blue.gif">
<h2>Welcome to my world</h2><br>
<a href="pages/page1.htm">to Page One</a><br>
<a href="pages/page2.htm">to Page Two</a><br>
</body>
</html>
```

*Please don't just copy... choose your own colors, title, text, etc.
DESIGN your home page*

Part Two: Activity: (40%)

- Create a folder named lab4

(QUICKSTART ALTERNATIVE: copy your lab3 FOLDER, and rename the copy to lab4) which contains the following

Grading Points (Lab 4) There are **hints** on these pages to help

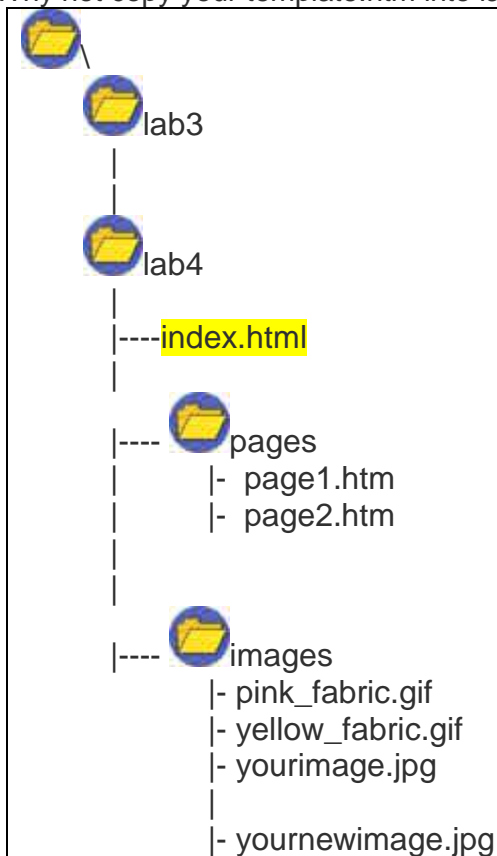
10 points: On page1.htm, add the word Hi, and using one font tag:

- *make it red,
- *make it Arial, and
- *make it one size larger

See page 151 for examples.

10 points: Create a new file of your own design called index.html inside of lab4, [but **not in** the pages folder] details below.

(Why not copy your template.htm into lab4 as a starting point, rename it ndex.html?)



Definition: index web page or default web page; the page that opens when no other page is specified.

Example, you go to <http://www.google.com> and a page opens... you may not see the filename, but a page opens. Since you did not specify any special page, it was the default that opened.

- index.html must properly coded with appropriate title, and use of body tag attributes
- Link from index.html to page1.htm & page2.htm; You will have to adjust the path so the web page can locate the file. **See page 108 for examples or page 178 for a visual reference.**

5 points Index design

*Make this page your own design; Add some text, format it, you do need to choose backgrounds, colors, etc. See page 161 for instructions on how to make your own background image, or see the class website to download free background images.

10 points: Edit the image file that displays on page2.htm:

- Crop the excess part of the picture, using GIMP, Photoshop, etc., (You may also adjust the brightness, contrast, etc.)
- Save the new version of your image to a **different name**, leaving the original file in the images folder.
- Optimize the new file (Should be 20-40k, maybe 300x300 pixels) See page 173 for information on optimizing, or class web site for videos on using photo editors and optimizing
- Correct the `img src="../../images/` to open the new, optimized file

5 points: All pages correctly coded

(How to check for HTML errors, page 42)

Posers, could you answer these on a test?

1. How many counting symbols, or digits are in Base₁₀? Base₂? Base₁₆?
2. What do we call Base₂?
What do we call Base₁₆?
3. How do you count to 16 in Base₁₀? Base₂? Base₁₆?

4. What is 256₁₀ in Base₁₆?

What is 255₁₀ in Base₁₆?

(You may use a Calculator. Set starting base, enter number, then select target base.)

5. Color representation in monitors uses what three colors?

6. 256 shades of each color yields 2^8 for Red + 2^8 for green + 2^8 for blue, which = 2^{24} , or the ability to represent about _____ colors using RRGGBB.

In a scientific view calculator, enter use the x^y function; enter 2, then choose x^y , then choose 24

7. Using word colors, What is the syntax to change the body text to white, and the body background color to black?

< body >

8. Using hex colors, What is the syntax to change the body text to white, and the body background color to black?

< body >

9. What is the hex code for blue (try to use just 0's and F's)

10. What is the hex code for green (try to use just 0's and F's)

11. What is the hex code for red (try to use just 0's and F's)

12. What is the hex code for yellow (look at a color chart, if you like, but try to use just 0s / F's)

13. What is the hex code for purple (magenta) (try to use just 0s and F's)

14. Convert the following color from decimal representation to hex representation

(you may use a calculator: covert the red, green, and blue components separately, then combine into the 6 digit hex value)

126 126 126 = # _ _ _ _ _

What color is this? Add this number to the <body bgcolor= ...> section of a page to test

Section 2 fonts and Images, (Overview 7)

15. Describe a serif font.
16. Describe a sans-serif font.
17. Describe a monospace font.

From font notes

18. From my Tutorial three notes, what does `<tt>` `</tt>` do?
19. From my Tutorial three notes, what does `<pre>` `</pre>` do?
20. From my Tutorial three notes, what does ` ` do?
21. What is a .gif? What is it well suited for?
22. What is a .jpeg (or .jpg)? What is it well suited for?
23. What is a png? What is it well suited for?
24. Which format supports animation?
25. Which format supports transparency?
26. Does the book mention any other **image** format that supports animation?
27. List some of the align= options for the img tag.

Image maps will be included in a future lab, but some theory questions.

28. What is an image map?
29. What is a hot spot?
30. What are the hotspot shapes?

Part Three: Hands On Questions: (30%)

Lab 4 Questions

1. What is the font tag?

(Choose the one best answer)

- A deprecated tag
- Allows you to change the size of text
- Allows you to change the color of text
- Allows you to change the type face of text
- all the above

2. Which of the following is correctly coded?

```
<font color="red" size="+1" face="arial" >text</font>  
<font color="red" size="+1" face="arial" >text<font>  
<font color="red" size="monospace" face="arial" >text</font>  
<text color="red" size="+1" face="arial" >text</text>
```

3. Match the following

1. Font tag attribute that changes text color using word or hex colors
2. Font tag attribute that changes text size, using specific values such as 4, or relative values such as +1
3. Font tag attribute that changes text's type face, if that type face is installed on the users computer
4. Font tag attribute that changes text color using only hex colors
5. Font tag attribute that changes text to allow anti-aliasing
6. Font tag attribute that changes text size, using specific values such as 72 points
7. Font tag attribute that changes text's type face, even if that type face is not installed on the users computer

size

color

face

4. Match the following

<input type="text"/>	the attribute to set the vertical size of an image, measured in pixels	1. img
<input type="text"/>	the attribute to point to the graphic file	2. src
<input type="text"/>	the tag to display a graphic	3. alt
<input type="text"/>	the attribute to display alternate text for ADA compliance	4. height
<input type="text"/>	the attribute to locate an object, such as an image, to the left, center, or right	5. width
<input type="text"/>	the attribute to set the horizontal size of an image, measured in pixels	6. align

5. match the following

	1. uses two counting symbols, also called binary
	2. uses ten counting symbols, also called decimal
<input type="text"/> base ₂	3. uses sixteen counting symbols, also called hex or hexadecimal
<input type="text"/> base ₁₀	4. uses 10 counting symbols, also called binary
<input type="text"/> base ₁₆	5. uses two counting symbols, also called hexadecimal
	6. uses two counting symbols, also called octal
	7. uses none counting symbols, also called decimal

6. Fill in the missing number

base₂ 0 1 10 11 100 101 ____ 111 1000 1001 1010 1011 1100 1101 1111 10000

base₁₀ 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

base₁₆ 0 1 2 3 4 5 6 7 8 9 A B C D E F ____

7. What is 256₁₀ in Base₁₆? (type in number) ____

What is 255₁₀ in Base₁₆? The answer is FF (True or False)

8. Color representation in monitors uses what three colors?

Answer in the order used when typing in the hex values ____

9. 256 shades of each color yields

2⁸ for Red + 2⁸ for green + 2⁸ for blue,

which = 2²⁴, or the ability to represent about _____ colors using RRGGBB.

24

256

about 65,000

about 16.7 million

10. Using word colors, What is the syntax to change the body text to white, and the body background color to black?

<input type="radio"/> <code><body text=white bgcolor=black> ... </body></code>	<input type="radio"/> <code><body text="white" background="black"> ... </body></code>	<input type="radio"/> <code>< text="white" bgcolor="black"> ... </body></code>	<input type="radio"/> <code><body text="white" bgcolor="black"> ... </body></code>
--	---	--	--

11. Using hex colors, what is the syntax to change the body text to white, and the body background color to black?

- ☐ `<body text="ffffff" bgcolor="000000"> ... </body>`
☐ `<body text="#ffffff" background="#000000"> ... </body>`
☐ `<body text="#000000" bgcolor="#ffffff"> ... </body>`
☒ `<body text="#ffffff" bgcolor="#000000"> ... </body>`

12. Match the hex code and the color (Just type in the number)

- | | |
|------------------------------|---------------------|
| <input type="text"/> #ff00ff | 1. blue |
| <input type="text"/> #ffff00 | 2. green |
| <input type="text"/> #00ff00 | 3. red |
| <input type="text"/> #ff0000 | 4. yellow |
| <input type="text"/> #0000ff | 5. purple (magenta) |

13. Convert the following color from decimal representation to hex representation (you may use a calculator: covert the red, green, and blue components separately, then combine into the 6 digit hex value)

126 126 126 = #_ _ _ _ _ What color is this?

- a) 999999; GRAY b) 7E7E7E; RED c) 7E7E7E; GRAY d) 999999; RED

14. Match the following (Just type in the number)

- | | |
|---|--|
| <input type="text"/> a way to add extra spaces in HTML without using any formatting | 1. <code><tt> ... </tt></code> |
| <input type="text"/> each letter takes up as much space as any other letter, such as
iii
WWW | 2. <code><pre> ... </pre></code> |
| <input type="text"/> a typeface with extra lines and marks, such as Times | 3. san serif font |
| <input type="text"/> a typeface with no extra lines or marks, such as Arial | 4. serif font |
| <input type="text"/> only changes the font to typewriter text, doesn't recognize link breaks or extra spacing | 5. monospace font |
| <input type="text"/> changes the font to typewriter text, but recognizes spaces and line breaks | 6. <code>&nbsp;</code> |

15. Match the following (Just type in the number)

- | | |
|---|--|
| <input type="text"/> options of gif | 1. .gif |
| <input type="text"/> old format limited to 256 colors, best suited for charts and line graphics | 2. .jpg |
| <input type="text"/> best suited for photographs | 3. .png |
| <input type="text"/> options of align | 4. supports animation and transparency |
| <input type="text"/> new format, a possible replacement for gif that is not limited to 256 colors | 5. left center and right |
| <input type="text"/> another option to make animations | 6. flash |

16. Match the following (Just type in the number)

the area of a graphic that works as a link

1. image map

rectangle, circle, and polygon

2. hotspot shapes

name given to HTML code that makes part of an graphic into a link

3. hotspot

SUBMITTING THE LAB

In Windows, zip the entire lab4 directory, and rename to yourname-lab4.zip. Directions on page 80.

Log into Your LMS, choose this class, choose Dropbox, select Lab 4. Browse to yourname-lab4.zip and upload it. (See page 80 or class website for detailed instructions)

You will then transfer your answers to the LMS Quiz for lab 4. You may use your notes for this part of lab. Choose the Quizzes menu, and locate Lab 4.

Completing Overview 7

- Submit by 11:59 am, Friday, of the current week
(Check your Learning Management System (LMS) for specific due dates)
Details on your LMS are in the College Specific Appendix at the end of the book.
- Lab 4

MUD 7 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What topics, if any, during this time frame do you feel very comfortable with? Why?

What topics, if any, during this time frame do you not feel comfortable with?

Please include feedback on additional content provided

- Participation Discussion 7 Respond in the class LMS Discussion forum to the following:
Photoshop allows you to use File/Save as Web, and GIMP allows you to Optimize a file... making the file look about the same, but resulting in a smaller file size. Why is this important?

For the next time frame:

- Read Overview 8
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 5



Overview 8

Tables

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Quick reference

1x1 table:

```
<table>
<tr>
  <td>stuff</td>
</tr>
</table>
```

Tables

If you are using a word processor, and want to organize information into rows and columns, you create a table, and place your items in cells; of course, it is not quite as easy in web page speak: we subdivide a table into rows, and subdivide rows into details... and we place our items in these detail. If you have several rows, the stacked 'details' take on the appearance of columns.

Example

row 1 detail 1	row 1 detail 2	row 1 detail 3
row 2 detail 1	row 2 detail 2	row 2 detail 3
row 3 detail 1	row 3 detail 2	row 3 detail 3

To create a Table:

Open Notepad in the Accessories area

Either open your template.htm, or create the default HTML document

```
<HTML>
<HEAD><TITLE>Your Title</TITLE></HEAD>
<BODY>
</BODY>
</HTML>
```

Save document on your account or floppy as an .htm, such as inclass.htm

Between the <body...> </body> tags, insert the following

```
<HTML>
<HEAD><TITLE>Your Title</TITLE></HEAD>
<BODY>

<TABLE>
<TR>
<TD>Hi</TD>
</TR>
</TABLE>

</BODY>
</HTML>
```

This is the minimal table, 1 X 1, one row with one detail (a place to insert items into the table).

- `<TABLE></TABLE>` defines the table area
- `<TR></TR>` defines the table row
- `<TD>something</TD>` defines the table detail: the cell ...
you **may not** have an empty detail, put something in.

To make a table bigger

- To increase the number of 'details' (cells) and generate the number of 'columns' you want, copy the `<TD></TD>`s repeatedly within the `<TR></TR>`
- To increase the number of 'rows' to the number you want, copy the entire `<TR></TR>`s repeatedly within the `<TABLE></TABLE>`
- Once the table structure is built, you may insert
 - Text
 - Images
 - Links

within the 'details'.

Using a table to organize material into rows and columns. Let's say you want to organize some words into a column, and you want the column about one third of the way over from the left margin, like so:

Hi Bye

If you were using a typewriter to do this, you would simply hit the tab key, or the space key, until the words were in the right place. But web browsers ignore spaces, and would draw the words to the left margin; therefore we have to use a table.

As shown above, the easiest way to create the table above is to start with an 1x1 table; that is, one row with one column (detail).

you should already have the following between the `<body>` and `</body>`, in `inclass.htm`:

```
<table>
<tr>
<td>Hi</td>
</tr>
</table>
```

Save changes, and switch to the browser, and refresh or reload. You should now see the word 'HI', clinging to the left margin.

By default, the borders are invisible; to verify that a table really is around the word, insert the attribute and value **border="1"** INSIDE of the table tag.

```
<table border="1">
<tr>
<td> HI </td>
</tr>
</table>
```

Save changes, and switch to the browser, and refresh or reload. You should now see the word 'HI', clinging to the left margin, in a now visible table. The value for the border ranges from 0-6 pixels, zero being none, and 6 being very thick.

But the word 'Hi' is not at all where we want it placed. By default, tables are only big enough to accommodate what is inside. To move the word over, we need to increase the size of the table.

Switch back to notepad, and insert the attribute and value **width="100%"** INSIDE of the table tag, allowing spaces to separate the tag and attributes.

```
<table border="1" width="100%">
<tr>
<td> HI </td>
</tr>
</table>
```

Save changes, and switch to the browser, and refresh or reload. You should now see the word 'HI', clinging to the left margin, in a now very wide table. If we had omitted the '%', the value would have been interpreted as 100 pixels. That might be very big on a small screen, and very small on a big monitor screen, so normally values are set as a percentage of the available screen.

Even though the table is bigger, the word is still to the left. What we need to do is insert another detail in front of the detail holding the word, in order to start inching our target word away from the margin. But what we don't want to do is put anything visible in the detail. We will use the non-breaking space character, ** **.

Rather than type, you may just copy the existing detail to the clipboard,

and paste an exact duplicate in front of the original. Then edit the contents of the first detail to ` `.

```
<table border="1" width="100%">
<tr>
<td> &nbsp; </td> <td> HI </td>
</tr>
</table>
```

Save changes, and switch to the browser, and refresh or reload. You should now see the word 'HI' is no longer clinging to the left margin, but only moved slightly. But we can use the same trick to make the detail wider that we used to make the table wider. INSIDE the first `<td>`, insert the attribute and value `width="30%"`.

```
<table border="1" width="100%">
<tr>
<td width="30%"> &nbsp; </td> <td> HI </td>
</tr>
</table>
```

Save changes, and switch to the browser, and refresh or reload. You should now see the word 'HI' is no longer near the left margin, but right where we wanted. But we also wanted the word 'BYE' to occur directly underneath it. What we need is another row, again with two details.

Copy from `<tr>` to `</tr>` to the clipboard, then paste the entire structure between the `</tr>` and the `</table>` .

```
<table border="1" width="100%">
<tr>
<td width="30%"> &nbsp; </td> <td> HI </td>
</tr>
<tr>
<td width="30%"> &nbsp; </td> <td> HI </td>
</tr>
</table>
```

Edit the word in the second detail on the second row to the desired contents; in this case, the word 'BYE'.

We also do not need the second row to repeat the already specified `width="30%"` for the column, so that may be removed.

And finally, we want the border to go away, leaving the words floating in space, away from the margin; so, reset the border to equal 0.

```
<table border="0" width="100%">
<tr>
<td width="30%"> &nbsp; </td> <td> HI </td>
</tr>
<tr>
<td width="30%"> &nbsp; </td> <td> BYE </td>
</tr>
</table>
```

You should wind up with the following

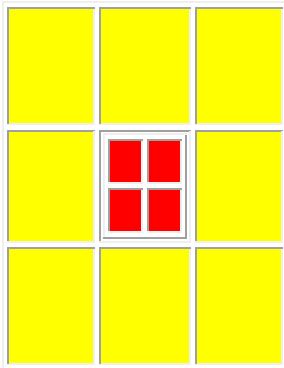
```
<table border="0" width="100%">
<tr>
<td width="30%"> &nbsp; </td> <td> HI </td>
</tr>
<tr>
<td> &nbsp; </td> <td> BYE </td>
</tr>
</table>
```

which yields

HI
BYE

Fun with Tables

Details can hold text, links, or images... anything you can put into a web page you can put into a table, ***including another table!***



Simple Table template

You will need to copy the `<td>X</td>` until you have enough columns, then copy the `<tr>X</tr>` until you have enough rows

```
<html>
<head> <title> Title goes here </title>
<!-- your name goes here -->
</head>
<body background="value"
bgcolor="value"
text="value"
link="value"
vlink="value"> Stuff to display in the web page goes here

<table>
<tr><td> 1 x 1 Table </td></tr>
</table>

</body>
</html>
```

Instructor Notes

Reminder on lists

Remember, there are three kinds of lists

Ordered

Unordered, and

Definition

Ordered List Example: Sequence is important

1. list item
2. list item
3. list item

Ordered List Code

```
<ol>
<li> list item
<li> list item
</ol>
```

Unordered List Example: Sequence is not important

- list item
- list item
- list item

Unordered List Code

```
<ul>
<li> list item
<li> list item
</ul>
```

Definition List Example

Term

Definition

Definition List Code

```
<dl>
  <dt> term
  <dd> definition
</dl>
```

Preformatted text <pre> </pre>

<pre></pre> was covered in my Overview 6-7, but they show how you could use it to organize information into rows and columns. However, the typewriter text is hard on the eyes, and you have limited format options.

Tables

When some books start discussing tables, they seem to think you can just type out a series of <tr> and <td> tags, and then go back to put your content in. I prefer to build a 1x1 table, with *something* in between the <td>x</td> tag, then copy the <td>...</td> tags until my columns are set, then copy the <tr>...<tr> tags until my rows are set. Then I can easily replace the contents of the details. (See page 186.)

Some books also introduces the <th></th> and so on, which I prefer to avoid, though I do cover them in lab 6, and in Overview 9.

Remember, the default border for a table is 0, but you can increase it; old html limited this to 6 pixels wide, but newer browsers can make huge borders, and color the borders using bordercolor=, or bordercolorlight=.

Some books also discuss making partial borders, or grids, using the rule= and frame= attributes. Be careful not to confuse this attribute with the framed pages, which we will discuss in a future Overview.

Again, most 'advanced' table elements discussed here are covered in Overview 9.

Width

A very important concept is to set table widths using percentages, so the page looks the same regardless of the size monitor your user has... I almost never use width= with *"a pixel value,"* unless the table is very small... the rest of the time I use width= with percentages, as in
<table width="90%">...</table>

Reminder on using é

To impress prospective employers, you need to spell Résumé correctly.

There are at least four ways to do this in Word Processors:

- * Insert\Symbol
- * Start\Run\Charmap... locate the acute e, copy, and then paste in Word
- * Press [Control] and ['] (single quote) at the same time. Release, press e
- * Press [Alt] and hold it down, type 0233 and let go.

For web pages, use `é` or `é`

Sample Résumé

R. Craig Collins Résumé
2600 S. 1st Street
Temple, TX 76504
254-298-8461
craig.collins@templejc.edu

Education	<ul style="list-style-type: none">• PhD work Educational Computing, University of North Texas• MS Computer Education and Cognitive Systems University of North Texas• BBA Business Information Systems University of Texas El Paso
Experience	<ul style="list-style-type: none">• Temple College• University of Mary Hardin-Baylor• Cedar Valley College• Creative Education Institute• Center for Organization Research & Development
References	Available upon request

A good résumé would also have addresses, phone numbers, contact personnel, and dates. Further, there would be a lot of formatting of text.

My Vitæ (an educator's résumé with classes taken and classes taught) is on the class website.

Optional: Complex template with Table

```
<!--Sample Comprehensive Template-->
<html>
<head>
    <title>
        Your title goes here
    </title>
    <!-- your name goes here -->
</head>

<!--Only .gif or .jpg/jpeg images allowed-->
<body
background="[path/]filename.jpg"
bgcolor="#ffffff"
text="#000000"
link="#0000ff"
vlink="#ff00ff"
alink="#00ff00"
>

<!--Bookmark-->
    <a name="topp"></a>

<!-- H1-6 provides bold, size, and line break before/after-->
<h1>Headline text</h1>

<font color="#ff0000" size="+1">Large red words</font>
<br>

<br>

<br>
<a href="[path/]filename.htm">Link to local file</a>
<a href="http://URL">Link to default or index on web</a>
<br>
<!--Two by two table-->
    <table border="1" width="95%">
        <tr>
            <td>A1</td><td>A2</td>

            </tr>
            <tr>

                <td>B1</td><td>B2</td>
            </tr>
        </table>
        <br>
<!--Link to jump to top of page-->
    <a href="#topp">To top</a>

</body>
</html>
```

Lab 5 cheat-sheet

Craig's Résumé
 2600 S 1st
 Temple, TX 76504

 254-298-8461
 craig.collins@templejc.edu

 Goal: To get an A

Education	BBA UTEP Dates MS UNT Dates PhD work UNT Dates
Experience	TSTC Dates Duties Cedar Valley College Dates Duties UMHB Dates Duties Temple College Dates Duties
References	Available upon request

HTML tags shown in the diagram include: `é`, `<h2>`, `
`, ``, ``, `<table>`, `<tr>`, `<td>`, ``, ``, ``, `</td>`, `</tr>`, `</table>`.

Notice by drawing out what your résumé should look like, it is easy to go back and annotate which tags can make that design come to life.

Note how I labeled the headline, the links, how to make the é, and especially where the table, rows, and details should be; I also noted where breaks would be... although I could have used `<p>text</p>` for some material. A real résumé would include addresses, duties, contact personnel, etc.

To use a mailto
 the html would be `Visible text`
 Remember, mailto's don't work if your user only has a web email service.

Finally, please don't make your goal "to get an A" but instead to 'get a good paying job that utilizes hard earned skills,' or some other BS worthy verbiage. (BS stands for Bachelor of Science, by the way.)

Lab 5



A video on creating tables is available on the class web site.

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59PM
(see due dates on web site)

•**NOTE:** Do NOT use CAPITAL letters OR spaces in file names.

•**NOTE:** Do NOT use curly quotation marks, such as ”;
only use straight quotation marks, such as ”.

- Note: If you need to stop work on a web page:
Save your changes in your text editor (Notepad)
When ready to resume,
open the file in notepad
and double click web page to open browser

Part 1 Documentation (below)

Part 2 Activity p. 198

Part 3 Hand on Questions p. 199

Part One: Documentation (30%) At the end of this process, you will be turning in answers using the Quizzes area of Your LMS, based on the following. So, to get the best score, fill in all the answers in this document first.

Tags to document must include: <table> , <tr>, and <td>

Tag: <table> </table> Table

Syntax (required and [optional attributes]; including bgcolor=, border=, and width=)

What does a table do?:

What does border= do?

What does bgcolor= do?

What does width= do?

Example:

Notes: requires the use of < > and < > tag sets.

Tag: <tr> </tr> Table Row

Syntax (required and [optional attributes];)

What does a tr do?: :

Example:

Notes:

Tag: <td> </td> Table Detail

Syntax (required and [optional attributes]; including width=, background=, bgcolor=, and align=)

What does a td do?:

Example:

Notes:

Also, make sure to update:

Tag:

Syntax (required and [optional attributes];)

What does ol do?:

Example:

Notes: requires the use of < >

Tag:

Syntax (required and [optional attributes];)

What does ul do?:

Example:

Notes: requires the use of < >

Tag:

Syntax (required and [optional attributes];)

What does li do?:

Example:

Part 2, Activity (40%):

Create a folder named lab5

(QUICKSTART ALTERNATIVE:

copy your lab4 FOLDER, and rename the copy to lab5)

(remove the [large version](#) of your image for page2.htm though, it is no longer needed)

Step 1

Add a link from index.html to resume.htm (See paths, p. 106)

Step 2

Create a new file of your own design called resume.htm inside of the pages folder

(why not copy a template with a table (p. 191 or 194) into lab5\pages as a starting point, renaming it resume.htm?)

Grading Points

Résumé aspects	General web page aspects
(5 points) Your name, address phone, and email	(5 points) Appropriate Title, Control of default text/link colors, background color and background image See previous overviews for making backgrounds or class web site to download a background
(5 points) Include the word résumé somewhere in the document, spelled résumé not resume (p. 195) (don't use special characters in filename)	(5 points) At least a 2x3 table (see p. 186 or p. 191 for help with tables)
(3 points) Section labels: Goals or Objectives, Experience, Education, and References	(5 points) Use of a list (see Lab 1, p. 52, or p. 191) (2 points) Formatting (bolds, etc) (5 points) Links: link from index to résumé, link from résumé to index, (see Paths, p. 106) and one or more relevant link(s) on résumé: Examples: convert email address to working mailto (p. 83), or add link to Temple College, or add link to Employer, etc
	(5 points) Appropriately coded

How to check for HTML Errors, page 42

Part Three: Hands On Questions: (30%)

Posers, could you answer these on a test?

- Tag typically surround text, so you can't leave `<td></td>` empty. What can you put in a detail if you don't wish anything to display?
- In `<Table width=" "...>` `width=` can use a pixel value or a percentage. Discuss when each could be used.
- If you set a detail width, `<td width=" "...>`, what happens to the detail if you put something wider in that detail?
- If you set a detail width, `<td width=" "...>`, what happens to the column, if you put something wider in any detail?
- You could control the height of a row, but normally this is left alone. what do you suppose sets the default height of a row?

Lab 5 Questions

1. Match the following

table	This tag creates a table
tr	This tag divides table rows into details, or cells
td	This table attribute sets how thick the edges of the table are
border	This tag divides tables into rows
width	This attribute can set how wide a table or detail is

2. Fill in the missing tags or attributes to code the following

Hi
Bye

```
<table ____="1" width="20%"  
<____><td>Hi</td></tr>  
<tr><td>____</td></tr>  
<____>
```

3. What does the `` tagset do? (From Quiz 1)

4. What does the `` tagset do? (From Quiz 1)

5. What does the `` tagset do? (From Quiz 1)

6. Tags typically surround text, so you can't leave `<td></td>` empty. What can you put in a detail if you don't wish anything to display?

- a) `<!--empty-->` c) the non-breaking space
b) `é` d) just put some text in that's the same color as the `bgcolor`

7. True or false? If you set a table to use pixels, such as `width="1280"`, but the user's browser window is only 800 pixels wide, a scroll bar will be required for the user to see the entire table. It would be better to use `width="100%"` instead, to size the table to fit the browser window.

8. If you set a detail width, `<td width="10"...>`, what happens to the detail if you put something wider, such as a picture that is 20 pixels wide, in that detail?

The image is cropped, only displaying the left 10 pixels

The detail expands to hold the image

The image will be shrunk to fit in the space available

The image will not display at all

9. If you set a detail width, `<td width="10"...>`, what happens to the column, if you put something wider in any detail, such as an image that is 20 pixels wide?

The entire column expands to the size of the widest item

Only the one detail with the image expands, the rest of the details stay 10 pixels wide

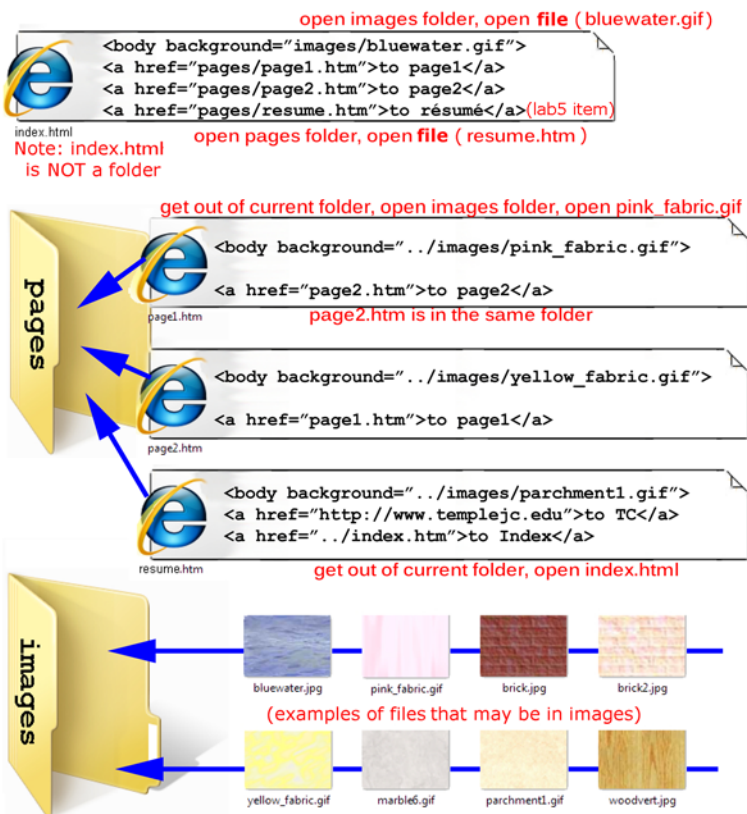
10. You could control the height of a row, but normally this is left alone. What do you suppose sets the default height of a row?

The row height will always be 1 pixel tall, unless the `height=` attribute is used

The height of the tallest item in that row

The width of the tallest item in any row

The row height will always be 100 pixels tall, unless the `height=` attribute is used



Review for Test 2

Before continuing, verify you are caught up with class participation discussions and MUDs. To check your progress: in the LMS, choose the ▼ icon next to your name; to check your Discussion progress, use the dropdown Tool and select Discussions...choose Apply.

You will need to scroll down to see which discussions you have and have not posted to.

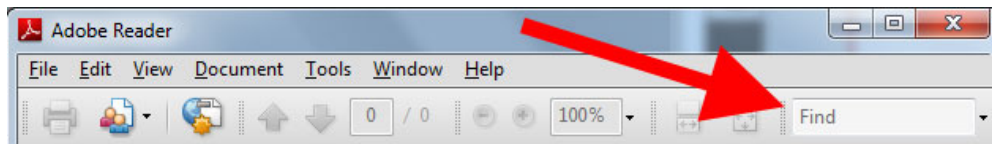
Your participation grade will be penalized at the end of the semester for discussions you have not posted to.

Feel free to copy this to a word document and send it to me... I won't give you the right answers necessarily, but I'll let you know where you still need a little work. Note: This test is a little more challenging

How to Study, page 115; How to take a Collins test, page 116









PS, The first part of the final will include the same information as Test 2.

Don't forget you can Ctrl + F to search the pdf version to help find items.



- Lists
 - Can you name the different types of lists?
 - What tags are used in each type of list?
- Text Formatting
 - What is a non-breaking space? How is it added to a web page, and what does it do?
 - What does `<tt>text</tt>` do?
 - What does `<pre>text</pre>` do?
- Graphics
 - Why use a background color, and background image?
 - Can you name the eight basic colors using hex (black, white, red, green, blue, purple, yellow, turquoise)
 - What is the attribute to set the background color?
 - What is the attribute to set the background image?
 - What file types are supported?
 - Which file format is best suited for photographs?
 - Which file format is best suited for graphs?
 - What are the three variations on gif? What do they do?
 - How many colors may be used in gif?

- o Which file format supports transparency?
- o Which image attribute sets the width?
- o Which image attribute sets the height?
- o Which image attribute sets the text alternative?

 lab5 ----page1.htm ----image1.gif	See also page 108 or page 200 Example 1: Web page saved in lab5 image1.gif saved in lab5
 lab5 ----page1.htm ----  images - image1.gif	Example 2: Web page saved in lab5 image1.gif saved in lab5\images
 lab5 ----image1.gif ----  pages - page1.html	Example 3: Web page saved in lab5\pages image1.gif saved in lab5
 lab5 ----index.html ----  pages - page1.htm - page2.htm - resume.htm ----  images - pink_fabric.gif - yellow_fabric.gif - yourimage.jpg	Example 4: Web page saved in lab5\pages image1.gif saved in lab5\images

- Example 5:
Web page saved in lab5
bg.jpg saved in <http://tc.templejc.edu/dept/cis/ccollins/ITMED1x16>

Image Maps

Name the three types of hotspots (See page 136, 177)

ftp

What does ftp stand for? (See page 23)

Tables

What three tags are used to create tables?

What tag creates the table?

What tag creates the row?

What tag divides the row into cells?

What can you put in a cell?

What attribute makes the border visible?

What attribute makes the table a different size?

What attribute makes the text go to the left, center, or right of the detail?

Code the following tick tac toe game:

X	X	O
O	O	X
X	X	O

Can you see the border? Make sure you add that when starting the table.

Is the table bigger than the contents, or can you just use the default width?

How many rows are there? Don't forget to end the row.

How many details are in each row? Don't forget to end the detail.

Don't forget to end the table.

```
<table
<tr><
> ? <
> <
> ? <
> <
> ? <
> <
>
<
> ? <
> <
> ? <
> <
> ? <
> <
>
<
>
```

Could you do a table with two rows and four columns? Four rows and two columns?

SUBMITTING THE LAB

In Windows, zip the entire lab5 directory, and rename to yourname-lab5.zip. Directions on page 70.

Log into Your LMS, choose this class, choose Dropbox, select Lab 5. Browse to yourname-lab5.zip and upload it. (See page 70 or class website for detailed instructions)

You will then transfer your answers to the LMS Quiz for lab 5. You may use your notes for this part of lab. Choose the Quizzes menu, and locate Lab 5.

Completing Overview 8

Submit by 11:59 am, Friday, of the current week

(Check your Learning Management System (LMS) for specific due dates)

Details on your LMS are in the College Specific Appendix at the end of the book

- Lab 5

MUD 8 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 8 Respond in the class LMS Discussion forum to the following:

What can you put in a table?

For the next time frame:

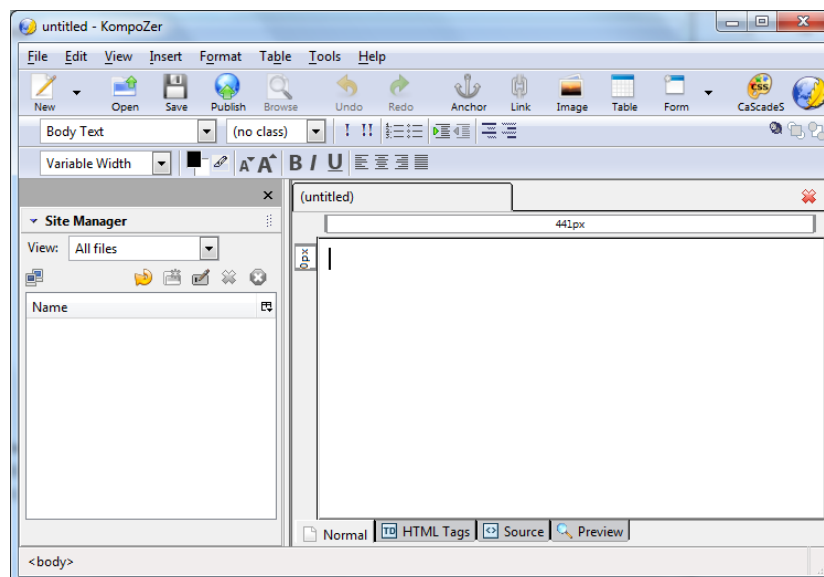
- Read Overview 9
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 6

Overview 9

Tables, Image Maps, Editors

Are you getting the best possible grade?	205
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You may now start using editors, such as Dreamweaver or KompoZer (KompoZer used to be called NVu, they are pretty much the same thing, and they are both FREE Mac/Win versions <http://www.kompozer.net/download.php> Check class web site for additional download info.)



Are you getting the best possible grade?

First things first: Are you spending enough time on this class?

When you registered for class, it probably said you are expected to attend a lab period, outside of the regular meeting times. Normally this lab is not scheduled; you may work on any computer anywhere if it has the right software... that includes the computer lab in the WTC building. But, usually on your registration slip, it is suggested that you come to the Wednesday, 12:30-2:30 lab in room 522, as I am there to help you with labs and answer questions. I am the only person on campus that schedules an open lab like this. So, are you using the lab time afforded to you to work on labs, and ask questions?

Most colleges advise their students to spend at least one hour outside of the classroom for every hour in the classroom. This is the time you will need to read the class material before you come to class, and take notes on questions you wish to ask. Class material includes your book(s), my notes on my web site, and the videos provided with the book or on the class web site. Most of my classes meet a bit over two hours a week; are you spending two hours a week outside of the class, preparing?

Are you getting the most out of my lecture?

Not all students learn best by reading. That is why I include videos. You want to see the lecture, and see the demonstrations. You want to follow along with the guided activities. But, if you have not read the required material BEFORE class (the class schedule is on your syllabus, on the class web site, and there are reminders in YOUR LMS), you won't be prepared for my lecture.

So what to do if you didn't 'get it'?

Raise your hand or email. Ask questions.

Come by my office hours. They are listed on the class web site. Come to my lab times, or attend other similar classes.

Next, are you using the feedback in the LMS? Do you check the dropbox to get prompt feedback, and in the MUDs do you suggest areas in my notes that might benefit from more or new information? Post to all the forums you should be, to get the best participation grade possible.

What your Instructor won't do.

Instructor's want to help you learn, but don't expect them to constantly repeat what was already said, or what is already written down for you. After a bit, Instructor's will simply point out the relevant information.

It is up to you to review the steps until you master them. Instructors can provide insight, provide some learning tips, or refer you to campus institutions that can help with your reading or learning skills; Instructors can provide info on where the material resides on the web site or in your book, but Instructors can't sit by you the entire time... other people may have questions too.

Don't expect the faculty member to do your lab. Instructors will show you the steps, but it is up to you to string those steps together... use your notes until the steps are second nature.

A final note on using the material to assist you during the learning phase.

Between the book and my notes, EVERYTHING is covered. Nothing is said in lecture classes that isn't available for you in the book or on my web site. Many software related items have videos to demonstrate the techniques, but you simply can't learn by skipping to the videos. You must read the material first. You may turn to that part of the book, then, as you watch the videos provided...stop the video, and compare the notes to what you see.

Okay, as a student I am paying attention, doing my reading, but my grade is low. What is going on?

Most people in these classes that are not getting As or Bs can attribute that to not turning in work.

Are you turning in all parts of the lab? Almost every lab has two parts, a software related activity, and a quiz over a related topic.

The activities are turned in by using the LMS dropbox.

Lab quizzes are open book, open note, and taken using the quizzes feature in the LMS. To find out at any time what your scores are, go to the grades area in YOUR LMS, and scroll down for feedback on what can be redone to improve your grade. A separate section on feedback is in the orientation at the end of the book.

If you are not doing the labs, you will not be prepared for the Tests.

To get the best test grade: do the labs, and really spend some time on the provided test reviews. Almost everything on the test comes from the review. You may complete and email me a test review for feedback on your material.

And remember, your lowest test score can be improved by doing well on that section of the Final exam.

Reminder on Make Up Work

All material is due on a specified date, electronically submit the material even if you don't attend class. Late work may not be accepted, or may be heavily penalized.

A missed test grade is generated as a percentage of the relevant section of the Final Exam; the lowest test grade may be replaced by a percentage of a markedly improved relevant section of the Final.

Reminder on the Key to success in my classes

Spending time on the class, participating, and turning in your homework almost guarantees passing; test grades build on that success. The majority of my tests are short answer/fill in the blank, to ascertain what you have actually learned, to duplicate the real test before getting a job, the job interview.

Cheating prevents me from seeing what you are weak in, which prevents you from learning it. So, don't cheat, or break the rules.

Reminder on Test 2




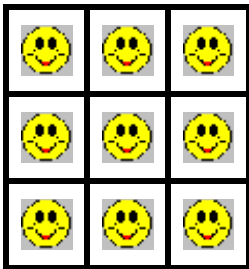
See Overview 8 for the test review, study tips and how to take a test.

Complex Tables



Several videos on tables/editors are available on the class web site.

Border, cellspacing, and cellpadding

<p>A basic table</p>  <pre><table> <tr><td>...</td><td>...</td><td>...</td></tr> <tr><td>...</td><td>...</td><td>...</td></tr> <tr><td>...</td><td>...</td><td>...</td></tr> </table></pre>	<p>A table with borders</p>  <pre><table border="1"></pre> <p>You may also use <code><table frame="type"> ... </table></code>, where type could be above, below, etc. <i>or</i> You may also use <code><table rules="type"> ... </table></code>, where type could be all, cols, rows, or none</p>
<p>Cellspacing The amount of room the <i>border</i> takes up <i>between</i> cells, measured in pixels</p>  <pre><table border="1" cellspacing="5"></pre>	<p>CellPadding The amount of room around the object <i>in</i> the detail, measured in pixels</p>  <pre><table border="1" cellpadding="5"></pre>

Header

HEADER If you wish to create a header row that automatically 'bolds' the contents, use `<th>` `</th>` *instead of* `<td>` `</td>` on the *first* row...

“Merging” Cells with `rowspan` or `colspan`

ROWSPAN To create a detail that extends into the space below, use `<td rowspan="x">`, where x = the number of rows to be occupied.

Note: omit a `<td>` `</td>` on the next row.

Example

01	02	03	<code><table border="1"></code>
04	05		<code><tr><td>01</td><td>02</td><td>03</td></tr></code>
07	08	06	<code><tr><td>04</td><td>05</td><td rowspan="2">06</td></tr></code>
09	10	11	<code><tr><td>07</td><td>08</td></tr></code>
			<code><tr><td>09</td><td>10</td><td>11</td></tr></code>
			<code></table></code>

COLSPAN To create a detail that extends into the space to the right, use `<td colspan="x">`, where x = the number of columns to be occupied.

Note: omit a `<td>` `</td>` in that row.

Example

01	02	03	<code><table border="1"></code>
04	05	06	<code><tr><td>01</td><td>02</td><td>03</td></tr></code>
07	08		<code><tr><td>04</td><td>05</td><td>06</td></tr></code>
09	10	11	<code><tr><td>07</td><td colspan="2">08</td></tr></code>
			<code><tr><td>09</td><td>10</td><td>11</td></tr></code>
			<code></table></code>

width, align, valign

WIDTH You may control how wide a table is by using `<table width="x">` where 'x' is either a value in pixels, or a percentage of the screen ("x%").

You may control how wide a detail is by using `<td width="x">` where 'x' is either a value in pixels, or a percentage of the screen ("x%").

Note: This only needs to be defined once for a column, as all details below that will 'inherit' this value.

ALIGN You may control where information is placed horizontally in a detail by using `<td align="x">` where 'x' is left, right, or center.

VALIGN You may control where information is placed vertically in a detail by using `<td valign="x">` where 'x' is top, bottom, or middle.

background, bgcolor

BACKGROUND You may control the texture in a detail by using `<td background="x">` where 'x' is a .jpg or .gif file.

Note: not all browsers support this feature.

BGCOLOR You may control the background color in a detail by using `<td bgcolor="#x">` where 'x' is a six digit hex color.

Note: not all browsers support this feature.

thead, tfoot, tbody

Table rows may be grouped into a table head, table foot, and one or more table body sections, using the THEAD, TFOOT and TBODY tags, respectively. This division enables users browsers to support scrolling of table bodies independently of the table head and foot. When long tables are printed, the table head and foot information *may* be repeated on each page that contains table data.

thead, tfoot, tbody are not a large consideration in *this* book.

More on formatting

For web page basic format options, many are similar to features in word processing:

`<i>text</i>` for italic

`text` for bold

and modifying tags to center text, etc.

The following section introduces

-spaces, tabs, and form feeds,

-a preview of In-line formatting with `<tag style="..."> </tag>`, and

-block formatting with `<div align="..."> </div>`

More fun with spaces and text placement (on screen, or printed)

You know about non-breaking spaces, (` `), but if your computer reads ASCII (Windows reads ASCII), you might also try the ASCII tab (`	`). Or, if you wish items to print on separate pages, insert the ASCII form feed (``)

Begin **HTML 4 concepts; but relax, we can let editors do this stuff...**

This is a preview of Overview 12; this an intro to what your editor is doing.

In-Line Formatting, using `<tag style=...> </tag>` or ` `

For more information, check out the W3C material at

<http://www.w3.org/Style/>

Up until now, if you just wish to change the appearance of a few words, you used `text`.

As mentioned earlier, `` has been deprecated; one of the preferred methods now is using in-line formatting, such as

` text`.

That is, you add a style *property* and *value* to an *existing tag*, such as a headline, or a paragraph. I like to use ***span***; like paragraph, it surrounds some text, but does not force the line breaks that `<p></p>` does.

Style Examples

Style property declarations have the form "property: value" and if there are several options to be used, they are separated by a semi-colon.

```
<h1 style="text-align: center"> </h1>
<p style="text-align: center"> </p>
<span style="color: red; font-size: 14pt"> </span>
<span style="font-weight:bold; font-family: Arial, Helvetica, sans-serif"> </span>
<img style="float: right" ... > </img>
```

It is often confusing to do too much style formatting early on, as this type of HTML is very rich, with many, many options; so, **styles are best implemented if you are using an editor**, such as Dreamweaver or NVu. First you create a style, then you apply the style to whatever text you wish to format; **more on creating styles in Overview 12**.

Formatting by dividing your page into blocks, or divisions: <div>

One step up from applying placement to a paragraph or headline, such as `<p align="right">Text </p>`, is the idea of blocks or divisions. Using `<div></div>` we can surround a section of a web page, including headlines, horizontal rules, images, and text, and align all of them at once.

DIV Examples

```
<div align="left">... </div>
<div align="center">... </div>
<div align="right">... </div>
<div align="justify">... </div>
```

HTML Editors

HTML editors automate the use of tags and attributes when developing a web page. Using an HTML editor can allow you browse to a file, and the editor will create the path statement. Using an HTML editor can allow you to choose a color, and the editor will insert the hex value. Using an HTML editor can allow you to quickly format an existing document, and will not generate typos in your HTML code.

So why did we wait until now to start using HTML editors?

A 747 captain may make well over \$250,000.00 a year to basically watch the airplane fly itself. The reason he is paid well over \$250,000.00 is because *he knows what to do if the airplane STOPS flying itself.*

If you had simply started learning Dreamweaver, for example, instead of learning HTML, you would not have any idea on what is being done for you, and therefore would have no idea on how to modify the code when the editor generates something that doesn't match your needs. Tables especially are a pain to develop well with editors, as they often default to variable widths as you add content. In future overviews, you'll learn about frames, and editors have trouble letting you editing the component parts of a frame. If you had no knowledge of HTML, you just wouldn't know which parts of the document you control, or which areas may need to be modified to get the end result you wish.

As it turns out, if you know what the editor is doing for you, it is much easier to learn an editor, instead of visa-versa. Further, new editors are released every year or so... only knowledge of HTML and what the editor is doing for you can allow you to adapt to *any* editor, regardless of version.

This book will introduce you to two HTML editors that can help you design and build web pages: NVu and Dreamweaver. NVu is an older, free, open source editor, while Dreamweaver is what 90% of professional developers use.

Several videos on tables/editors are available on the class web site.



Editor tips, Nvu (aka KomPoZer)

Tip 1

Put your structure in first...

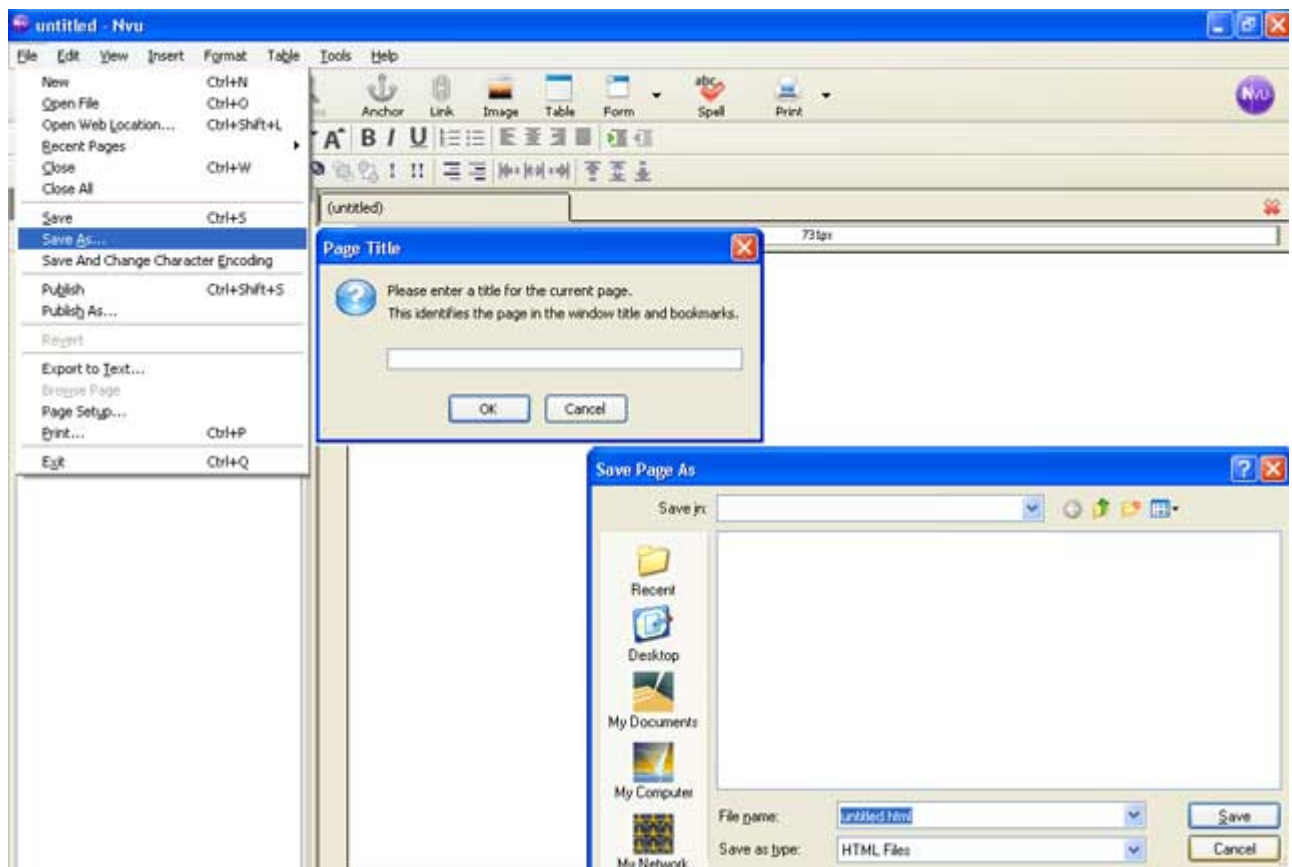
- create a folder to hold your site on your computer, inside this new folder
 - you will make your default document, index.html
 - create a folder called pages and
 - create a folder called images

Tip 2

If starting a new file, save your new file **immediately**, otherwise link paths will be broken

- File\Save As...
- you will be prompted first for the page title,
- then you will need to provide the filename and location

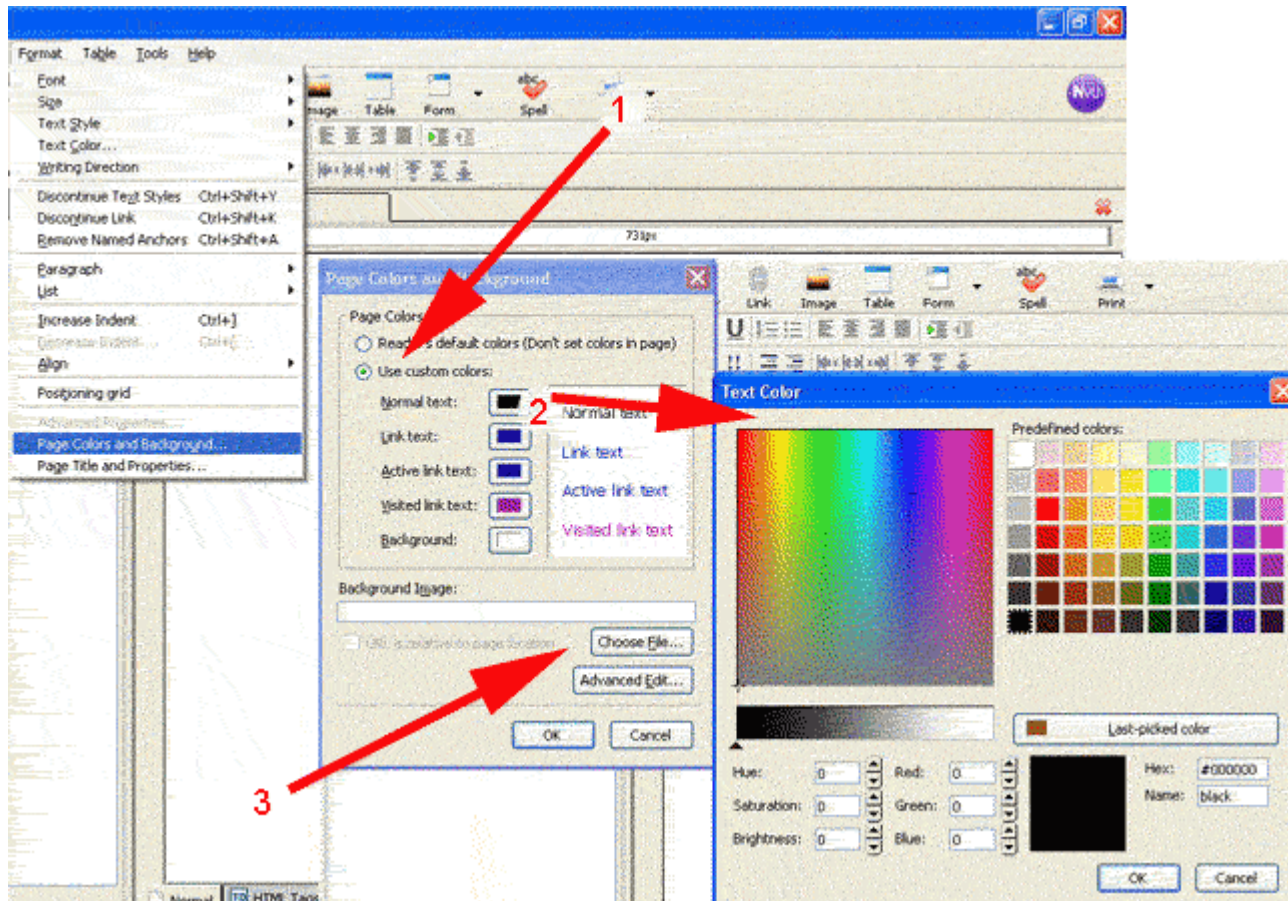
(remember, the default document **does not** go in the pages folder, and normally is named index.html).



Tip 3

To Format\Page Colors and Background...

1. Choose Use custom colors...
2. Click the color button you wish to change to open the color palette
3. You may also browse to existing files for background images



Tip 4

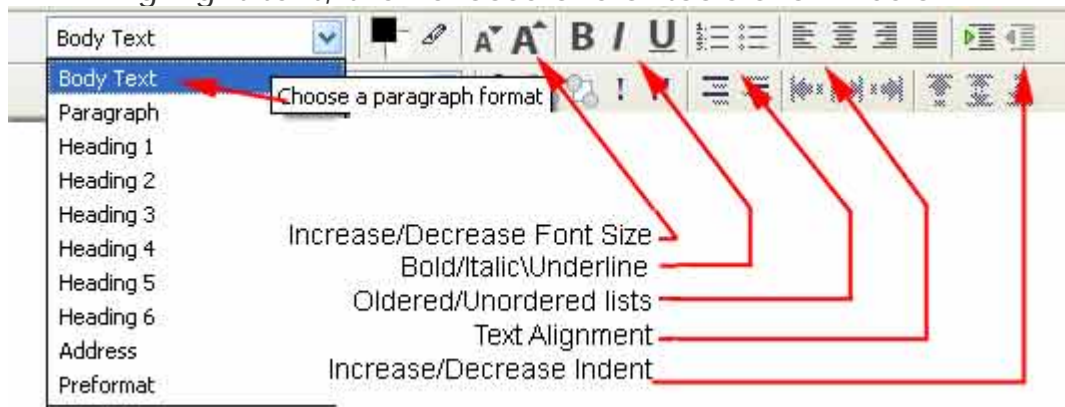
To format

- Type and format text as you would with a word processor...
- To Spell check



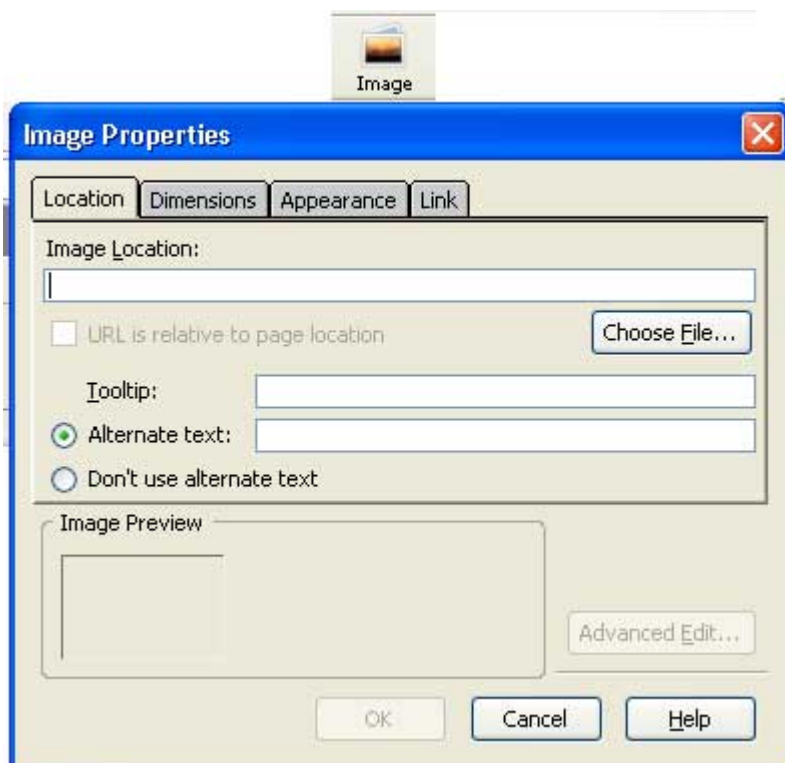
Tip 4, formatting, continued

- Type and format text as you would with a word processor...
- Highlight text, then choose one of tools shown below



Tip 5

- To Insert images
 - Browse to the file location using Choose File...
 - Add alt
 - May adjust dimensions
 - Under appearance you may control spacing, or add image map
 - May set image as link



Tip 6

- To Insert named **anchors**, also known as bookmarks



Tip 7

- To Converting text to **links**
 - Highlight text



- type in URL, or browse to local web page using Choose File

Tip 8

- Using Tables
 - remember, text or images has to go in each cell
NVu **will not** automatically place an ` ` in an empty cell
 - you can resize cell width
 - highlight multiple cells, right click: you can join cells
 - right click: you can add background to the table or cells
 - highlight single or multiple cells, then right click: you can align text

Several videos on tables/editors are available on the class web site.



Tip 9

- Using Forms (Overview 11)
 - remember to name textboxes, checkboxes, etc.
 - more on forms in Overview 11.

Tip 10

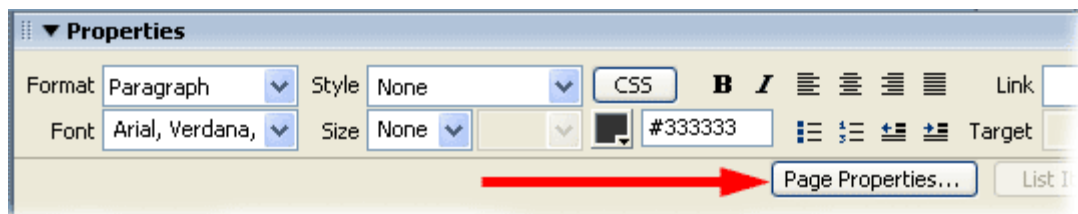
- NVu doesn't do frames,
but can create or edit the pages your frame will open
 - more on frames in Overview 12

Intro to Dreamweaver

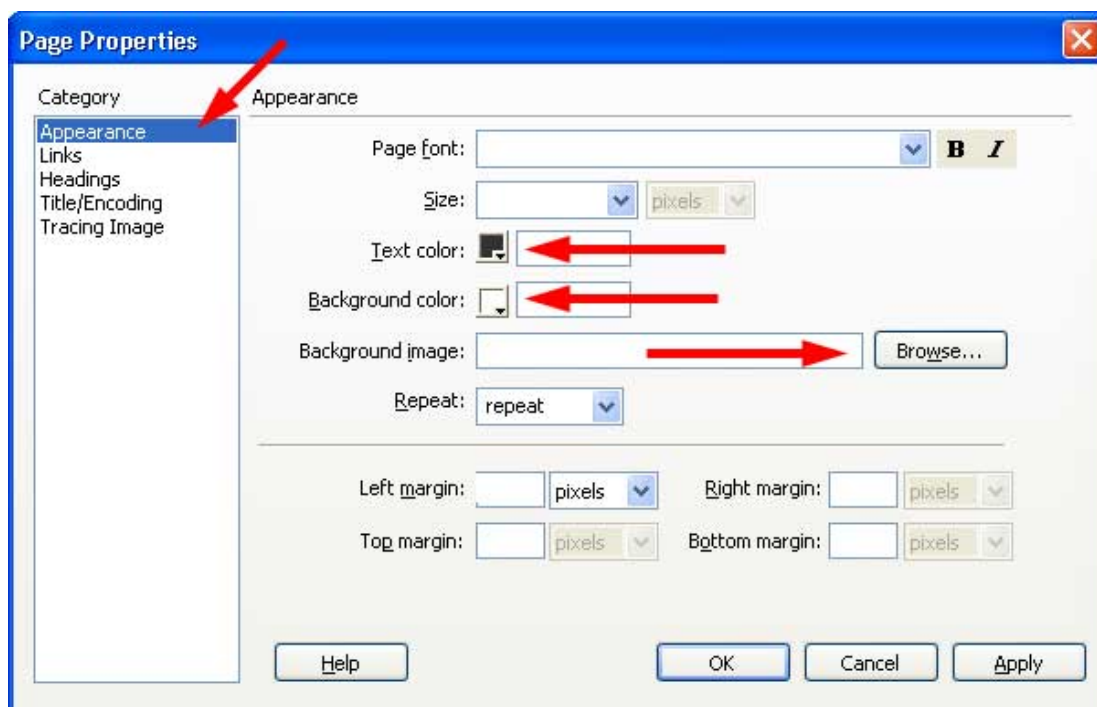
These instructions are not specific to a particular version of Dreamweaver, you may have to adapt the topics to your version; use Dreamweaver 'Help' as needed to locate and use the tools discussed.

To begin with, after starting Dreamweaver, SAVE the blank file, such as O:\labx\index.html. As with Nvu/KomPoZer, this must be done now in order for relative addresses and relative paths to work; also, 'Save' your work after each major change to your page.

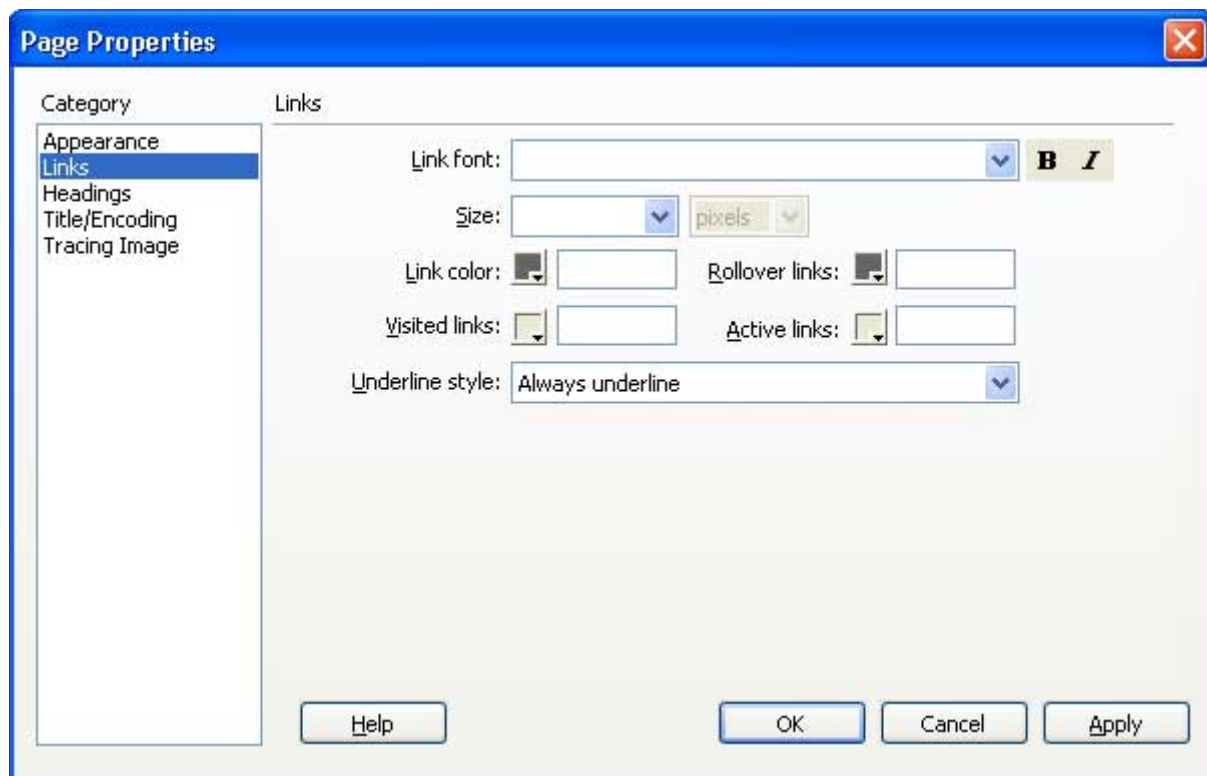
Next, click the Page Properties button at the bottom of the page. Note: whatever is selected has properties that can be modified at the bottom of the screen... again, as with NVu, notice the word processor type controls.



Next, on the Appearance menu, set your text color, background color, and browse to a background image you have created and saved in a folder accessible to the web page, such as O:\labx\images.

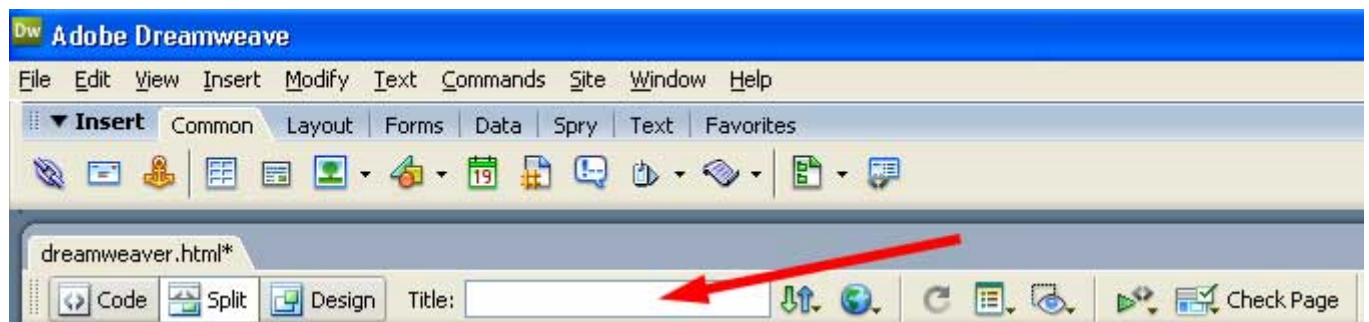


Now choose the links menu, and set the colors for the links... these should complement the text color and background.

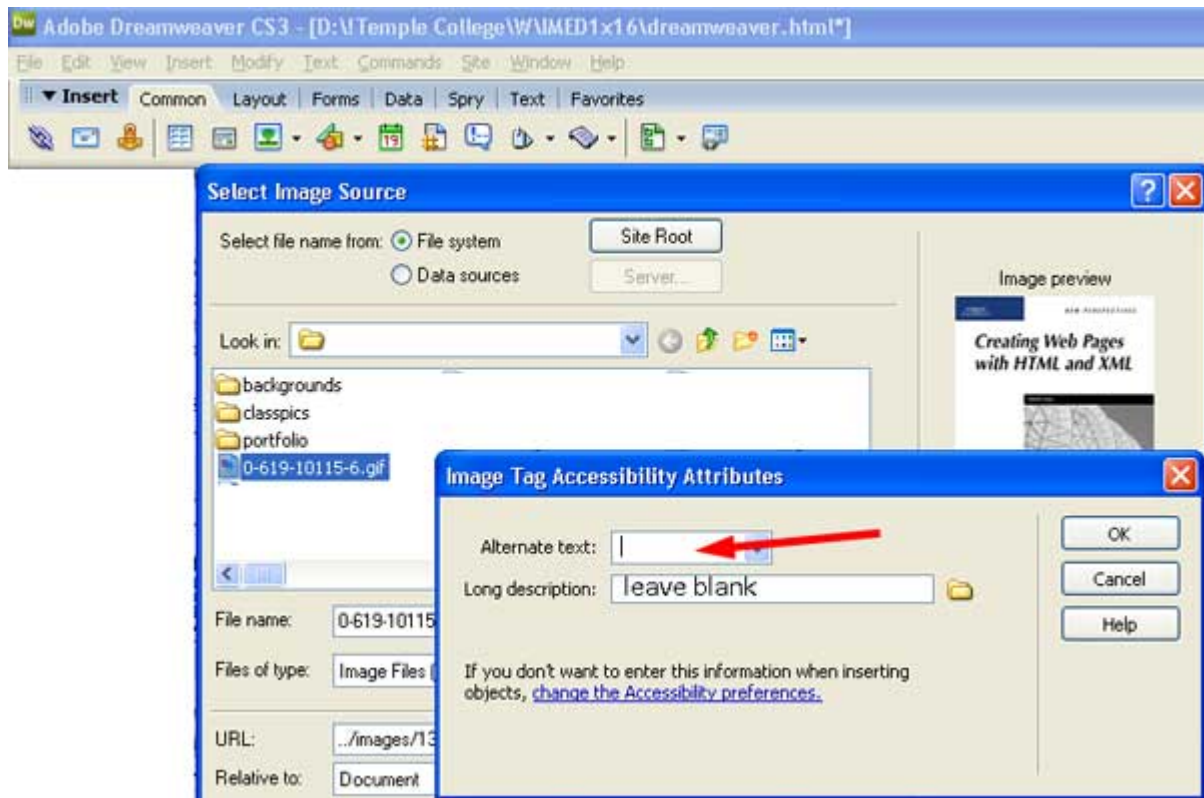


You may now save your changes by choosing [OK].

Next, you must set the title that you wish to display in the browser, above the main window.



You may 'Insert' images... after browsing to the file, you must provide Alternative text for the visually challenged.



As with a word processor, you may 'Insert' a table to organize your page.

Several videos on tables/editors are available on the class web site.



Note on Dreamweaver use:

More advanced classes, such as Web Design II focus on using a tool such as Dreamweaver; but this class, akin to Web Design I or Intro to Web Design, focuses on HTML foundations.

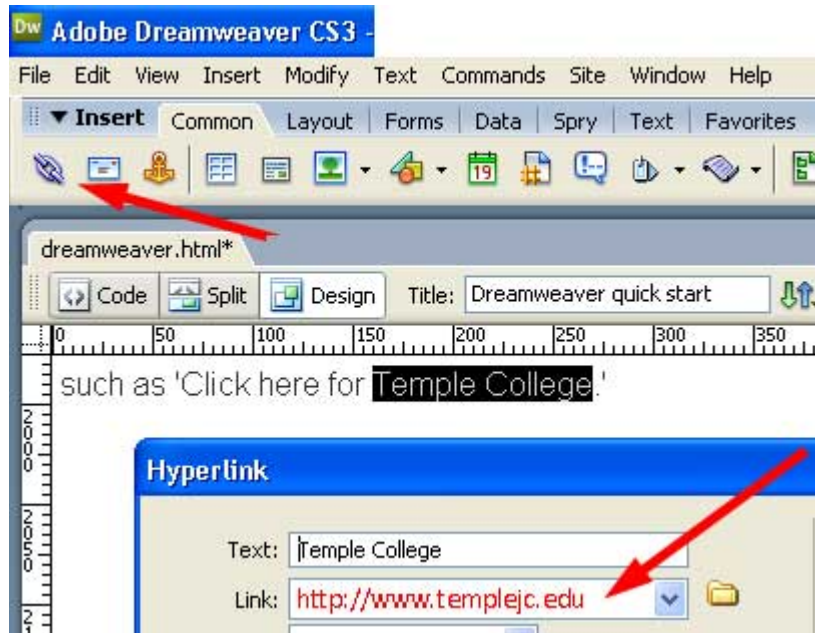
So from this point on, you may continue to code in HTML, you may use the freely distributed Nvu/Kompozer, or you may use Dreamweaver if you have access. (Any editor, aside from Word or Front Page, are fine.)

This book cannot anticipate which version of Dreamweaver you may have, so topics covered will be in a generic format, and not specific to any version.

Links in Dreamweaver

Finally, to link to an Internet site, type some text, such as 'Click here for Temple College.'

Highlight the text, and choose the Chain icon.



For now, only fill in a full URL for the link... leave other fields as is.
To link to an existing page on your site, choose the Folder button to the right, and browse to the file.

Image Maps

An image map is simply an image that can be used to link to different sites by clicking on various areas of an image, called hot spots. The hotspots are rectangles, circles, or polygons defined in HTML; the defined hotspots are then associated with a web site as a link.

Example image with hotspots
(the dotted lines around particular parts of the image):

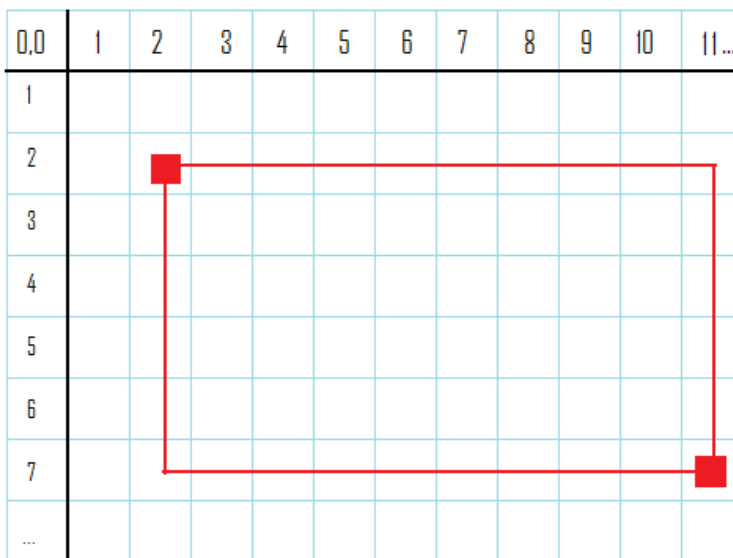


Rectangular Hot Spot Circular Hot Spot Trapezoidal Hot Spot

While, in theory, you can make an image map simply with a text editor, most people use their HTML editor or their graphics editor to not only define the hotspot, but also create the HTML code. Below are instructions for using an HTML editor or a graphics editor to create an image map, and then the final section of 'image maps' is some sample code; if you have the related image (available on the class web site) you could copy/paste the code to a web page to turn the image into an image map.

What is an image map?

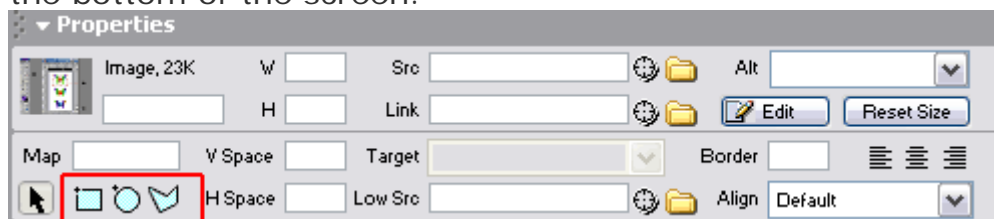
Image maps read coordinate values, x and y values as you may have done in geometry.



The rectangular image map above is 2,2 to 11,7 (the origin being the upper left hand corner of the monitor, in this example).

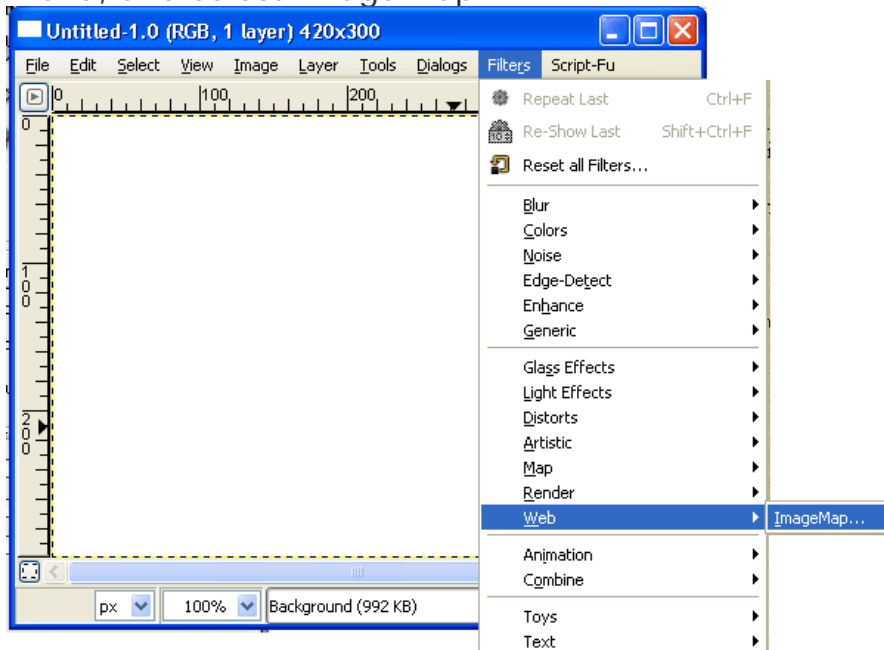
Image Maps with an HTML editor or photo editing software

If you are using Dreamweaver, after inserting the image, select the image; this will activate the image map tools in the Properties area, at the bottom of the screen.

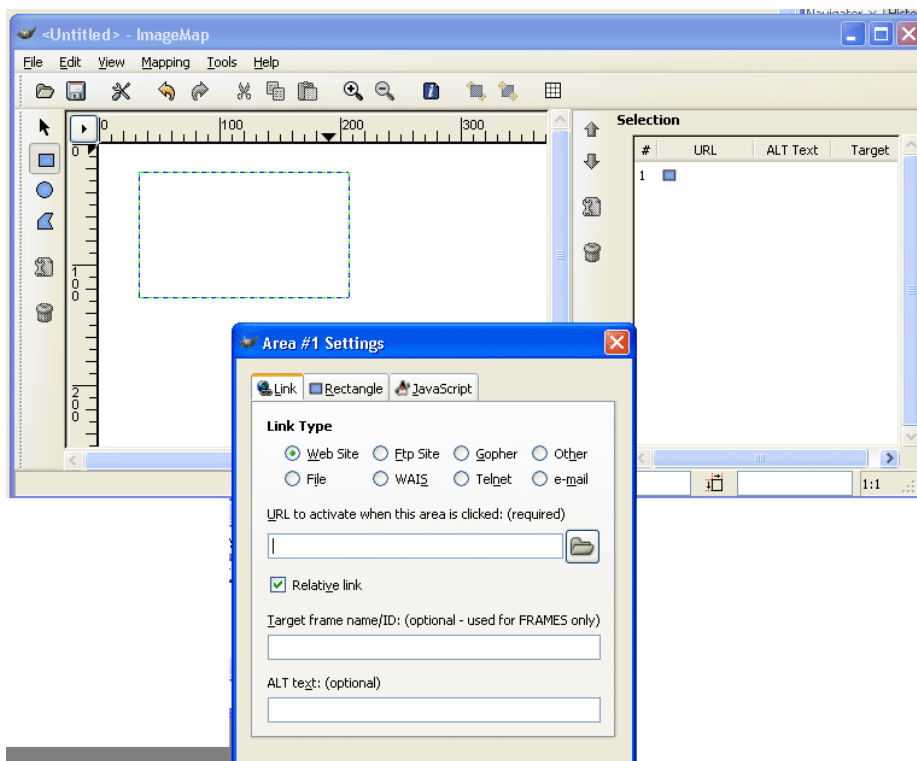


Choose a hotspot tool, and draw your shape. Once you finish, you will then get a new addition to the properties area: a place for the link and a place for the URL. It's that simple when using a full featured editor.

If using **GIMP**, start with an image, and then choosing Filters/Web menu, and select Image Map.



The Image Map window opens, allowing you to choose a hotspot shape to drag over parts of your image. As soon as an area has been defined, the Settings dialog appears. This is used to specify the hyperlink associated to the selected area.



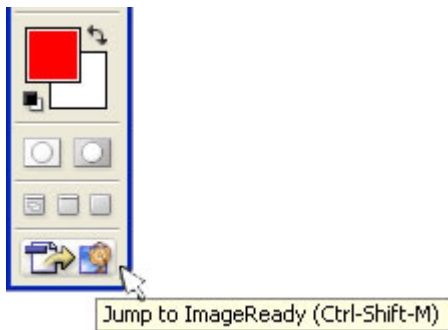
After all the desired areas have been selected and hyperlinks defined, you can save the work by clicking on the disk icon or selecting the Save As function from the File menu.

This creates a web page with the image map information, so the file extension should be .html or .htm.
No changes are actually made to the image.

You can then copy and paste the relevant image map info into another web page, as you may choose to do in this week's lab.

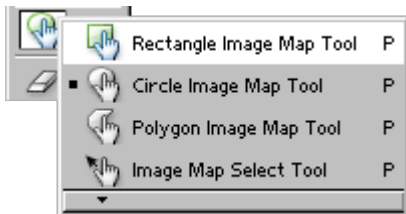
Image Maps in Adobe Creative Suite

If you have Adobe Creative Suite, the Image Map tool may not be in Photoshop, but is available in the Fireworks Toolbar as the Hotspot Tool. It works similarly to the method listed below for older versions of Photoshop.



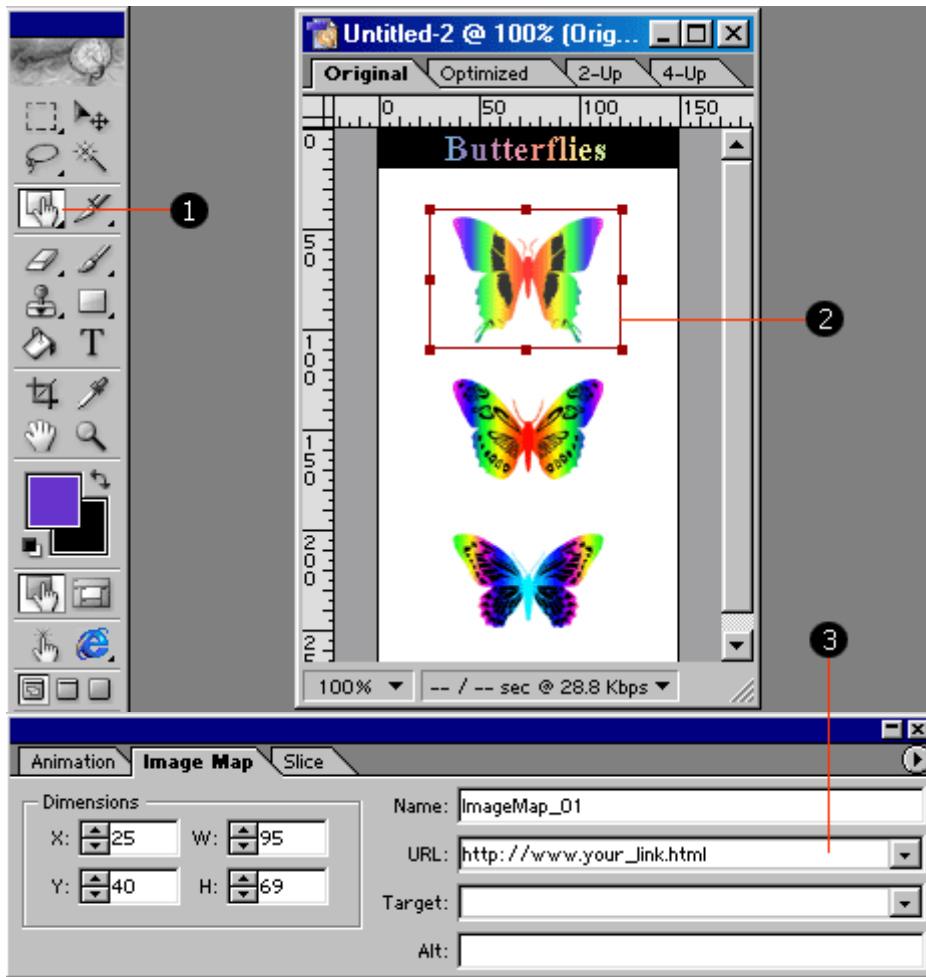
If you use an older version of Photoshop: Open your image in Photoshop; after prep, click the ImageReady icon, bottom right of the tool box.
Or, just open **ImageReady**, and open your file directly. Now go to **Window > Image Map**.

Select the appropriate **Image Map** tool
(Item #1 in the image on page 224;
you have choices here, rectangle, circle, or polygon.).



Use the cursor to select the hotspot on the image,
as in item #2 in the image on page 224.

In the **Image Map** palette (item #3 in the image on page 224),
Enter **URL** to page for Link. You may also add a **Target** and **Alt** tag as needed.



Repeat until all area's are mapped.

To Save image and code...Simply go to **Save Optimized As...**
(Be sure to select "HTML and Image"). This will save the image and create an html page; you can copy the image map code into another page.

An EASY Image Map, use Sample Code

<pre> graph TD IMED1316[IMED1316] --> Lab2[Lab2] Lab2 --> Lab5[Lab5] Lab2 --> Lab6[Lab6] Lab6 --> PAGES[PAGES] Lab6 --> IMAGES[IMAGES] </pre>	<p>If you have copied the file 'folders.gif' to your images folder, you could insert the following code to make <i>just</i> the top IMED 1316 folder a link to Temple College.</p> <pre> <map id="folders" name="folders"> <area shape="rect" coords="132,29,204,88" href="http://www.templejc.edu" alt="Temple College" /> </map> </pre>
--	---

W3C: World Wide Web Consortium

Remember Tim Berners-Lee from the Timeline in Overview 1? He didn't just sit on his laurels after coming up with the World Wide Web. He became associated with a volunteer group that approves new standards for HTML, and which also provides resources. The appendix lists many tags and attributes, but the W3C has all of them. So, if you would like to see other tags, or examples of how tags are used, check out:

Table of contents for HTML 4

<http://www.w3.org/TR/html401/cover.html#minitoc>

List of Tags (Elements)

<http://www.w3.org/TR/html401/index/elements.html>

List of Attributes

<http://www.w3.org/TR/html401/index/attributes.html>

I am avoiding HTML 5 for the moment.

Here is a great place for your Notes:

Lab 6 You may now start using Web Editors, if you are so inclined!

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59AM
(see due dates on web site)

- **NOTE:** Do NOT use CAPITAL letters OR spaces in file names.
- **NOTE:** Do NOT use curly quotation marks, such as *"*; only use straight quotation marks, such as *"*.

No new DOCUMENTATION, see Lab 5

HANDS ON ACTIVITY begins below

No HANDS ON QUESTIONS, *wasn't the Test enough for the week?*

Part 2, Activity (100%): You will later transfer this information into your LMS dropbox

- Copy the contents of lab5 to a lab6 folder

Part 2a, Activity (50%):

- Using a text editor or a html editor, such as Dreamweaver or NVu, add a table to page1.htm; include with align="value", valign="value", background="value" or bgcolor="value", and either a rowspan or colspan, as described in this overview. Add line breaks so I can see the valign

Part 2b, Activity (50%): Two options, choose ONE option only.

- Option One, the EASY option...

Copy the image 'folders.gif' from the class website to your **images** folder (verify the file is saved as *folders.gif*, **not** *folders[1].gif*), then add the following code to page2.htm (the code makes the IMED1316 folder in the image a link)

I strongly suggest you **copy the code from the class website, rather than type the code manually**; the lines of code should match what you see below... then paste them into your page2.htm document.

```

<map id="folders" name="folders">
<area shape="rect" coords="132,29,204,88" href="http://www.templejc.edu"
alt="Temple College" /> </map>
```

or


- Option Two

Using an editor, such as Dreamweaver or GIMP, etc., add an image map to your existing page2.htm.

Grading Points

- page1.html has a table with
 - a table with SOMETHING (text, an image, or ` `) in every cell (10%)
 - background color or background image for the table (or individual cells) (10%)
 - at least two cells are merged/joined with `rowspan` or `colspan` (10%)
 - text in at least one cell is visibly vertically aligned (10%)
if you put a few `
` in an adjacent cell, this will be easier to see
 - text in at least one cell is visibly horizontally aligned, center or right (10%)
See sample code below for background, or if coding by hand.
- page2.html has a working image map with
 - a working visible image, such as the "folders.gif" (10%)
 - a working alt attribute, such as "folders" (10%)
 - a working hotspot, such as the rectangle over the IMED 1316 folder (15%)
 - the hotspot actually links to another page, such as www.templejc.edu (15%)
 - If using your own image and link destination, please add some text near the image that lets me know where the image map is, and what it is supposed to do.

Sample Code for an example complex 2x5 table

<code><td align="left" valign="top" colspan="2"></code>	Top, left, with colspan of 2				
<code><td align="right" valign="top"></code>	Top, right				<code><td align="right" valign="bottom" rowspan="3" bgcolor="yellow"></code>
<code><td align="left" valign="bottom"></code>	Bottom, left				
<code><td align="center" valign="middle"></code>	Center, middle				Bottom right rowspan of 3 w/ yellow
<code><td> </td></code>					<code><td> &nbsp; </td></code>

No Quiz for Lab 6 Again, wasn't Test #2 enough?

SUBMITTING THE LAB

In Windows, zip the entire lab6 directory, and rename to yourname-lab6.zip. Directions on page 70.

Log into Your LMS, choose this class, choose Dropbox, select Lab 6. Browse to yourname-lab6.zip and upload it. (See page 80 or class website for detailed instructions)

No quiz for Lab 6.

Completing Overview 9

- Submit by 11:59 AM, Friday, of the current week (see due dates on course web site)
 - Lab 6

MUD 9 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 9 Respond in the class LMS Discussion forum to the following:
Why did we wait until now to start using HTML editors?
-

For the next time frame:

- Read Overview 10
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 7



Overview 10

HTML Frames

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Frames Quick Reference	Appendix-17

Please See Frame Appendix for Screenshots of a presentation on Frames

What is a frame?

Framed web pages are when you see multiple web pages simultaneously. For all practical purposes, the frame web page itself is not visible; the frame web page simply divides the browser window into spaces, into which web pages can be placed.

Frame example

This space displays navigation.htm	This space displays logo.htm
	This space displays welcome.htm
	This space displays contact.htm

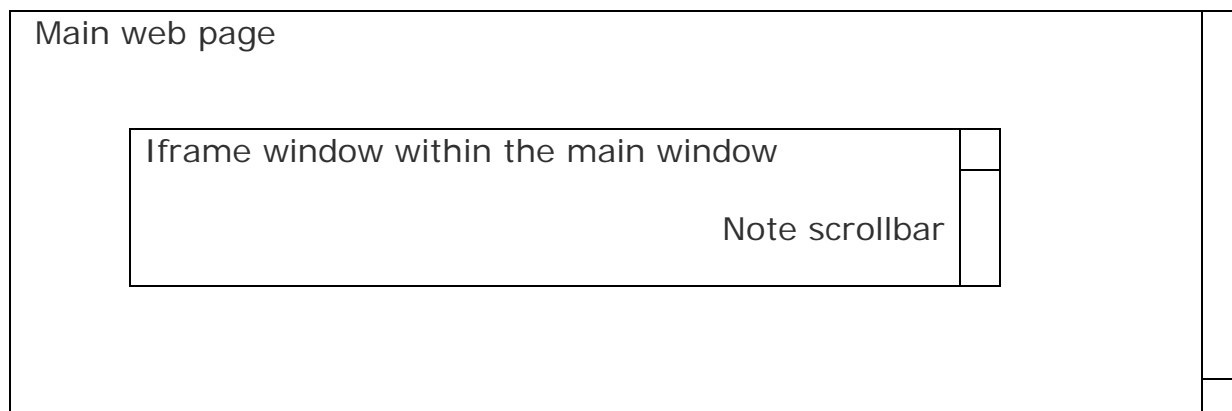
Only two tags are used in framed web pages:

`<frameset>` and `<frame>`

- A frameset can contain a frame, which holds a web page or
- another frameset

iFrame

The simplest implementation of a frame is `iframe`, sort of like picture in picture in a TV, `iframe` cuts a whole in the web page, and displays another page there. On the class website, some of the Lab questions web pages have this interior web page, that has its own scrollbar.



How to implement `iframe`: `<iframe src="URL" width="x" height="y"></iframe>`

Doctype: Telling the browser to expect frames

If you have used an HTML editor, no doubt you have seen that it adds a 'doctype' and <meta> tags to your file. These tools simply tell you browser what to expect in the way of HTML (doctype), and at the very least, the language the page was created in (a use of the meta tag).

The practical use in this class is that frames are much more advanced than basic HTML, so you *should* include a frame doctype; this goes BEFORE the <html> tag.

Note, it is in the form of a comment, so it would be ignored by older browsers that don't use doctype.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">
```

Other doctypes

The following DOCTYPEs are commonly used:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
```

This declares the document to be HTML 4.01 Strict. HTML 4.01 Strict is a trimmed down version of HTML 4.01 that emphasizes structure over presentation. Deprecated elements and attributes (including most presentational attributes), frames, and link targets are not allowed in HTML 4 Strict. By writing to HTML 4 Strict, authors can achieve accessible, structurally rich documents that easily adapt to style sheets and different browsing situations. However, since many browsers lack full support for style sheets, HTML 4 Strict documents may look bland on older visual browsers such as Netscape Navigator 3.x.

Newer browsers use a standards-compliant rendering for HTML 4 Strict documents. These browsers use a 'quirks' mode for most other document types to emulate rendering bugs in older browsers.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
```

This declares the document to be HTML 4.01 Transitional. HTML 4 Transitional includes all elements and attributes of HTML 4 Strict but adds presentational attributes, deprecated elements, and link targets. HTML 4 Transitional recognizes the relatively poor browser support for style sheets, allowing many HTML presentation features to be used as a transition towards HTML 4 Strict.

Newer browsers such as Internet Explorer 5 for Mac, Netscape 6, and Mozilla use a standards-compliant rendering for HTML 4.01 Transitional documents that include the URI of the DTD in the DOCTYPE. These browsers use a "quirks" mode to emulate rendering bugs in older browsers if the URI is omitted:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

This declares the document to be XHTML 1.0 Strict. XHTML 1.0 Strict is an XML version of HTML 4 Strict.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

This declares the document to be XHTML 1.0 Transitional. XHTML 1.0 Transitional is an XML version of HTML 4 Transitional.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
```

This declares the document to be XHTML 1.0 Frameset. XHTML 1.0 Frameset is an XML version of HTML 4 Frameset.

<meta> Tags

Aside from describing the character set used (language the web page was created in),

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
```

for English, many search engines use the meta tag, nested in the <HEAD> to find data to include in the search engine database.

There are many variations

```
<meta name="description" content="your info">
```

Which allows the search engine to capture a description you create, and

```
<meta name="keywords" content="your info">
```

Which allows the search engine to capture keywords you designate.

Some Search engines simply take the first 25 words or so that appear on your page.

There are other <META> tags, as well, such as

```
<META http-equiv="PICS-Label" content='(PICS-1.1 [set by ratings bureau]r
(n 0 s 0 v 0 l 0))'>
```

Which allows the browser to detect parental control ratings

(You could google RSACi for more info), and

```
<META HTTP-EQUIV="REFRESH" CONTENT="x; URL=y">
```

Which allows you to automatically jump to another page 'y' after 'x' seconds.

(You could even force the current page to be reloaded...)

HTML frames



Note: NVu/Kompozer doesn't do frames.

Dreamweaver, after CS 5, can open them, but can't create them.

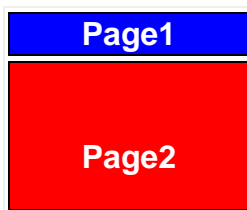
Earlier Dreamweaver that could create frames often messes up and uses absolute addresses instead of relative addresses, and creates pages to put in the frame rather than letting you choose an existing page.

For that reason I offer frame templates to help you with your labs.

Note: See appendix, or presentation on web site, for a good starter overview.

- A frameset carves a browser window in to spaces, either columns or rows
 - A frameset can contain a frame, which holds a web page
 - or
 - another frameset

Framesets and Frames are a way of opening multiple web pages in the same browser window,
such as in two rows,



or,

a more complex frame set where you mix columns and columns divided into rows.

To review complex frame concepts, check the class web site.

To code a complex frame, check the class web site.



1. This left side could be used as a table of contents
2. This top frame is information you wish to always be visible at the top of a page
3. This would be the main content you wish to display
4. This bottom frame is information you wish to always be visible at the bottom of a page

(Please See Frame Appendix for Screenshots of a presentation on Frames)

This "Step By Step" consists of two parts.

In the first part we explain how to create a "simple 2 row frame" frameset page, one that is divided up into JUST rows or JUST columns, but not both. A good example of this would be a home page that has a "toolbar" that takes you to different portions of a Web site.

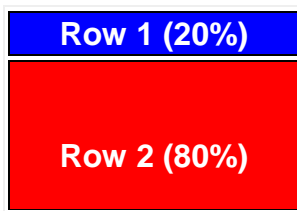
The second part of this section explains how to create a complex frameset page.

Once you've learned how to create simple frameset pages, it's actually quite straightforward to create a "complex " frameset page; one that can have both columns and rows. The code for the complex frame is below.

Creating a Simple Frameset Page

Step 1: Decide how many rows or columns you want.

Remember, framesets and frames are a way of dividing the browser's screen into different independent portions. In the "simple" case, you will be dividing the screen into only columns or rows. For this example, we'll create a page with two rows.



Step 2: Create the pages that make up the rows or columns.

The most important thing to remember about frames and framesets is that a frameset carves the browser up to displays more than one HTML page. These carved up spaces normally contain a frame... the frame is what holds one of the web pages to display.

If you have a frameset page with two frames in it, three HTML files are needed: one for each of the frames, and one that describes how the frameset will be laid out.

In this case, we'll say that you've created two HTML pages, row1.htm and row2.htm. The former will be shown in the top frame, and the latter will be shown in the bottom frame.

Step 3: Create the frameset page.

The next step is to create the frameset page that describes how the page is laid out. Here's the HTML for our frameset page:

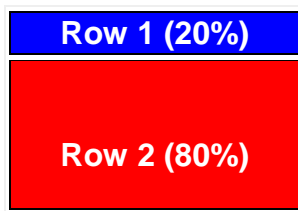
```
<HTML>
<!--Note: no body tag is required... the web pages that are opened within the frame
provide that info-->
<!--Note: later we'll add back the head tag to pass a title, etc.-->

<FRAMESET ROWS="20%, *">
    <FRAME SRC="row1.htm">
    <FRAME SRC="row2.htm">
</FRAMESET>

</HTML>
```

Framesets divide the web pages into placeholders.
Frames fill the placeholders with a web page.

The number of values that follow the ROWS= or the COLS= determine how many rows or columns will be created.
The values assigned determine how big the row or column is... either in pixels or as a percentage of the screen.
The * used above means "whatever is left over."



Thus row one will be 20% of the available screen, and row two will be whatever is left, in this case 80%. When viewed, this page will be divided into two rows, showing the two files that you created: row1.htm and row2.htm.

To create a page with two columns instead of two rows, simply use COLS instead of ROWS in the FRAMESET tag:

```
<FRAMESET COLS="20%, *">
```

Step 4: Set the relative sizes of the rows or columns.

There are four ways to tell a browser how tall to make a row:

1. Number of pixels. To make the first row 200 pixels tall, use **ROWS="200, *"**.
2. Percentage of screen height, as in **ROWS="20%, *"**
3. Use "*", meaning "whatever is left over." The above examples also use this method.
4. Use "n*", where *n* is a number. This means "*n* parts of what's left over." Thus **ROWS="*, 2*"** makes two rows where the first one is 1/3 the height of the screen and the second is 2/3 the height of the screen. And **ROWS="100, 2*, *"** creates three rows: one 100 pixels tall, one that takes up 2/3 of the remaining space, and one that takes up the last 1/3.

Step 5: Decide where the links should go.

Because each frame is a separate browser, clicking a link in one of the frames will go to a new page *in that frame*. In some cases that may not be what you want.

It's possible to create a link that, when clicked, makes a new page show up in another frame. To do this, you need to **name the frames**, just as you named your anchors to make bookmarks.:

```
<HTML>

<FRAMESET ROWS="20%, *" >
  <FRAME SRC="row1.htm" name="firstrow">
  <FRAME SRC="row2.htm" name="secondrow">
</FRAMESET>

</HTML>
```

Let's say you want to be able to click a link in the top frame and have a new page come up in the bottom frame.

To do this, place the following **in row1.htm**:

```
<A HREF="newpage.htm" TARGET="secondrow">Click here to see
"newpage.htm" in the bottom frame</A>
```

The TARGET attribute causes the link to be opened in the bottom frame.

If you want to be able to click a link and have a new page fill the window (replacing the frameset), use **TARGET="_top"** as follows:

```
<A HREF="newpage.htm" TARGET="_top">Click here to see "newpage.htm" take up the whole
window</A>
```

And if you want the page to come up in an entirely new Internet Explorer window, use **TARGET="_BLANK"** as follows:

```
<A HREF="newpage.htm" TARGET="_BLANK">Click here to see "newpage.htm" come up in a new
window</A>
```

Note: This works even on pages that do not have frames. To avoid cluttering the user's desktop with windows, this feature should be used sparingly.

For more options, see class web site.

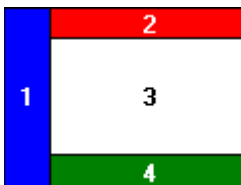
Please See Frame Appendix for Screenshots of a presentation on Frames

Creating a Complex Frameset Page

Now that you know how to create simple frameset layouts, it's very straightforward to make complex ones. A complex frameset is just a simple frameset, but some of the carved spaces are filled with framesets, instead of frames.

IMPORTANT CONCEPT: A FRAMESET carves space that can be filled with a frame, or another FRAMESET...

Let's say we want to create a page that has an index on the left and three frames of content on the right:



To do this, we create a frameset with two columns. The first column will contain frame 1, and the second will contain another frameset that holds frames 2 through 4. Here's the HTML:

```
<HTML>
<FRAMESET COLS="20%, *">
```

The first column is just a single frame:

```
<FRAME SRC="frame1.htm">
```

But for the **second** column, instead of using another FRAME tag, we insert a FRAMESET tag with three rows.

```
<FRAMESET ROWS="20%, *, 20%">
  <FRAME SRC="frame2.htm" name="topframe">
  <FRAME SRC="frame3.htm" name="middleframe">
  <FRAME SRC="frame4.htm" name="bottomframe">
</FRAMESET>
```

Then we close the FRAMESET and HTML tags, and we're done.

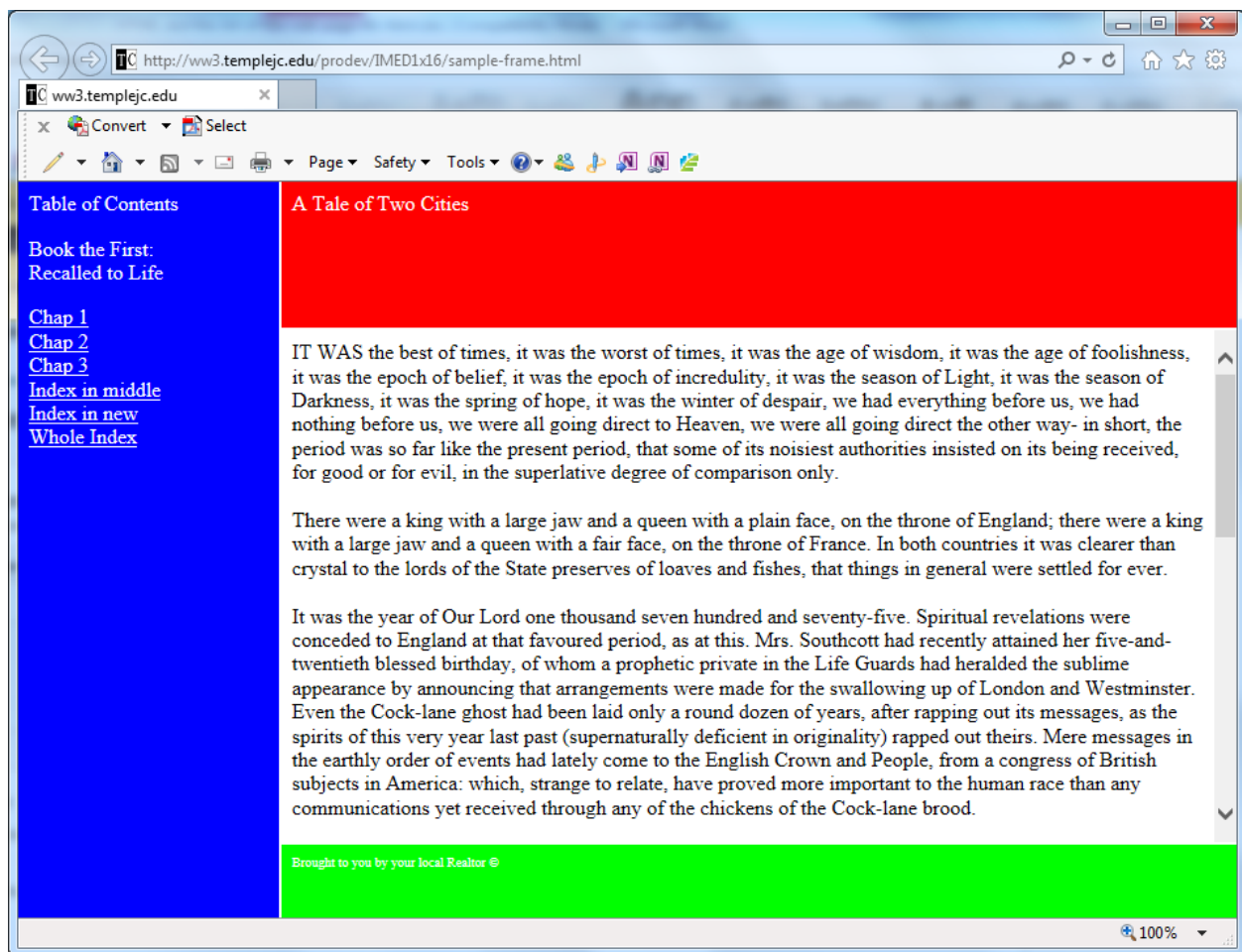
```
</FRAMESET>
</HTML>
```

Thus, by "nesting" one frameset inside another, complex frame layouts can easily be built from simple ones.

We could have created the same layout by using two FRAME tags and pointing the second FRAME tag to a separate file that was itself a frameset. The above syntax, in which we can insert a FRAMESET block instead of a FRAME tag, is actually a shorthand that reduces the number of files needed by one.

There's one case in which you don't want to use the shorthand: when you want to click a link in frame 1 and have a page come up that replaces frames 2, 3, and 4. In that case, you would do it the longer way, giving the second frame a name and using `` to replace the contents of that frame.

See class web site for working versions of this design.



Please See Frame Appendix for Screenshots of a presentation on Frames

OPTIONAL Advanced Techniques

Making Frameset Pages Visible in Browsers that Don't Support Frames

Since frameset pages usually contain no content, just a set of FRAMESET and FRAME tags, they tend to not show up at all in browsers that don't support frames. Fortunately, the frames standard provides an easy way to provide content for non-frame browsers. Before the ending `</HTML>`, insert

`<NOFRAMES>`

Replace this with content to be displayed if browser does not support frames

`</NOFRAMES>`

`<HTML>`

`<FRAMESET ROWS="20%, *">`

`<FRAME SRC="row1.htm">`

`<FRAME SRC="row2.htm">`

`</FRAMESET>`

`<NOFRAMES>`

Welcome to my home page! Click below to see my vacation photos...

etc.

`</NOFRAMES>`

`</HTML>`

Internet Explorer and other browsers that support frames will ignore everything between `<NOFRAMES>` and `</NOFRAMES>`. Browsers that do not support frames will ignore the frames and display everything between the `NOFRAMES` tags.

Placing a Colored or Textured Border Between Frames

With many HTML 4 compliant browsers, you can not only turn off the 3-D, you can also specify that the borderless frames should be a particular distance apart. Because this allows the background of the frameset page to show through, if your frameset page has a background color or image the effect is that of a colored or textured border between the frames.

`<HTML>`

`<BODY BACKGROUND="woodgrain.gif">`

`<FRAMESET ROWS="20%, *" FRAMEBORDER="0" FRAMESPACING="20">`

`<FRAME SRC="row1.htm">`

`<FRAME SRC="row2.htm">`

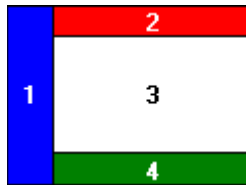
`</FRAMESET>`

`</BODY>`

`</HTML>`

The code above places a 20-pixel border between the two rows of the frameset. Because the author has specified a background graphic (woodgrain.gif), there will now appear to be a 20-pixel-wide textured border between the frames. (To use a background color instead of a background image, use **`BODY BGCOLOR=`***color name or value*.)

Coding the example frame



Coding my sample:

It is always a good idea to draw out your design

	A Tale of Two Cities
Table of Contents	IT WAS the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way- in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.
Book the First: Recalled to Life	
Chap 1	
Chap 2	
Chap 3	
Chap 4	There were a king with a large jaw and a queen with a plain face, on the throne of England; there were a king with a large jaw and a queen with a fair face, on the throne of France. In both countries it was clearer than crystal to the lords of the State preserves of loaves and fishes, that things in general were settled for ever. ...
Chap 5	
Chap 6	
	This page brought to you buy your local Realtor©

Modern HTML standards include a DOCTYPE to tell the browser to expect the frames... I have included one below .


```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">

<HTML>
<head>
<title>Frame</title>
</head>
<FRAMESET cols="200, *">
  <FRAME name="side" SRC="side.htm">
    <FRAMESET ROWS="20%, 70%,*">
      <FRAME name="topframe" SRC="top.htm">
      <FRAME name="middleframe" SRC="middle.htm">
      <FRAME name="bottomframe" SRC="bottom.htm">
    </FRAMESET>
  </FRAMESET>
  <!-- optional noframes tags could go here-->
</HTML>

```

Code for the side page:

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<title>Side of Frame</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="#0000FF" text="#FFFFFF" link="#FFFFFF">
Table of Contents
<p>Book the First: Recalled to Life</p>
<p>
<a href="middle.htm" target="middleframe">Chap 1</a><br>
<a href="middle2.htm" target="middleframe">Chap 2</a><br>
<a href="middle3.htm" target="middleframe">Chap 3</a><br>
<a href="index.html" target="middleframe">Index in middle</a><br>
<a href="frames.html" target="_blank">Index in new</a><br>
<a href="index.html" target="_top">Whole Index</a>
</p>
</body>
</html>

```

Check class web site for working versions of this frameset.

Target=

Reminder, earlier in the semester, target was discussed

```

<a href="URL" target="_top"> breaks the frame, opening link in full window
<a href="URL" target="_blank"> opens link in new, full window
<a href="URL" target="name"> opens link in named frame

```

Frame templates

Note: Items **highlighted like this** need to be edited...

Note: You may include

frameborder="NO" OR

border="value" OR

framespacing="value"

within any <frameset ... >

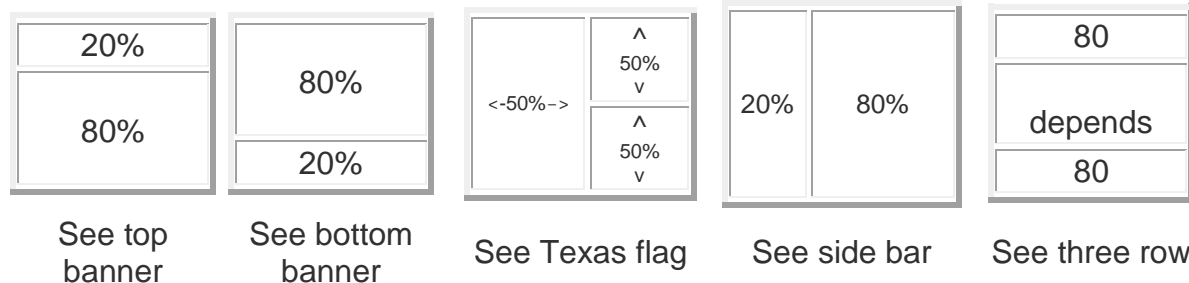
Note: You may include scrolling="NO" OR

noresize

within any <frame ... >

Note: the following can be added at the bottom of any framed page to pass information for browsers that don't do frames

```
<noframes>
  <body>
    Information to display if browser doesn't support frames
  </body>
</noframes>
</html>
```

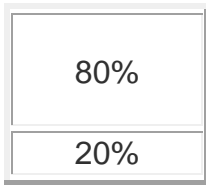


Top Banner

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<frameset rows="*,80%">
<frame src="pagename1" name="framename1">
<frame src="pagename2" name="framename2">
</frameset>

</html>
```

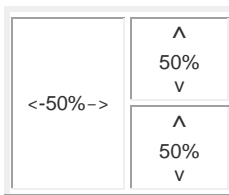


Bottom Banner

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<frameset rows="80%,*">
<frame src="pagename1" name="frame1">
<frame src="pagename2" name="frame2">
</frameset>

</html>
```



Texas Flag

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<frameset cols="50%,*">
<frame src="pagename1" name="frame1">
<frameset rows="*,50%">
<frame src="pagename2" name="frame2">
<frame src="pagename3" name="frame3">
</frameset>
</frameset>

</html>
```

20%	80%
-----	-----

Side Bar

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<frameset cols="*,80%">
<frame src="pagename1" name="frame1">
<frame src="pagename2" name="frame2">
</frameset>

</html>
```

80 pixels
depends
80 pixels

3 Rows

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<frameset rows="80,*,80">
<frame src="pagename1" name="frame1">
<frame src="pagename2" name="frame1">
<frame src="pagename3" name="frame1">
</frameset>

</html>
```

Instructor notes

Before I begin, let me just say that I dislike frames. Frames allow you to open multiple pages within the same browser space. While perhaps useful for search engines to display a search result, but still have *you* in a Google or Ask browser window, well that can be helpful; or, you may wish to display navigational tools that always stay at the top or the side of a page.

But often frames fail to load all of your desired pages, and trying to get a link to open in a separate frame, or just getting out of frames, can be a challenge. Editors either avoid or dare you to use frames. Dreamweaver will insist on creating a new page for each frame, instead of asking first if you would like to use an existing page. And the second you click into one of those new pages within the frames, it is almost impossible to get Dreamweaver back to the frame, instead of the framed pages. And Dreamweaver will probably lock your windows and/or prevent resizing or scrolling, depending on what design you start with.

You might note that the doctype is different for a framed page, meaning while supported, I don't think the W3C likes them anymore than I do.

The `iframe` is clever, where you display another page as you would an image, but I rarely use it, except for labs where you can scroll down the questions.

So, I took the time to create some templates, including some optional attributes, and I just start with those when I need a frame. You can too.

Tip 1

One of the things that crack me up about frames is they don't trust your math. If you want to create a frame that has two columns, one 20% of the windows and one 80%, you simply define it as `cols="20%,*"` ... the `*` meaning *'whatever is left, after I subtract 20%.'* Recall, 20% is 20% of the window, just 20 (with no %) is 20 pixels.

Tip 2

If you remove scroll bars, `scrolling="no"`, folks with small displays might not be able to see your entire content area.

Tip 3

Just as anchors should be named, Frames should be named; that way you can **open other documents in a specific** frame.

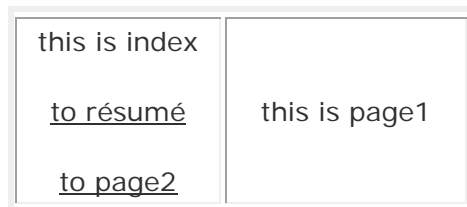
Recall our earlier discussion on `target=` for a href? Now we put it to use.

`Click here` is the same as
`Click here;`
that is, the linked document opens in the current browser window.

`Click here;`
means the linked document opens in a new browser window.

But, if you have frames you can have the link in one frame, but have the link open in a different frame.

Example:



If the frame on the left is named 'left', and the frame on the right is named 'right', from the index we can:

`to résumé;`
which means the linked document opens in a left frame,
which would be the equivalent of
`to résumé;`

or

`to résumé;`
which means the linked document opens in the 'right' frame

or we could

`to résumé;`
which means the linked document removes the frame set, and the résumé opens all by itself.

Not all browsers like frames, so you can take advantage of browsers ignoring tags they don't understand, to add `<noframes></noframes>` after your frame code. Since a browser would ignore the frame code, and the `noframes` tag, it basically displays whatever is left, such as a message to get a better browser. If your browser likes frames, it knows to ignore whatever is between the `noframes` tags.

Inline Frames again, are displaying a web pages as you would an image... carve a little box, then cram the image, or the page, into the box.

Session 3

The Appendix contains a quick overview of frames for reference.

Lab 7

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59AM (see due dates on web site)

- **NOTE:** Do NOT use CAPITAL letters OR spaces in file names.

- **NOTE:** Do NOT use curly quotation marks, such as " "; only use straight quotation marks, such as " .

- Note: If you need to stop work on a web page:
Save your changes in your text editor (Notepad)
When ready to resume,
open the file in notepad and
double click web page to open browser

DOCUMENTATION (30%) begins below

HANDS ON ACTIVITY (40%) begins on p 248

HANDS ON QUESTIONS (30%) begins on p 249

Part 1, Documentation (30%) You will later transfer this information into your LMS quiz

While information on tags and attributes are included in the appendix, a great way to learn HTML is to write down what each tag does, how it works, list useful attributes, and perhaps include an example.

Tags to document must include: <frameset> and <frame>

Tag: <frameset> </frameset> frameset

Syntax (required and [optional attributes]; including rows=, and cols=)

What do these do?:

Example:

Tag: <frame> Frame

Syntax (required and [optional attributes]; including src=, and name= [scrolling=, and the very rare attribute not followed by an '=... noresize]

What do these do?:

Example:

Part 2, Activity (40%): You will later transfer this information into your LMS dropbox

- Create a folder named lab7
(QUICKSTART ALTERNATIVE: copy your lab6 FOLDER, and rename the copy to lab7)

CHOOSE EITHER FAST OPTION 1 OR THE SECOND OPTION, YOU DON'T DO BOTH

• **OPTION 1**

add the following code to your index.html page

```
<br><iframe src="pages/resume.htm" width="90%" height="400"></iframe><br>
```

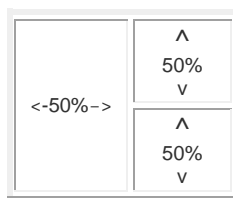
(you may alter the width and height values)

This opens your résumé in your index, sort of like picture in picture, for TV.
Note: this option will not help you as much for the quiz, or Test 3, but is acceptable for the lab

--- or you can do ---

- **OPTION 2** For those who are intrigued by framed pages and if you want to practice what is on the lab quiz and in Test 3.

Design **on paper** a frame system, using the rough dimensions below



- You must have a page that opens in each frame... you may reuse existing pages if you wish.

Note: Editors usually have trouble with frames.

NVu doesn't do frames, and Dreamweaver often messes up and uses absolute addresses instead of relative addresses.

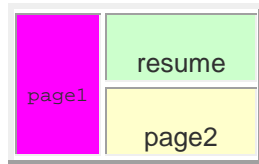
For that reason I offer frame templates to help you with your labs.

- Create a new file of your own design called frame.htm inside of the pages folder (why not copy a frame template from page 243 as a starting point?)

Grading Points

- (5 points) Please update your default document (index.html) to link to this file. Be sure to include the following:
- (10 points) the frame design in *yourname-lab7*, with at least 3 frames
- (5 points each, total of 15) each frame src named
- (5 points each, total of 15) a web page that opens in each frame src,
- (5 points each, total of 15) proper coding (you may reuse existing files)

If you wish to code by hand:



Steps to follow, if not using an editor, or a template

Create the frame: tag create columns = "size, remaining size"

Example `<frameset cols="40%, *" >`

Load the first frame: tag page to load identify the area

Example `<frame src="one.htm" name="side" >`

Create the second frame: tag create rows to fill this column = "size, remaining size"

Example `<frameset rows="50%,*" >`

Load the next frame: tag page to load identify the area

Example `<frame src="two.htm" name="upper" >`

Load the last frame: tag page to load identify the area

Example `<frame src="three.htm" name="lower">`

Close the right side

Example `</frameset >`

Close the whole frame structure

Example `</frameset >`

Challenges for those who wish to go beyond...

- Create new pages that open in the frame set
- Control where a link opens, say in a different frame, using
``to a named frame

Part 3: Hands On (30%) You will later transfer this information into your LMS quiz

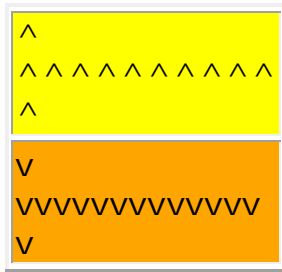
Posers, could you answer the following on the test?

1. Why do you name frames?
2. In `<frame cols=" "...>` etc., we typically leave one value as *. Why?
3. What attribute is used with ``, to get a page to open in the same frame?
4. What attribute is used with ``, to get a page to open in a different frame?
5. What attribute is used with ``, to get a page to open by replacing the frame?

Answer the following questions. (6 points each)

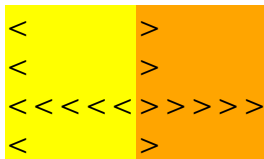
1. True or false `<frameset>` creates a space to hold frames

2. To divide your frameset into horizontal areas like rows,



use `<frameset ____="value,[value,]*">`

3. To divide your frameset into vertical areas like columns,



use `<frameset ____="value,[value,]*">`

4. To open fred.htm in a frame, the code would be

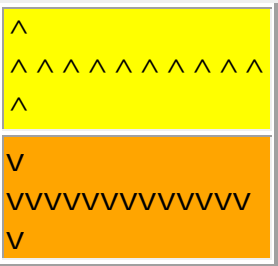
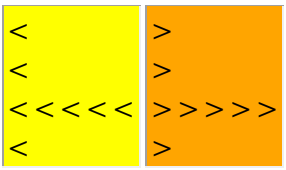
`<frame____="fred.htm">`

5. To open a URL, such as fred.htm, in a frame named topp, the code would be

`Click here`

True or false?

6. Match the tag or attribute with the definition
(Just type in the number)

<input type="checkbox"/>	The attribute used to identify a frame, so future links can send web pages there
<input type="checkbox"/>	<p>The attribute that indicates if the space is to be divided leaving spaces at the top and bottom, that run from the side to side, and if so, how many See image below</p> 
<input type="checkbox"/>	The attribute that indicates what web page is to be displayed when a frame is first loaded
<input type="checkbox"/>	The tag that creates a space to place frames
<input type="checkbox"/>	<p>The attribute that indicates if the space is to be divided leaving spaces to the left and right, that run from the top to the bottom, and if so, how many See image below</p> 
<input type="checkbox"/>	The attribute that determines if scroll bars will be used
<input type="checkbox"/>	The tag that holds the webpage in a frameset

1. frameset
2. frame
3. rows=
4. cols=
5. src=
6. name=
7. scrolling

7. Which of the following is a correctly coded frame?

- ☐

```
<frame rows="20,*">  
<frameset src="fred.htm" name="topp">  
<frameset src="ginger.htm" name="botom">  
</frame>
```
- ☐

```
<frameset rows="20,*">  
<frame src="fred.htm" name="topp">  
<frame src="ginger.htm" name="botom">  
</frameset>
```
- ☐

```
<frameset rows="20.*">  
<frame src="fred.htm" name="topp">  
<frame src="ginger.htm" name="botom">  
</frameset>
```
- ☐

```
<frameset src="20.*">  
<frame href="fred.htm" name="topp">  
<frame href="ginger.htm" name="botom">  
</frameset>
```

8. Why should you name each frame?

- ☐ To specify what web page opens in a frame when the frameset is first loaded
- ☐ They get tired of being called "hey, you there in the web page"
- ☐ To put text on the Title bar
- ☐ So future web pages can be loaded in that space, via target="name of frame"

9. In `<frame cols=" "...>` etc., we typically leave one value as *. Why?

- ☐ So we don't have to calculate the last value
- ☐ To force old browsers to ignore the frame
- ☐ To allow old browsers to open the frame
- ☐ As when using hex numbers, to indicate that the values were numerical not text

10. What attribute is used with ``, to get a page to open in the current frame?

The correct answer is

``

- ☐ True
- ☐ False

11. What attribute is used with ``, to get a page to open in a specific, named frame?

- ☐ Target="_self"
- ☐ Target="_top"
- ☐ Target="name of frame"
- ☐ Target="_blank"

12. What attribute is used with ``, to get a page to open by replacing the frames, leaving just the one web page occupying the entire browser window?

- ☐ Target=["name of frame"]
- ☐ Target="_top"
- ☐ Target="_blank"
- ☐ Target="_self"

SUBMITTING THE LAB

In Windows, zip the entire lab7 directory, and rename to yourname-lab7.zip. Directions on page 80.

Log into Your LMS, choose this class, choose Dropbox, select Lab 7. Browse to yourname-lab7.zip and upload it. (See page 80 or class website for detailed instructions)

You will then transfer your answers to the LMS Quiz for lab 7. You may use your notes for this part of lab. Choose the Quizzes menu, and locate Lab 7.

Completing Overview 10

- Submit by 11:59 AM, Friday, of the current week (see due dates on course web site)
 - Lab 7

MUD 10 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 10 Respond in the class LMS Discussion forum to the following:
What are some possible uses of frames?
-

For the next time frame:

- Read Overview 11
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 8



Overview 11

HTML Forms

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HTML FORMS

Up until now, all activity on a web site was the web site delivering information to users; there was no interactivity, no way for the user to communicate back to the holders of a web site. This shortcoming can be addressed in many ways, but one of the easiest is a form.

A form is an area of a web page that allows:
text information to be entered, or
preset options to be selected
and finally,
allow the user to then Submit that information.

Once the information is entered, the form includes a instructions on where to send the data, and a mechanism to collect and submit the information.

(While often submitted information is meant to be processed, such as a shopping cart attached to a database, this session will limit the actual implementation of forms in this arena to basic delivery (using email, or a server that will acknowledge the submission but do nothing with it. More information on processing form data would be in a class such as eCommerce, not Web Page Design.)

Of the two types of form collection areas mentioned above, there are several options.

Text information can be a smaller text fields, or a larger 'textarea' field, and
presets that include radio buttons (single selection, this or that),
checkboxes (multiple selections) or
selections from a list.

Creating a form

A form is defined with the `<form></form>` tagset.

We will add two attributes to this tag at the end of the process, beginning on page 261.

You place **all** of your form controls **between** these two tags, and you usually only have ONE set of form tags.

The examples below show individual forms; a *real* form would have many of the pieces between the `<form ...></form>`

```
<form ...>

</form>
```

Again, we will have to add an action and a method to the form tag in order for it to work, that is covered on page 261. For now only the data related parts of the form are covered.

As with lists, tables, and frames, simply creating the form is not enough, we need helper tags:

input

or

textarea

or

select

Just as with named bookmarks and frames, it is all but required to **name** the fields, so the data can be separated and processed later.

```
<form ...>
...
  <input type="something" name="something">
  </input>
...
  <textarea name="something" rows="something" cols="something">
  </textarea>
...
  <select name="something">
    <option value="something">
  </select>
...
</form>
```

Input

The most critical form tag is the `<input>` tag. The type of input is specified with the type attribute, and the values are:

checkbox,

radio, or

text.

• Radio Buttons

Radio Buttons are used when you want the user to select only one of a limited number of choices.

```
<form ...>
...
<input type="radio" name="sex" value="male"> Male
<br>
<input type="radio" name="sex" value="female"> Female
...
</form>
```

How it looks in a browser:

- ☐ Male
- ☐ Female

Note that the form itself is not visible.

Note that there is only ONE form tag per web page;

do not add another `<form ...>` for each element.

Note that only one option can be chosen when using radio buttons...

and each radio button *set* MUST use the same value in `name="value"`.

• Checkboxes

Checkboxes are used when you want the user to select one or more options of a limited number of choices.

```
<form ...>
...
<input type="checkbox" name="penny">
I have a penny<br>
<input type="checkbox" name="dime">
I have a dime
...
</form>
```

How it looks in a browser:

- ☐ I have a penny
- ☐ I have a dime

- **Text** fields

Text fields are used when you want the user to type a limited number of letters, numbers, etc. in a form.

```
<form ...>
...
First name:
<input type="text" name="firstname">
<br>
Last name:
<input type="text" name="lastname">
...
</form>
```

How it looks in a browser:

First name:

Last name:

Note that in most browsers, the width of the text field is 20 characters by default. It can be changed with `size=`

Note: **Textarea** fields are used when you want the user to type a longer string of letters, numbers, etc. in a form.
Set the `cols` value to how many typed characters can display per line, and `rows` to the number of rows.

```
<form ...>
...
First name:
<textarea name="essay" rows="3"
cols="70">
</textarea>
...
</form>
```

How it looks in a browser:

Essay:



Select

You may also offer your user a set of options from a menu, and let them choose one...

often a default is selected

(yet another rare attribute not followed by an '=').

Selects can look like a dropdown box if `size="1"`; there will be a scroll bar if there are more options than rows.

Selects are like lists: lists require the helper tag `` for each item on a list; selects require the helper tag `<option>`

```
<form ...>
...
<SELECT SIZE="3" name="something">
<OPTION VALUE="value1">first choice
<OPTION VALUE="value2">next choice
<OPTION SELECTED VALUE="value3">default choice
</SELECT>
...
</form>
```

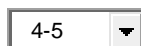
How it looks in a browser:



or change the select size

```
<form ...>
...
<SELECT SIZE="1" name="dropdown">
<OPTION VALUE="value1">first choice
<OPTION VALUE="value2">next choice
<OPTION SELECTED VALUE="value3">default choice
</SELECT>
...
</form>
```

How it looks in a browser:



Form Delivery Options

The discussion thus far has just been on collecting the information, but without some method of delivering the collected info, our form is useless. The two `<form>` attributes that take care of this job are `action` and `method`.

`Action` is a URL that defines where to send the data when the submit button is pushed.

`Method` has two settings, the default is `get`, the other is `post`.

`Get` is used when requesting info from a database. Use `Post` if you are updating.

We also need to add the button to do the actual submission, an input tag with a `type="submit"`

```
<form action="URL"
method="something">
...all your other selects and inputs...
<input type="submit" value="Submit">
</form>
```

How it looks in a browser:

Username:
...all your other selects and inputs...

Example:

Processed on studentweb.templejc.edu to simply echo values chosen

```
<form action="http://studentweb.templejc.edu/imed1316/cgi-bin/FormValues.asp"
method="post">
```

or

mail the results to craig.collins@templejc.edu

```
<FORM ACTION="mailto:craig.collins@templejc.edu?subject=Lab 8 " METHOD="POST"
ENCTYPE="text/plain">
```

See the class website for a humorous(?) working form example or Joe Teakell's forms.

FORM Submission Options

Aside from the `<input type="submit" value="Submit">` at the bottom of the form, you may also add a `<input type="reset" value="Reset Form">`

FORM Template (better version on website)

(Replace items like this with **your** text, values, and change names if you like; the *form* action will work as is, generating a list of what is being processed.

Actually having a database process the form is beyond Web Page Design, but you may replace the *form* action if you have access to a server with a database.)

```
<html>
<head><title>Your Title</title></head>
<body ...>
<a href=" ../index.html">To Home</a>

<form action="http://studentweb.templejc.edu/imed1316/cgi-bin/FormValues.asp"
      method="post">

<!--alternate action=: "mailto:email address"-->
<!--alternate method: "get"-->

text<input type="text" name="item">

<!--each field should have a unique name-->
<br>

text<textarea name="item1"
rows="3" cols="10">
</textarea>
<br>

<input type="radio" name="item2" value="something">text<br>
<input type="radio" name="item2" value="something else">text
<!--for radio only, the fields share the same name-->
<br>

<input type="checkbox" name="item3a">text<br>
<input type="checkbox" name="item3b">text
<br>

<SELECT SIZE="3" name="item4">
<OPTION VALUE="firstvalue">text
<OPTION VALUE="nextvalue">text
<OPTION SELECTED VALUE="default value">text
</SELECT>
<br>

<input type="submit" value="Submit">

</form>
</body>
</html>
```

KomPoZer/NVu Form Quickstart

Tip: copy the template above, open NVu, change to source view, and paste... then switch back to normal view and edit

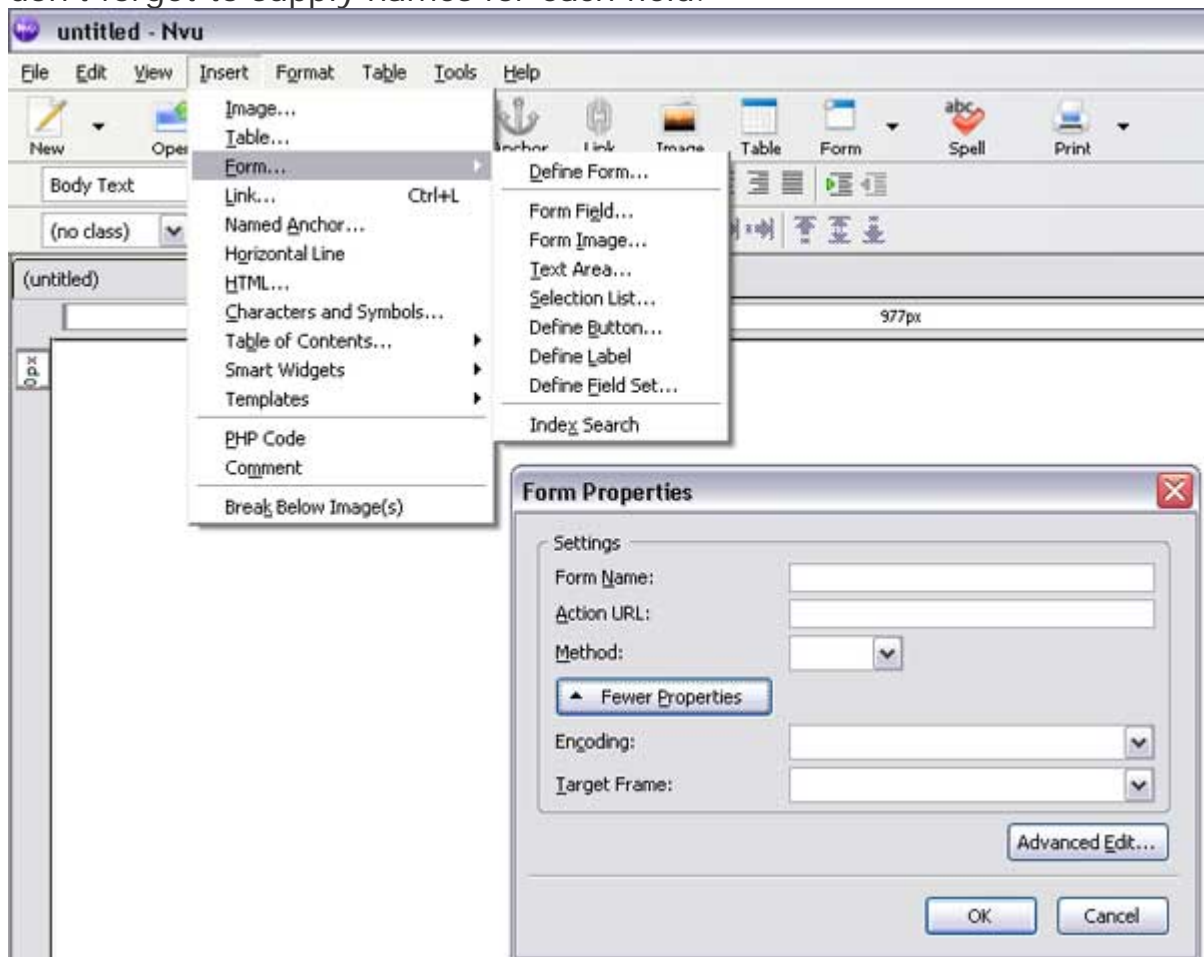
(Don't forget to correct items like title, links to web page, and you will need to add body attributes...)

NVu Forms menu and dialog box screenshot;

1st, choose Form\Define form first... and supply the **action** and **method**.

Then, choose Form and then the type of field...

don't forget to supply names for each field.

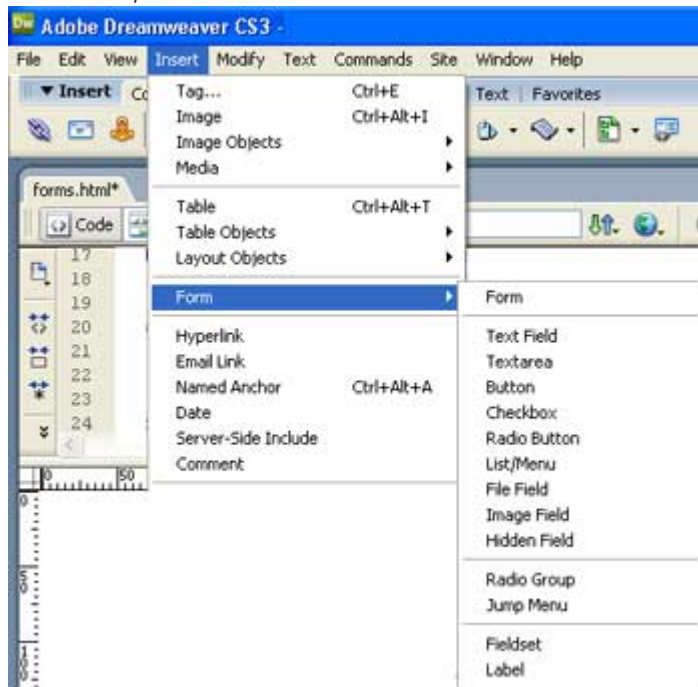


Dreamweaver Form Quickstart

Tip: copy the template above, open Dreamweaver, change to source view, and paste... (Don't forget to correct items like title, links to web page, and you will need to add body attributes...)

Note, Dreamweaver used **ID** instead of name for fields, and **label** is text that displays next to the form control.

As before, each field needs a uniquely named ID, aside from radio buttons, which share an ID.



Lab 8

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59AM
(see due dates on web site)

- **NOTE:** Do NOT use CAPITAL letters OR spaces in file names.

- **NOTE:** Do NOT use curly quotation marks, such as " ";
only use straight quotation marks, such as " .

- Note: If you need to stop work on a web page: Save your changes in your text editor (Notepad); When ready to resume, open the file in notepad and double click web page to open browser

DOCUMENTATION (30%) begins on below

HANDS ON ACTIVITY (40%) begins on p 266

HANDS ON QUESTIONS (30%) begins on p 267

Part 1, Documentation (30%) You will later transfer this information into your LMS quiz

While information on tags and attributes are included in the appendix, a great way to learn HTML is to write down what each tag does, how it works, list useful attributes, and perhaps include an example.

Tag: `<form> </form>` form

Syntax (required and [optional attributes]; including `action=`, and `method=`)

What do these do?:

Example:

Tag: `<input>` Input

Syntax (required and [optional attributes]; including `name=` and `type=radio`, `checkbox`, and `text`)

What do these do?:

Example:

Tag: `<textarea> </textarea>` A larger text box where the size can be set

Syntax (required and [optional attributes]; including `name=`, `rows=`, and `cols=`)

What do these do?:

Example:

Tag: `<select> </select>` Select

Syntax (required and [optional attributes]; including `name=` and the helper tag `<option>` with the attribute `value=` and `selected`)

What do these do?:

Example:

Part 2, Activity (40%): You will later transfer this information into your LMS dropbox

Create a folder named lab8

(QUICKSTART ALTERNATIVE: copy your lab7 FOLDER, and rename the copy to lab8)

CHOOSE EITHER FAST OPTION 1 *OR* SECOND OPTION, YOU DON'T DO BOTH

• Easy Option 1: Design a form on paper using text, text area, radio buttons, check boxes, and dropdown lists. Copy the template at the bottom of the form web page, or duplicate the template on page 262, and rearrange items and *edit* to re-create your idea into a working form

OR

• Option 2: Create a page of your own design that includes **ONE** `<form action=... method=...> ... </form>` tagset, and includes a working radio box, checkboxes, select, and text or text area *between* the

`<form action=... method=...> ... </form>.`

Note: this is a form **design** lab; but if you use the proper code, it should actually work.

Option 2, Start with

```
<form action="http://studentweb.templejc.edu/imed1316/cgi-bin/FormValues.asp"
method="post">
```

or, if you have a dedicated (non-web-based) email program set on your computer, you can use the form action mailto to mail the results to you

```
<FORM ACTION="mailto:your-email@templejc.edu?subject=Lab 8"
METHOD="POST" ENCTYPE="text/plain">
```

or

mail the results to craig.collins@templejc.edu

```
<FORM ACTION="mailto:craig.collins@templejc.edu?subject=Lab 8" METHOD="POST"
ENCTYPE="text/plain">
```

Option 2, Don't forget to end with

```
<input type="submit" value="Submit">
</form>
```

Note: Dreamweaver will expect you to fill out the properties for each item you add to a form, and you will have to manually change the name of your input fields.

Not recommended unless you really understand forms.

KomPoZer/NVu actually does a better job for novices, prompting you to fill out a dialog box for each item added, including the form you begin with.

Of course, coding in notepad always works; copy/paste from form web page, or duplicate the template on page 262 to get a jump start :)

Grading Points

- (5 points) index.html links to this file, and this links to your default document.
- (5 points) Make sure you have a meaningful title, background color/image, and control text colors
Verify you have ONLY ONE `<form ...>` tag, and one `</form>`
- (5 points) at least one working radio button
- (5 points) at least one working checkbox
- (5 points) at least one working select, such as a dropdown menu
- (5 points) at least one working text area or text box
- (5 points) working submit button
`<input type="submit" value="Submit">`
(this is the last thing before `</form>`)
- (5 points) properly coded

Part 3: Hands On (30%)

You will later transfer this information into your LMS quiz

Posers, could you answer the following on the test?

Why do you name values?

Describe the different form tools, such as radio, checkbox, etc.

Why might you use select instead of input?

What does `<form action=" "...>` do?

What does `<form method=" "...>` do?

What usually goes at the end of a form?

Answer the following questions. (6 points each)

1. Match the example to the tag or attribute

- ☐ checkbox
- ☐ select
- ☐ action
- ☐ post
- ☐ form
- ☐ input
- ☐ name
- ☐ radio
- ☐ text
- ☐ option selected value=

1. Tag that identifies certain data types the form can use, such as radio or checkbox
2. Input attribute used to uniquely identifies or names the input, to keep different groups of values separate
3. Input attribute that allows only one choice of many options
4. Input attribute that allows several choices to be made of many options
5. Tag that offers your user a set of options from a menu, and let them choose one... often a default is selected
6. Tag that starts and ends a form
7. A method attribute option
8. Attribute that defines where to send the data (a URL) when the submit button is pushed
9. Input attribute to accept about 20 typed characters
10. the attribute and value to set a default in a select menu

2. Why do you name values?

To display alternate text if the form doesn't display
So that the data can be distinguished, such as which is home phone or cell phone
So that the data can be sent to a frame
So it doesn't feel left out

3. Describe the different form tools, such as radio and checkbox

Radio is used for menu selections;
checkbox is used for multiple selections

Checkbox is to choose one of many ;
radio is used for multiple selections

Radio is to choose one of many;
checkbox is used for menu selections

Radio is to choose one of many;
checkbox is used for multiple selections

4. Why might you use select instead of input?

True or False: To give users a menu to choose from, good for long lists of options

5. What does <form action=" "...> do?

How the form data is to be delivered, either with get, or post
Delivers the URL where the data will be sent to
Causes the data to be uploaded to the server
Causes the data to be collected on your computer

6. What does <form method=" "...> do?

Delivers the URL where the data will be sent to
Causes the data to be collected on your computer
How the form data is to be delivered, either with get, or post
Causes the data to be uploaded to the server

7. What does submit do?

Causes the data to be uploaded to the server
How the form data is to be delivered, either with get, or post
Delivers the URL where the data will be sent to
Causes the data to be collected on your computer

Instructor Notes: if using my template

- make sure you change the title
- make sure you add your background image path, your bgcolor, your link color, your vlink color, etc.
- make sure you give each field an unique, appropriate field name (recall for radio button items, they share the field name)
- Make sure your completed form does not look like my form... you may need more text boxes or more radio buttons... they should be in a different order than in my template.
- Have fun with the form.

Regardless of how you create the form

- Test the form! If you click [Submit] and nothing happens, it is not correct.

You probably should use

```
<form action="http://studentweb.templejc.edu/imed1316/cgi-bin/FormValues.asp" method="post">
```

but you *could* use the mailto option;

However, this only works if the person filling out the form has access to an installed email program... this does not work if someone is using gMail, or any other web based email system.

Here is a handy place to make your own notes

SUBMITTING THE LAB

In Windows, zip the entire lab8 directory, and rename to yourname-lab8.zip. Directions on page 70.

Log into Your LMS, choose this class, choose Dropbox, select Lab 8. Browse to yourname-lab8.zip and upload it. (See page 70 or class website for detailed instructions)

You will then transfer your answers to the YOUR LMS Quiz for lab 8. You may use your notes for this part of lab. Choose the Quizzes menu, and locate Lab 8.

Completing Overview 11

- Submit by 11:59 AM, Friday, of the current week (see due dates on course web site)
 - Lab 8

MUD 11 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 11 Respond in the class LMS Discussion forum to the following:
Aside from data collection, what do forms actually provide users?
-

For the next time frame:

- Read Overview 12
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 9

Overview 12

HTML Style and ftp

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Note: There are three parts to this chapter...

background info on styles,

background info on ftp

and how to use ftp (for the lab, that part is on p 280.)

Styles are what replace the deprecated `` tag.

Very few people write styles by hand, they let their editor, such as Dreamweaver or KomPozer/Nvu do styles for them.

I will show you how to create styles, but there are so many variations that I really don't expect you to memorize much beside this little formula

style="selector: property"



Style basically says, we are going to format something
selector is where you choose something like text color, and
property is where you would choose the actual color, for example.

More on formatting

This book previously covered basic format options, and many are similar to features in word processing:

`<i>text</i>` for *italic*

`text` for **bold**

and modifying tags to center text, etc.

The following section covers

- spaces, tabs, and form feeds,
- In-line formatting with `<tag style="..."> </tag>`, and
- block formatting with `<div align="..."> </div>`

More fun with spaces and text placement (on screen, or printed)

You know about non-breaking spaces, (` `), but if your computer reads ASCII (Windows reads ASCII), you might also try the ASCII tab (`	`). Or, if you wish items to print on separate pages, insert the ASCII form feed (``)

In-Line Formatting, using a style `<tag style=...>`

`<tag style=...> </tag>` **or** ` `

Up until now, if you just wish to change the appearance of a few words, you used `text`.

As mentioned earlier, `` has been **deprecated**, or is being phased out; one of the preferred methods now is using in-line formatting, such as

` text`.

(The `span` is simply a tag that says start formatting here.)

That is, you add a style **property** and **value** to an **existing tag**, such as a headline, or a paragraph, or `span`.

I like to use **`span`**; like paragraph, it surrounds some text, but does not force the line breaks before and after the paragraph that `<p></p>` does.

Style Examples (very few people write styles, let your editor!)

Style property declarations have the form "property: value" and if there are several options to be used, they are separated by a semi-colon (;), such as

```
<h1 style="text-align: center"> </h1>
<p style="text-align: center"> </p>
<span style="color: red; font-size: 14pt"> </span>
<span style="font-weight: bold"> </span>
<span style="font-family: Arial, Helvetica, sans-serif"> </span>
or
<img style="float: right" ... > </img>
```

Other books START coding with quite a lot of in-line formatting, but this type of HTML is very rich, with almost too many options (a brief list is on page 276). So, styles I think are best implemented if you are using an editor, such as Dreamweaver where first you create a style, and then you apply the style to whatever text you wish to format; more on that shortly.

Aligning by dividing your page into blocks, or divisions: <div>

One step up from applying placement to a paragraph or headline, such as `<p align="right">Text </p>`, is the idea of blocks or divisions. Using `<div></div>` we can surround a section of a web page, including headlines, horizontal rules, images, and text, and align all of them at once.

DIV Examples

```
<div align="left">... </div>
<div align="center">... </div>
<div align="right">... </div>
<div align="justify">... </div>
```

For more specifics, check W3C, World Wide Web Consortium (p. 225).

HTML style

As discussed, Style property declarations have the form "property: value" and if there are several options to be used, they are separated by a semi-colon. But because there are really too many possible properties (see page 276), styles are best done with an editor (see page 275).

For more specifics, check W3C, World Wide Web Consortium (p. 225).
<http://www.w3.org/Style/>

But in-line styles can **only** let us define what EACH instance of a tag can look like. Taken one step further, we could define these modifications just once (in the head), and then **reuse** these style modified tags throughout the page.

That is, in the example below, since we defined the H1 tag in the `style` section of the head, EVERYTIME we use `<H1>`, it will be green with a yellow background, and in the Arial font.

Adding this information to predefine styles is called a *style sheet*. First we start with the `<style></style>` tag set in the head, followed by a comment read only by browsers that understand *styles*.

Key among tags changed here are modifications on how the body behaves, instead of adding `text=`, `link=`, etc. to the `<body>`.

This commented area that sets the styles follows the format `selector {property: value}` (**without** quotation marks).

Again your editor probably can build a better stylesheet than you can manually (page 276), but below is an short sample.

Example Style sheet: to make any H1 green, Arial, with yellow background

```
<HEAD>
<TITLE>Style sheet example</TITLE>
<STYLE TYPE="text/css">
<!--
BODY {background: #FFFFCC;
margin-top: 20}

A:link {color: #300090;
background: #FFFFCC}

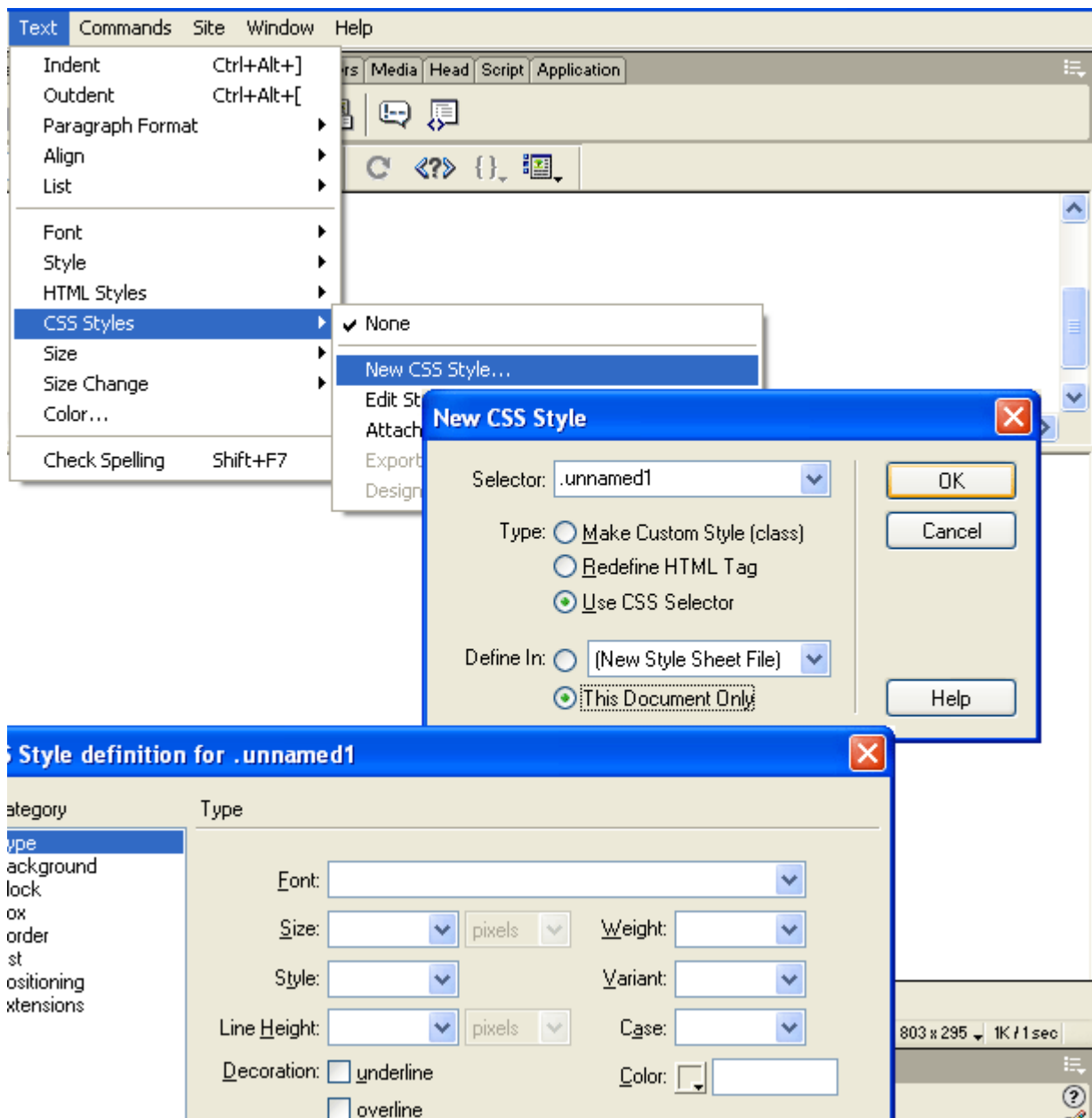
H1 {font-weight: bold;
text-align: center;
color: #006000;
background: #FFFFCC;
font-family: 'Helvetica', Arial, sans-serif}
-->
</STYLE>
</HEAD>
<body>

<h1>
This and every H1 will be a Headline size 1, but modified as described in the head
</h1>

</body>
</html>
```

Styles, using editors

Web Design II courses focus on using editors such as Dreamweaver, but below is a quick snapshot of where to find styles. You again create a new style for a stylesheet by naming it (the `selector`), then using a dialog box to define the property and value that would be hand coded as `selector {property: value}`. Later you while editing a web page, you'd highlight some text and select the style to apply to it, just as easily as in a word processor highlight text, then selecting [B] for bold.



Some style properties

Recall again stylesheets take the form `selector {property: value}`

A very good web site with details on style properties is at <http://www.eskimo.com/~bloo/indexdot/css/propindex/all.htm> which includes how to use the properties listed below.

Note: many properties, such as `background:`, have related properties, such as
`background-attachment:`
`background-color:`
`background-image:`
`background-position:`
`background-position-x:`
`background-position-y:`
`background-repeat:`

Stylesheet properties

`font:`
`height:`
`line-height:`
`list-style:`
`margin:`
`outline:`
`page:`
`page-break-after:`
`scrollbar-arrow-color:`
`scrollbar-base-color:`
`scrollbar-dark-shadow-color:`
`scrollbar-face-color:`
`scrollbar-highlight-color:`
`scrollbar-shadow-color:`
`scrollbar-3d-light-color:`
`scrollbar-track-color:`
`text-align:`
`text-indent:`
`width:`
`word-break:`
`word-spacing:`
`word-wrap:`

You may see now why it is best left up to editors to create styles.

For more specifics, check W3C, World Wide Web Consortium (p. 225).
<http://www.w3.org/Style/>

Instructor notes

Technically, Styles are not a part of this course, but I wanted to give you a jump start as the `font` tag is deprecated, and if you do any formatting in an editor, it is probably implementing that formatting with either an inline style, or more likely, a stylesheet. And now that we have access to html editors, it is fairly easy to use style sheets. Shortly we will also preview CSS, cascading style sheets, for you to use if you are so inclined.

OPTIONAL: ftp background knowledge

Reminder of previous references to ftp on pages 23 and 106.

IMPORTANT NOTE: YOU MAY SKIP THIS SECTION IF AND GO STRAIGHT TO '**ftp for the lab.**' But why would you do that?

FTP is aging, but still an irreplaceable tool. The reason it is studied for this class is no other tool set can reliably upload your web pages to a password protected server.

FTP, though, is not meant to manipulate the remote account. It is meant only to quickly access a remote resource, move files, and some basic housekeeping, such as creating folders or renaming files. Period. Not for the creation of new data, not for editing, and not for running executables; simply to support moving files from machine to machine.

Quick note on *downloading* with ftp: Many large files you click on to download from sites actually are delivered via ftp operating within your browser, since ftp is more robust at moving any files, either as an upload **or** as a download.

(If you were to use dedicated ftp software instead of your browser to download from a server that allows guest access, you would almost immediately be challenged for a password. Don't fear though, one unique feature of FTP is there is a standard username and password to use for anonymous guest account access.

The username **is** the unwieldy word *anonymous* [hence, the name anonymous ftp], and the password is the user's e-mail! Anonymous ftp is **only** for downloading; for uploading you must have an account controlled by a real username and real password.)

The ftp engines available that are the **most used** use are Windows Internet Explorer, Filezilla, the Windows FTP engine (*Type ftp* in the command prompt), or a free to try WS_FTP. Internet Explorer, Filezilla, and WS_FTP hide the command structure. With IE, it can be just like

browsing another folder on your computer. Filezilla and WS-FTP use two panes representing the two computers involved, with buttons that are labeled with the standard navigation commands

While all these tools have the ability to copy files, they are often limited in the fact that they can only give the user a list available files; there may be no preview or viewing mechanism for the new, complex audio, graphic or video formats. The final caveat for using FTP is the limited search engine support for finding files to copy.

Really Optional: ftp command line

(command line use of ftp is NOT required, see the following section, 'ftp for lab.')

Any command line ftp engine requires knowledge of FTP commands. So, the Windows ftp software is the tool of choice for those who are comfortable with command lines, and the control offered.

ftp commands

```
ftp> help
Commands may be abbreviated.  Commands are:

!                delete          literal          prompt
send
?                debug           ls              put
status
append          dir              mdelete         pwd
trace
ascii           disconnect      mdir            quit
type
bell            get             mget            quote
user
binary          glob            mkdir           recv
verbose
bye             hash            mls             remotehelp
cd              help            mput            rename
close           lcd             open            rmdir

ftp>
```

Really optional: Sample command line ftp session

```
open studentweb.templejc.edu
```

(connects to a web server named studentweb, you will be prompted to fill in username and password)

```
mkdir pages
```

(makes a directory named pages)

```
mkdir images
```

(makes a directory named images)

```
lcd O:\lab9
```

(sets the local machine to your O:\lab9)

```
put index.html index.html
```

(uploads/copies your default document to the current (root) directory of your account on studentweb)

```
cd pages
```

(changes the directory to the pages directory of your account on studentweb)

```
lcd pages
```

(sets the local machine to your O:\lab9\pages)

```
mput *.htm *.htm
```

(copies any file whose name ends with .htm)

```
cd ..
```

```
cd images
```

(changes the directory to the images directory of your account on studentweb)

```
lcd ..
```

```
lcd images
```

(sets the local machine to your O:\lab9\images)

```
binary
```

(set the upload to non-text files. You need to know the difference between ASCII and Binary transfers. ASCII is a file you can read with notepad [such as web pages]. Everything else is Binary. The default is ASCII, you only change it when uploading images, etc.)

```
mput *.jpg *.jpg
```

(copies any file whose name ends with .jpg)

```
mput *.gif *.gif
```

(copies any file whose name ends with .jpg)

```
bye
```

(ends the session)

ftp for the lab (These instructions are for Temple College students)

FTP has been around forever, but still an irreplaceable tool. The reason it is studied for this class is no other tool set can reliably upload your web pages to a password protected server.

FTP, though, is not meant to manipulate the remote account. **It is meant only to quickly access a remote resource, move files, and some basic housekeeping, such as creating folders or renaming files. Period.** Not for the creation of new data, not for editing, and not for running executables; simply to support moving files from machine to machine.

Again: ftp is only used to upload files. Not to edit or change files, or to view files.

So, To change files, edit your local copy, *delete* the file on the server, then upload the new version.

Note: To view the files, use your web browser, not the ftp system.

The server is at Temple College is `ftp://studentweb.templejc.edu`

Web Page Design I Student 01 (wd1std**01**)

thru

Web Page Design I Student 80 (wd1std**80**)

have an account on studentweb.templejc.edu. Other sc

Your instructor will assign you a two digit number.

The **username** at the ftp login is wd1-******, where you substitute **your** assigned student number, such as wd1-**25** and **your**

password is K ' V84 &******, where you substitute your assigned student number, JY" K ' V84 &**25**

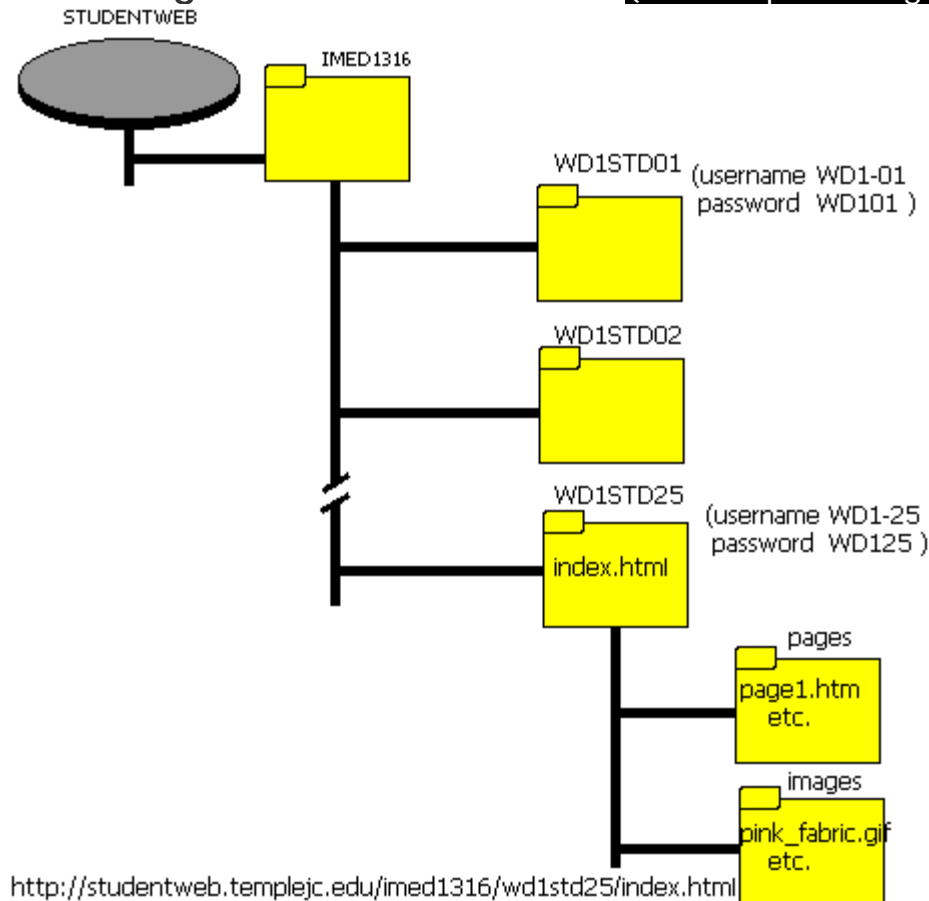
After logging in, you are automatically placed in **your** folder (no need to navigate the studentweb server), where you can upload a default document, such as index.html, plus folders and files you have created.

When finished, to view the pages you have placed on the server you would direct your web browser to

`http://studentweb.templejc.edu/imed1316/wd1stdxx`
(substitute **xx** with **your assigned** number)

Example, to go to the instructor's site, go to
`http://studentweb.templejc.edu/imed1316/wd1std25/`
to view the default document.

Visualizing the studentweb server (for Temple College students)



Note: '\' is DOS, '/' is Internet

When finished uploading with fpt, to view the pages you have placed on the server you would direct your web browser to

`http://studentweb.templejc.edu/imed1316/wd1stdxx`
(substitute **xx** with **your assigned** number)

To view the instructor's sample, go to

`http://studentweb.templejc.edu/imed1316/wd1std25`



Since there **will be** a default document named `index.html`, you do not need to specify the filename in your browser.

The biggest reason people have issues with this lab is they either did not upload a file named `index.html`, or they put `index.html` in a folder on the server... `index.html` goes in your area, but not in any subdirectories.

Below are sample instructions to use YOUR account information to log in and upload files, using IE, Filezilla (free), and WSFTP.

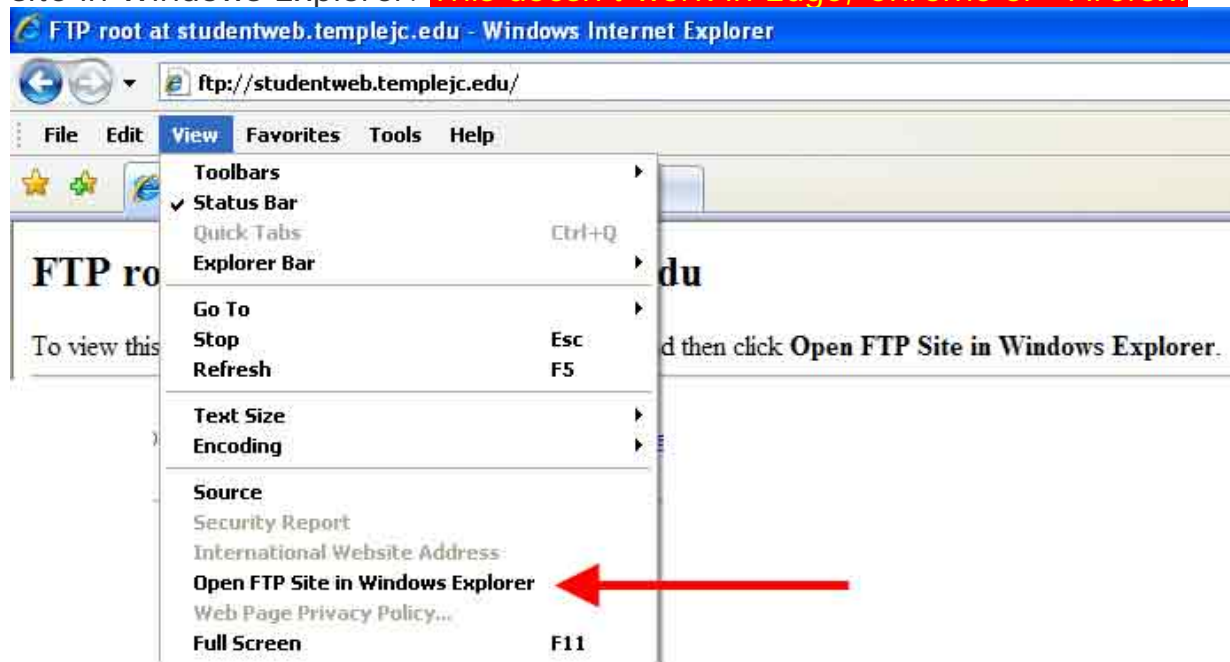
YOU CANNOT USE Edge or FIREFOX for uploading ftp without adding additional software.

(These instructions are for Temple College students)

ftp using Internet Explorer (NOT ALL VERSIONS SUPPORT ftp)

Type in the following URL in your browser: ftp://studentweb.templejc.edu

When prompted, choose [Alt]+View (**not Page**), then choose Open FTP site in Windows Explorer. **This doesn't work in Edge, Chrome or Firefox.**

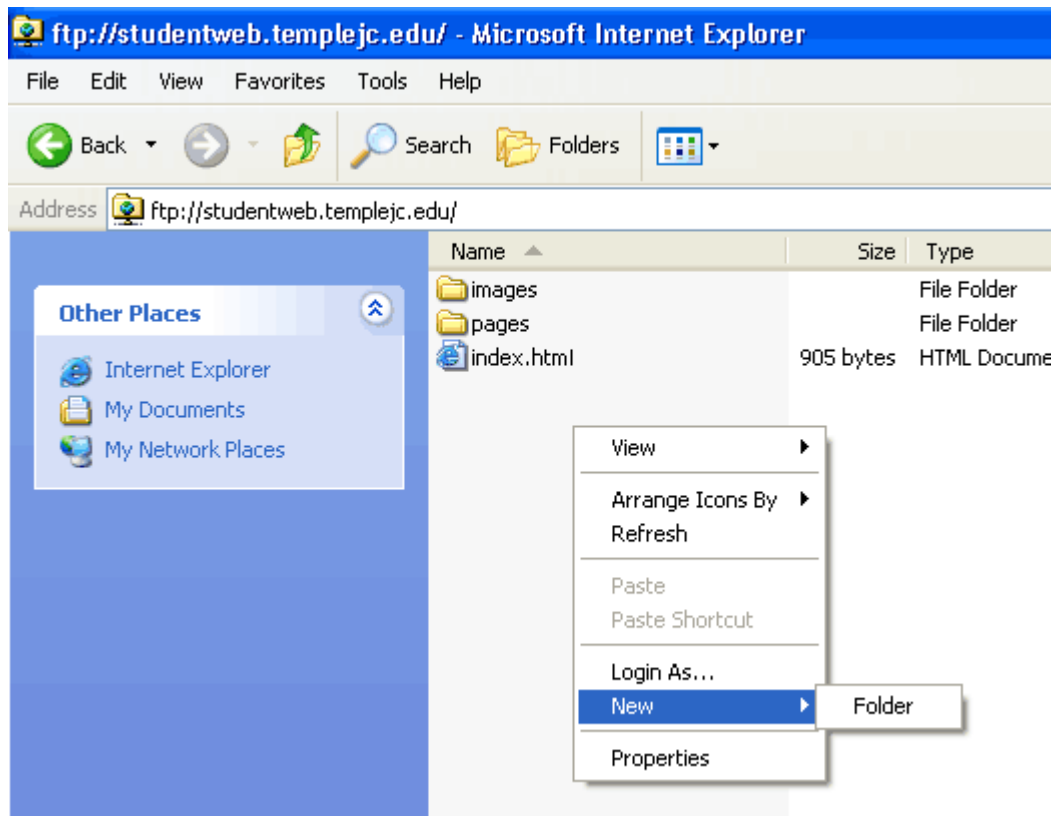


The log in screen will appear

Enter the user name and password provided by the instructor

A screenshot of the "Log On As" dialog box. It has a blue title bar with the text "Log On As" and a close button. The main area is light gray. At the top, there is a key icon and the text: "Either the server does not allow anonymous logins or the e-mail address was not accepted." Below this, the "FTP server:" is set to "studentweb.templejc.edu". There are input fields for "User name:" and "Password:". Below the password field, it says: "After you log on, you can add this server to your Favorites and return to it easily." There is a warning icon and text: "FTP does not encrypt or encode passwords or data before sending them to the server. To protect the security of your passwords and data, use Web Folders (WebDAV) instead." Below this is a link: "Learn more about using Web Folders." At the bottom, there are two checkboxes: "Log on anonymously" and "Save password", both of which are unchecked. At the very bottom are "Log On" and "Cancel" buttons.

You may now right click the browser window and create folders, as needed.



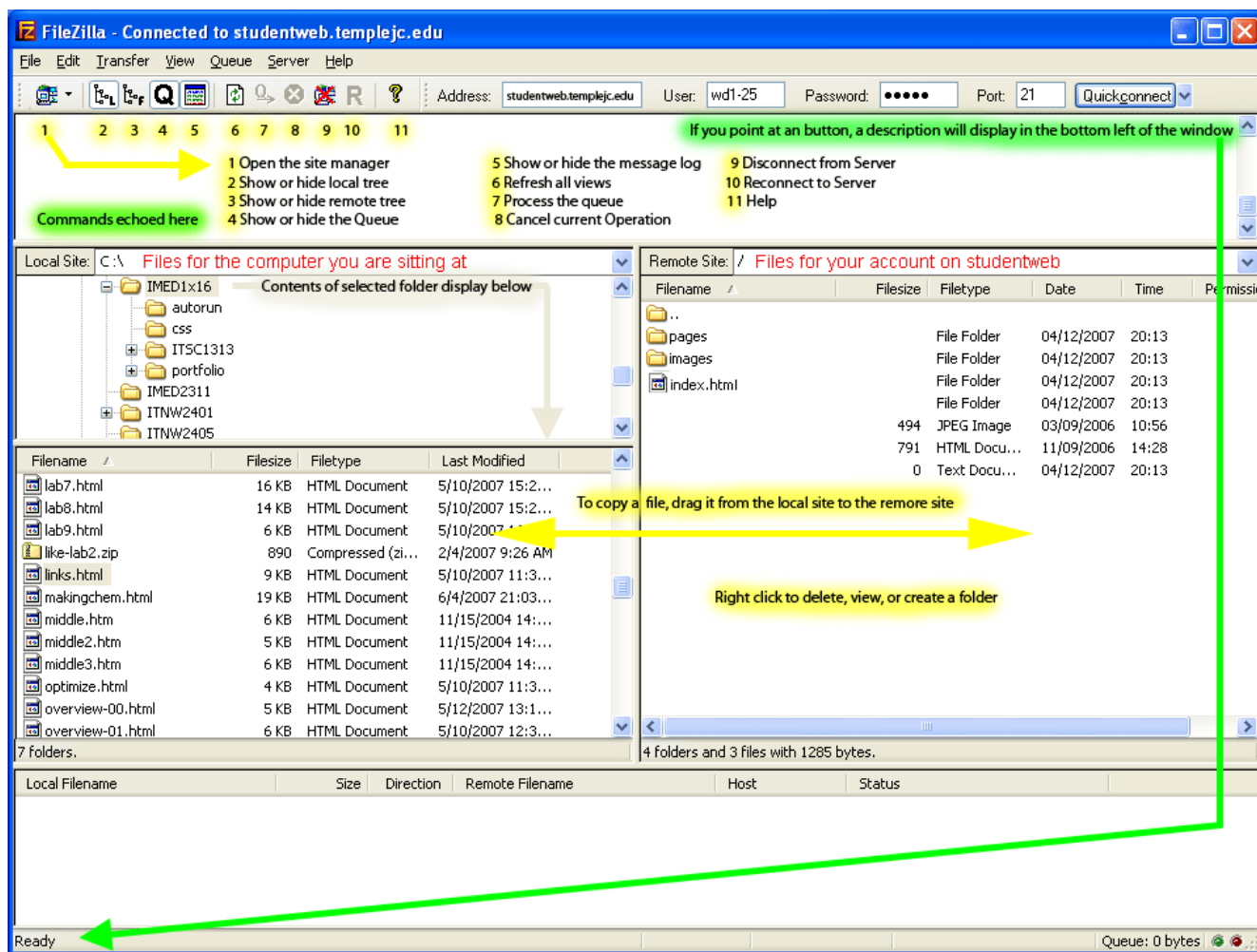
NOTE: DO NOT COPY YOUR LAB9 folder...
open the lab9 folder, and copy the contents only...
...such as index.html, the pages folder, and the images folder.
See screen shot below for what you should see when finished.

IMPORTANT, you CANNOT replace existing files on the server... they must be deleted, then re-uploaded.

ftp using filezilla (if not on your computer, download from <http://sourceforge.net/projects/filezilla/#>)

(These instructions are for Temple College students)

type in the following URL in your browser: ftp://studentweb.templejc.edu
Enter your username and password, as described above, then hit [Enter].
Right click remote site pane to create folders, as needed
Set local directory in left pane, as needed
Drag files to remote site.



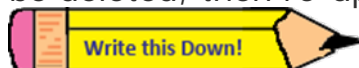
NOTE: DO NOT COPY YOUR LAB9 folder...

open the lab9 folder, and copy the contents only...

...such as index.html, the pages folder, and the images folder.

See screen shot below for what you should see when finished.

IMPORTANT, you CANNOT replace existing files on the server... they must be deleted, then re-uploaded.



ftp using wsftp, see class website.

ftp using Firefox, see class website.

Lab 9

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date, typically Friday, 11:59AM (see due dates on web site)

Activity (100%):

- Upload to your assigned server (see previous section) a default document (index.html) that opens at least one file stored in a pages folder, with links back to index, and at least one image saved in a images folder.
- Include a document that lists *your* studentweb URL in the dropbox

DO NOT SIMPLY UPLOAD YOUR LAB 9 FOLDER

Upload index.html,
create a folder called pages,
create a folder called images,
then upload your pages folder contents into the new pages folder
then upload your images folder contents into the new images folder.

If you cannot not access studentweb.templejc.edu, contact your instructor for alternative solutions (Primarily non-Temple College or dual credit students)

Acceptable default documents vary by server.
UNIX servers typically prefer index.html
Windows server typically prefer index.htm (no L at the end) or default.htm (no L at the end).

For this lab, you **must** name your default document index.html

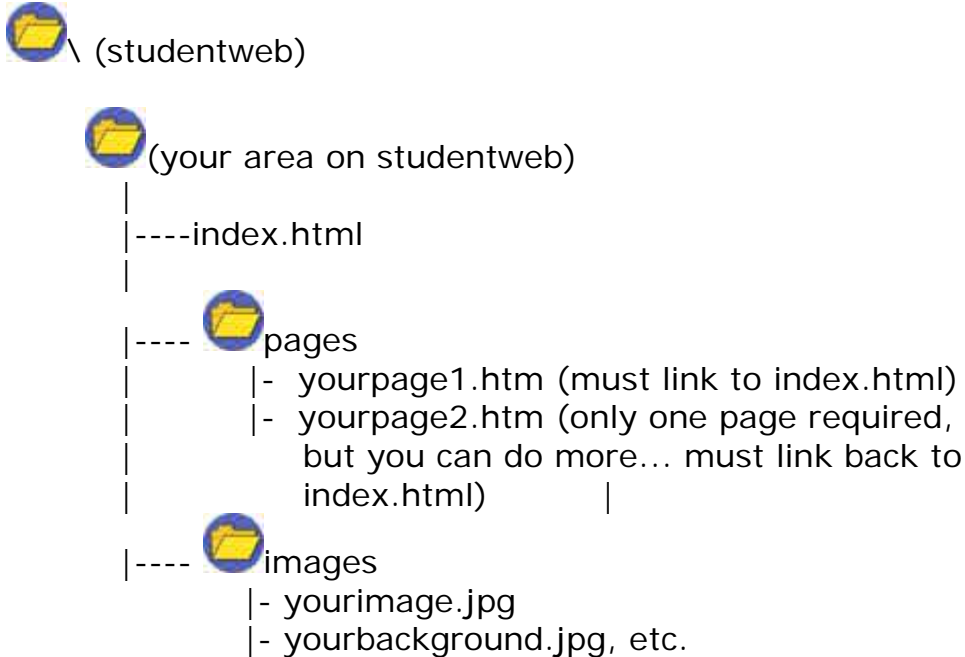
You may reuse existing pages as long as everything works (you may have to add links form page1.htm/page2.htm to index.html),
or
create new web pages (perhaps using styles, or perhaps use all or portions of your lab 10, if you have been working ahead).

- Copy any relevant sections of lab8 to a lab9 folder, and test that everything works.

AGAIN, DO NOT SIMPLY UPLOAD YOUR LAB 9 FOLDER

The lab9 folder is only for organization on **your** computer... upload **only the contents** of the lab9 folder

- **Details** (These instructions are for Temple College students)
On studentweb, create the required folders, and upload your files and to your area of studentweb



Grading Points

(10 points) default document (index.html) links to another web page, stored in the pages folder.

(10 points) the other web page links to default document

(10 points) at least one of these documents has an image

(10 points) all pages properly coded, with titles, background colors/images, control of text color

(50 points) all pages properly uploaded, and visible when URL followed (index.html correctly named, in root directory)

(10 points) deliver to me a document that tells me the URL to your default document.

You may create a web page, a text document, or a word document to place in the dropbox with that information

Instructor Notes:

The server for Temple College students is <ftp://studentweb.templejc.edu>. Student at other schools will be provided instructions on their ftp systems by your instructor.

Temple College details:

Your instructor will assign you a two digit number.

The **username** at the ftp login is wd1-**, where you substitute *your* assigned student number, such as wd1-25

The **password** is wd1**, where you substitute your assigned student number, such as wd125

Do not actually use account 25... that is the instructor's account.

if you upload files with errors, you must delete those files on the server, fix them on your disk, and then upload them again. Most ftp servers will not let you over-write or edit files.

you can't just drag your lab8 or lab9 folder into the ftp server, because then your index.html will not be visible to the server.

Technically, we would say index.html needs to be in your root directory, not in a subdirectory.

The steps again:

Upload index.html,
create a folder called pages,
create a folder called images,
then upload your pages folder contents into the new pages folder
then upload your images folder contents into the new images folder

Test your upload by sending your browser to
http://studentweb.templejc.edu/imed1316/wd1std**/
where ** is the two digit number I assigned you.

You can see my test ftp uploaded material at
<http://studentweb.templejc.edu/imed1316/wd1std25/>

When finished copy YOUR URL into a text document, save and zip to put in the dropbox.

SUBMITTING THE LAB

Log into Your LMS, choose this class, choose Dropbox, select Lab 9. Browse to the document with *your* studentweb URL, and upload it. (See page 80 or class website for detailed instructions)

Completing Overview 12

- Submit by 11:59 AM, Friday, of the current week (see due dates on course web site)
- Lab 9

MUD 12 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 12 Respond in the class LMS Discussion forum to the following:
Why might we need to use ftp to upload files?

For the next time frame:

- Read Overview 13
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you may wish to preview Lab 10



Overview 13

Future Issues, CSS

Review of Styles	290
Optional: Creating CSS with editors	291
Web Design Tips	294
Current issues in HTML	See course web site
Start Lab 10 (due Overview 15)	296
Using a free ISP to host lab 10	299
Completing the Overview	302
Test 3 Review	304

A review of Styles (recall, editors handle this)

In-line styles, the way KomPoZer does Styles

Where you modify one instance of a tag, such as

```
<H2 style="color: red; font-size: 14pt"> text</H2>
```

Stylesheet, the way Dreamweaver does Styles

Where you predefine, in the head, how a tag will work on the current page

```
...
<HEAD>
<TITLE>Style sheet example</TITLE>
<STYLE TYPE="text/css">
<!--
H2 { color: #006000;
font-family: 'Helvetica', Arial, sans-serif}
-->
</STYLE>
</HEAD>
...
```

CSS Cascading Style Sheet

Where you predefine in a separate document how a tag will work on the entire web site.

CSS, Cascading Style Sheet

In-line styles can let us define what each instance of a tag can look like. Taken one step further, we could define these modifications just once, in the head, and then reuse these modified styles throughout the page; adding this information is called a style sheet. Key among tags modified are modifications on how the body behaves, instead of adding text=, link=, etc.

(See my list of style properties on page 276)

However, there is a better way if you wish to reuse the same modified style definitions in many different pages. Yes you could copy a style sheet into a template, then build all of your pages on that template, but what if we wish to change the way the entire site looks? It might be nice if we could just modify this list of styles in once, rather than on each web page.

To do this first we replace our local Stylesheet that is stored in the head with a pointer to an external style sheet that applies, or cascades, across the whole web site. Then we simply build this single document, which ends in .css. Of course, your html editor can do this very nicely.

See the class web site for examples of css...

PS My website does use css, while my portfolio uses a different css.

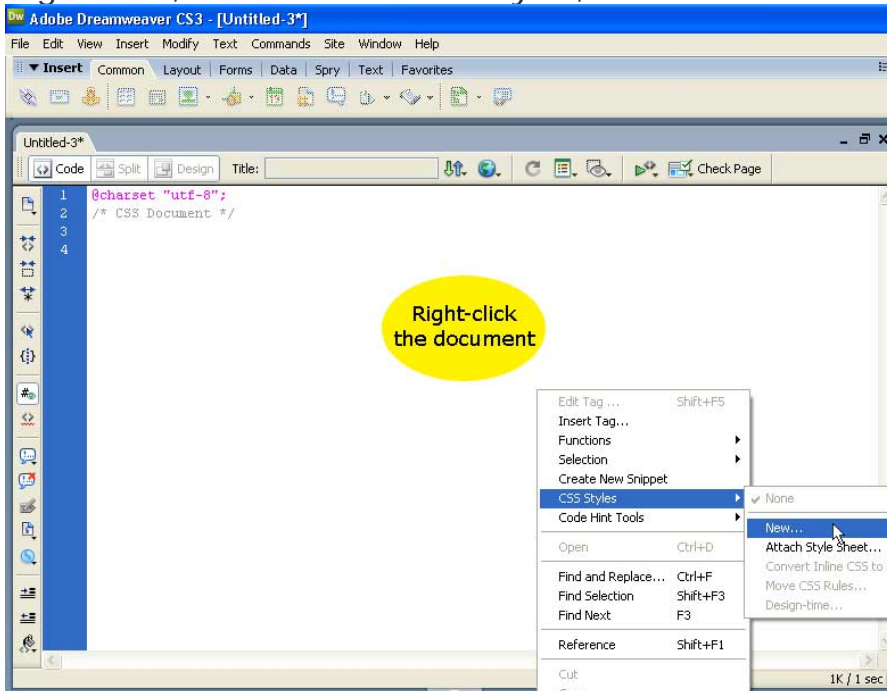
Optional: Creating CSS with editors

Creating CSS using Dreamweaver

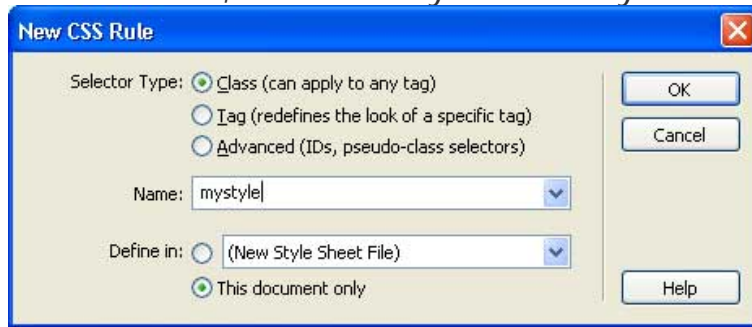
Select New CSS



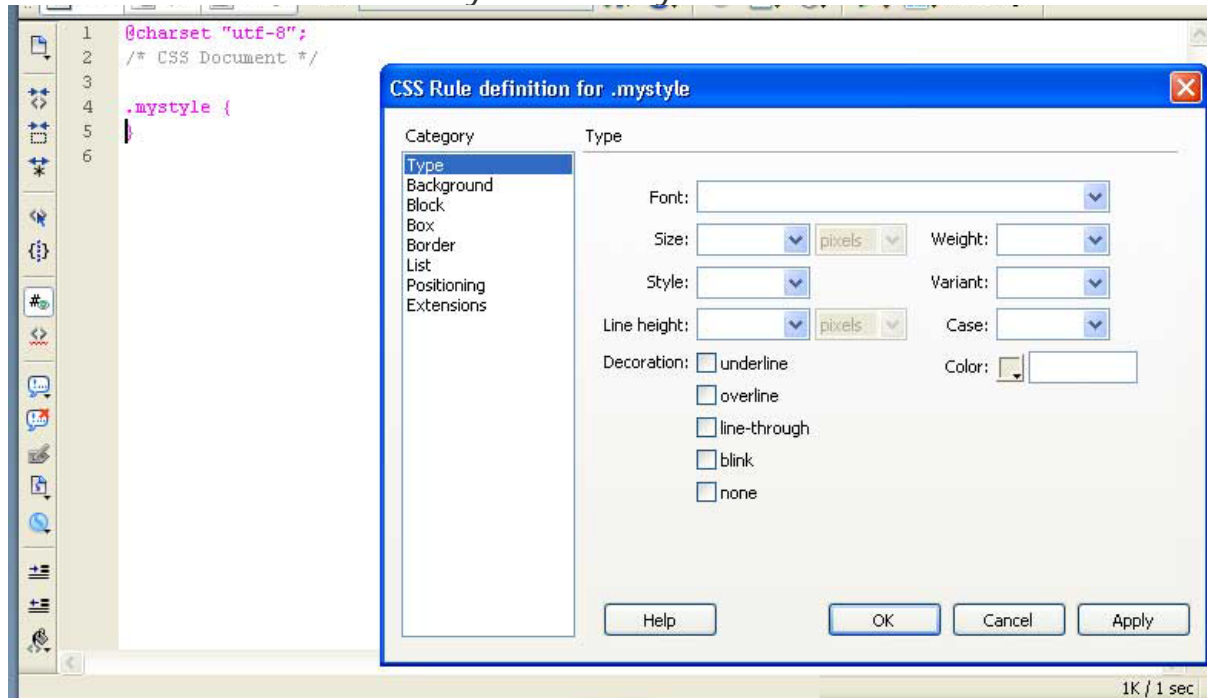
Right click, then choose CSS Styles, then choose New...



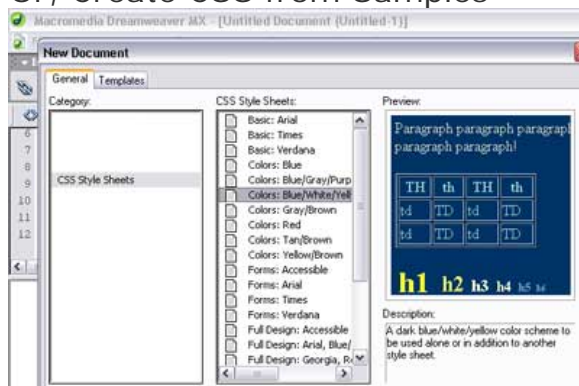
Choose Class, then name your new style item



Select the characteristics of your new style element



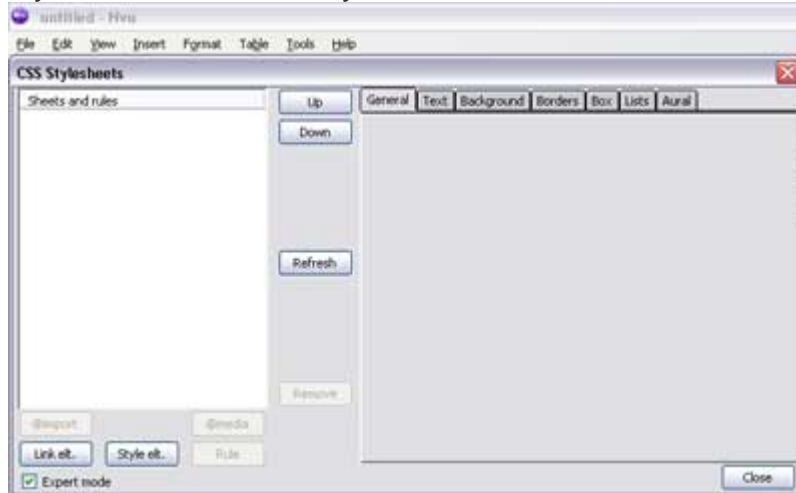
Or, Create CSS from Samples



KomPoZer/NVu Style handling

Start Nvu and create at least one HTML page before beginning these steps.

Step 2 In the Tools menu, select CSS Editor. You can create an internal or external style sheet. Click the Style button at the lower left.



Step 3 Click the Create Stylesheet button. A new stylesheet dialog opens. Name the stylesheet and Click Create Stylesheet.

Step 4 NVu creates an internal stylesheet by default. You can export to an external stylesheet using the Export Stylesheet and Switch to the Exported Version button.

Step 5 Deselect the Expert button and Rule becomes active. Choose to create a new style rule.

Step 6 Type your selector in this field to style an HTML element. You can create a named style or enter a selector such as "body" in the blank field. Click Create Style rule to begin writing rules.

Now these background, box, border and other CSS rules can be applied to any HTML element on a page using the various CSS selectors.

Using editors to create CSS is completely optional, but I hope you explore your options.

Web Design II classes typically go into much more detail of editor use.

Web Page Design Tips

Tips

- Web pages should be easy to read, with good contrast between background and text
- Web pages layout and design should be consistent throughout the site (see CSS for one method of implementing consistency)
- Web pages should be easy to navigate, with link destinations clearly labeled, and links back to your main page; consider a navigation bar on the top or side (consider using tables or frames)
- Web pages should be quick to download (images should be optimized)
- Web pages should be easy to find (consider adding meta tags)

Basic Design Principles

Balance and Proximity

- Don't align everything to the left, use tables to place text and graphics *across* the page, too
 - Avoid *too* much symmetry on a page, to keep interest up
- Place related items close together
- Use white space
 - Use white space to enhance groupings by surrounding related items with space
 - White space can also separate items, to add focus, and improve readability

Contrast and Focus

- *Occasionally*, vary typefaces, colors, sizes, etc., to increase emphasis
- Don't forget the main idea of the page, and design the page to draw attention to that area

There is no magic formula to making an attractive web page. As a study in different approaches, consider web sites like Google (that use a lot of white space to focus you on the search box) and news sites like MSNBC (loaded with information, using a large graphic, grouping, or colored headlines to draw your attention on a crowded page).

Finally, draw out a design or two BEFORE you start coding.



Notes

Current HTML issues

See class website.

Lab 10, Capstone

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

Check with your Instructor for due date,

Lab 10, the capstone, is typically due in the middle of Overview 15, the last full week of school before finals

(see due dates on web site)

Activity

Lab 10: Design then create a small (3 page minimum) web site, and upload it to a non-Temple College web server. **Document the process.**

Get an account on some non-college web server, if you have not done so, Perhaps do this google search: compare free ISP to find a site that does

what you want, 

whether that is to create in notepad then ftp your files up, or design pages on their site using their tools and templates.

OPTIONAL: If you are planning to actually continue to use this, you may wish to investigate fee charging sites like \$5/mo 1and1.com, www.godaddy.com, or SuperNova.net; But for this lab, FREE is good.

Lab 10 Process

Get an account on an ISP (Internet Service Provider's) web server
(85%) Design:

Design, Create and post to your new account:

- at least three well designed web pages
- that incorporate what you have learned this semester

Must be correctly coded and functional

Must be pleasing (no green text on red backgrounds, no text that disappears into your background, etc.)

(Pages external to your ISP account do not count towards the three page minimum... you *may* upload pages you created earlier IF they're modified to fit *your* design... I don't want to see pink_fabric or Link Test 1)

(10%) Uploaded: Files have to be accessible on a real web site

(5%) Turn in to YOUR LMS: A document placed in the lab 10 dropbox that includes the URL to your site,

AND a brief explanation of what you did to earn the 85 *design* points.

Actually, if you don't put in the document with your URL, you don't lose 5 points; you lose all points because I can't grade what I can't find.

You could upload a copy of your site to lab 10 dropbox,
but I grade from the URL!

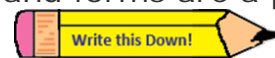
Note: I must see your name as web author somewhere on the site (especially if doing a site for a company)... you must point out where this citation occurs in the document you place in the lab 10 drop box, and tell me where you got your image (copyright reasons)

Lab 10 Grading Points

Grading Points (How to get the full 85 design points, aside from documentation and uploading)

- index.html should be your welcome page, link to all other pages
Note: frames may not work on all free ISPs(10%)
- use of **consistent look** on all pages via text/link colors and background image and background color (5%)
 - should include some regular formatting or styles
- use of appropriate titles and headlines (10%)
- use of OPTIMIZED images (jpg, gif, and/or png, with alt) (10%)
- use tables (5%)
- Spell Checked, interesting, shows planning, etc. (10%)
- Pleasing design (10%)
- correctly coded, with index and link, and functional (10%)
- includes your name (5%)
- Does not violate copyright (10%)
- may wish to use frames, and/or forms, etc, but they must work.
Most sites do NOT let you use frames, and forms are a pain.

I suggest you avoid frames and forms.



Don't forget the other points:

(10%) Files accessible on a real web site

(5%) Documentation in dropbox

- a) describing how you achieved design points,
- b) includes your URL

If you missed earlier lab points, you may reclaim them here if I see lab related activity and you have mentioned this in your design document
example, no lab 9 can earn points because files were uploaded to a server, etc.

Suggestion to meet the 3 page minimum

An attractive default document, also known as a splash screen, that opens when you access your account; this could link to a re-worked résumé and some other appropriate page, as long as all the pages on the site are somehow related.

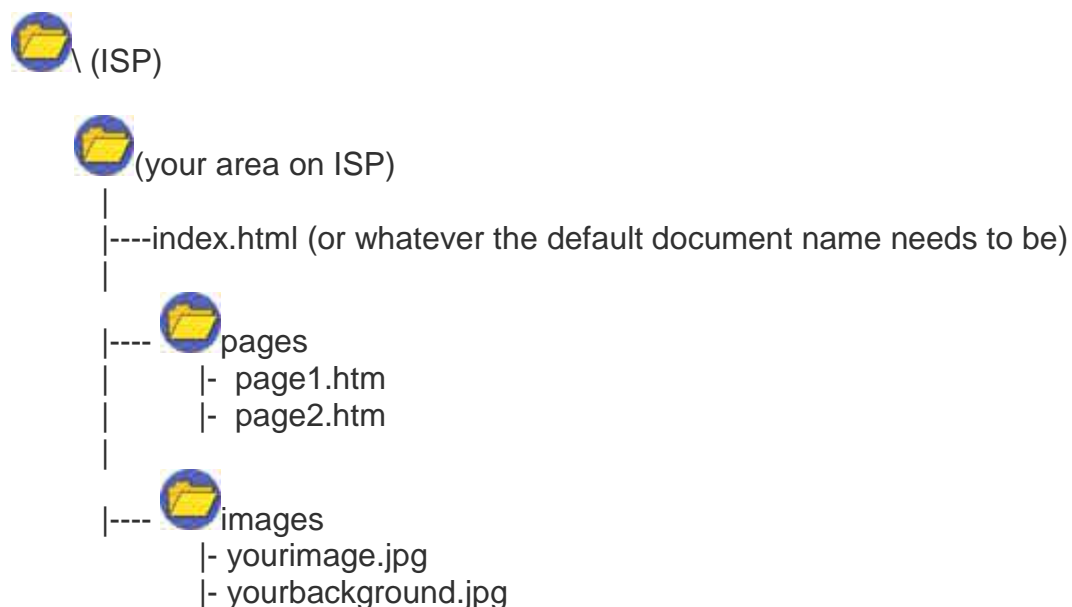
Your splash screen could also link to a portfolio of some type.

[What is a portfolio? Your portfolio should be web pages with content that would interest a specific audience, such as a prospective employer; this could include images you have created, or examples of skills you have to show off. See the class website for an overly large Portfolio I have created.]

Visualize and test

Don't forget to test that everything works on your computer.

On your ISP, create the required folders, and upload your files to the appropriate folder



- Note: if you upload files with errors, you must **delete** those files on the server, fix them on your disk, then upload them again. Most upload or ftp servers will not let you over-write or edit files.

Lab 10, Help with your ISP

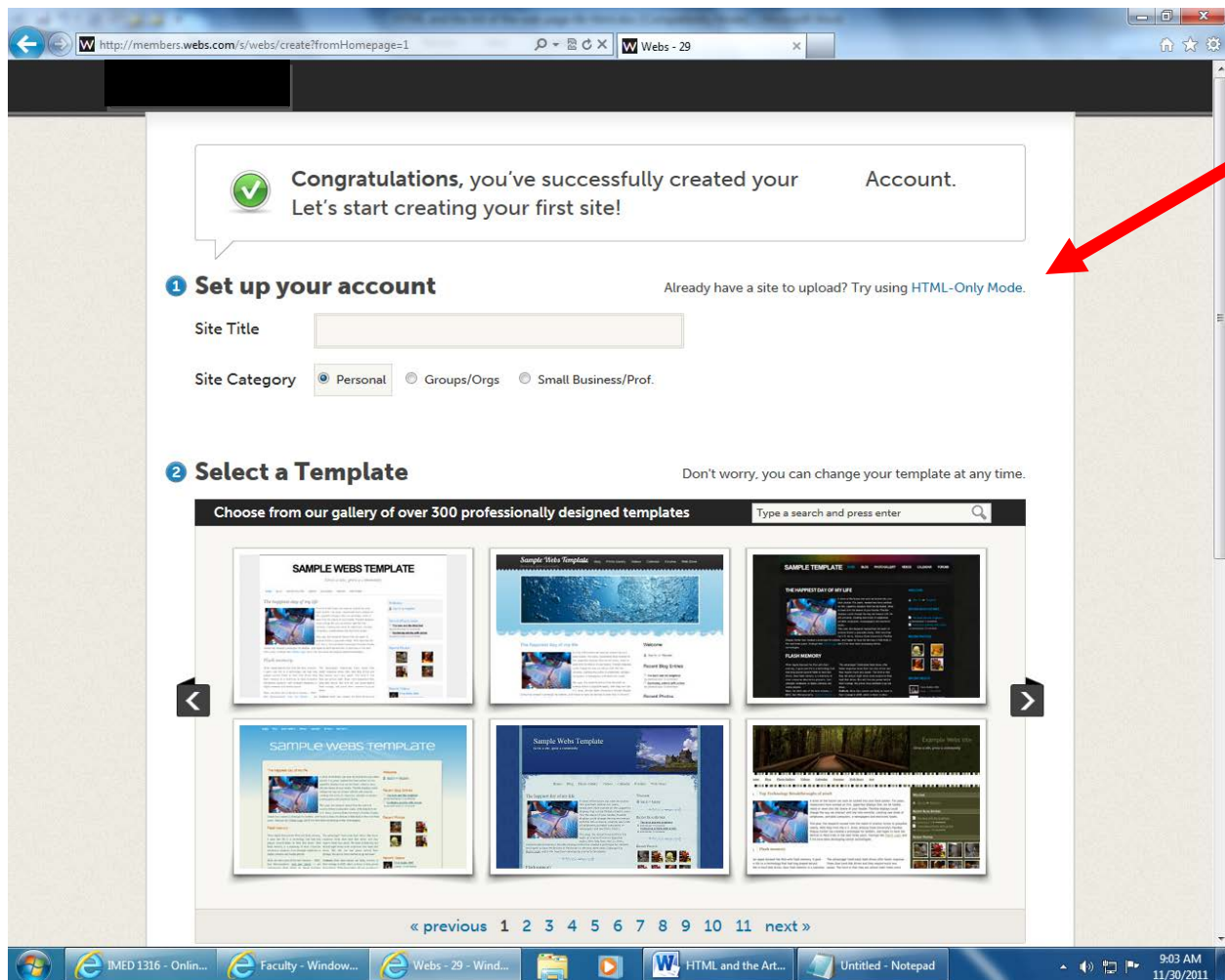
There are many free ISP services, use any you like. They all work about the same... below are steps that used to work on www.webs.com

I can not keep this section up to date... for process overview only.

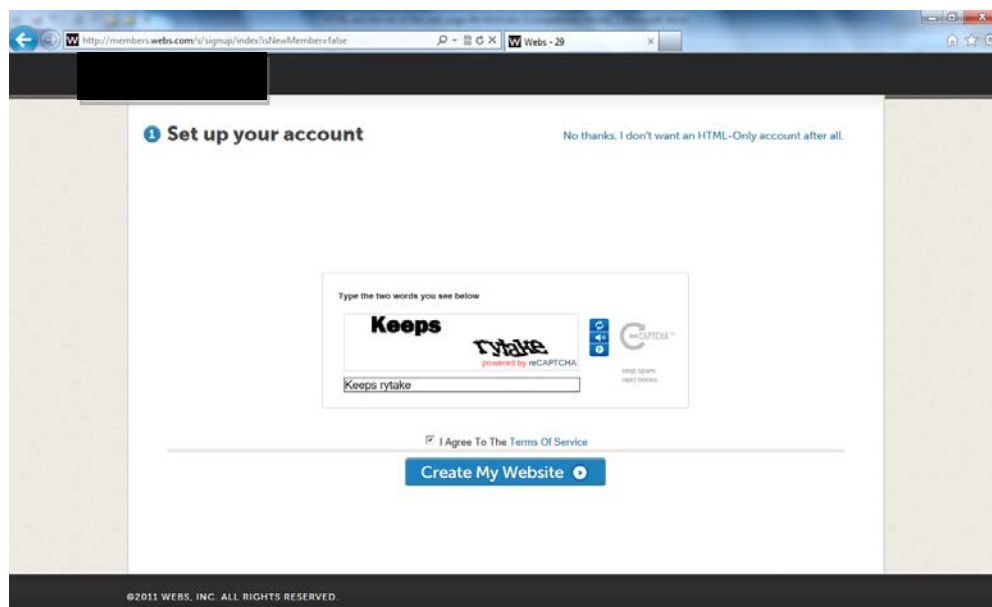
Again, I suggest you google compare free ISP to locate a site you can use (Check the class web site for updated information or student suggestions)

Using a free service (often *similar* to these steps)

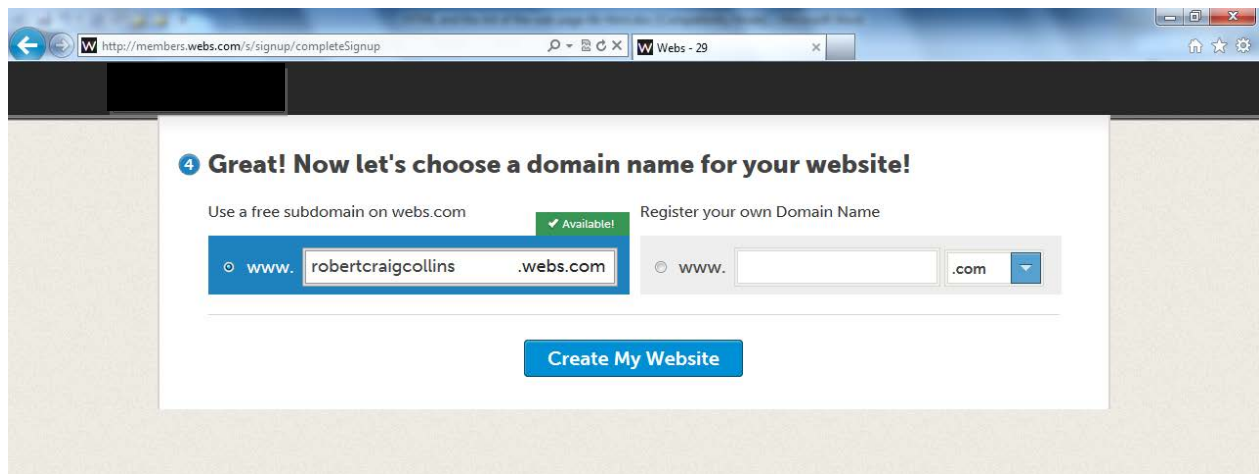




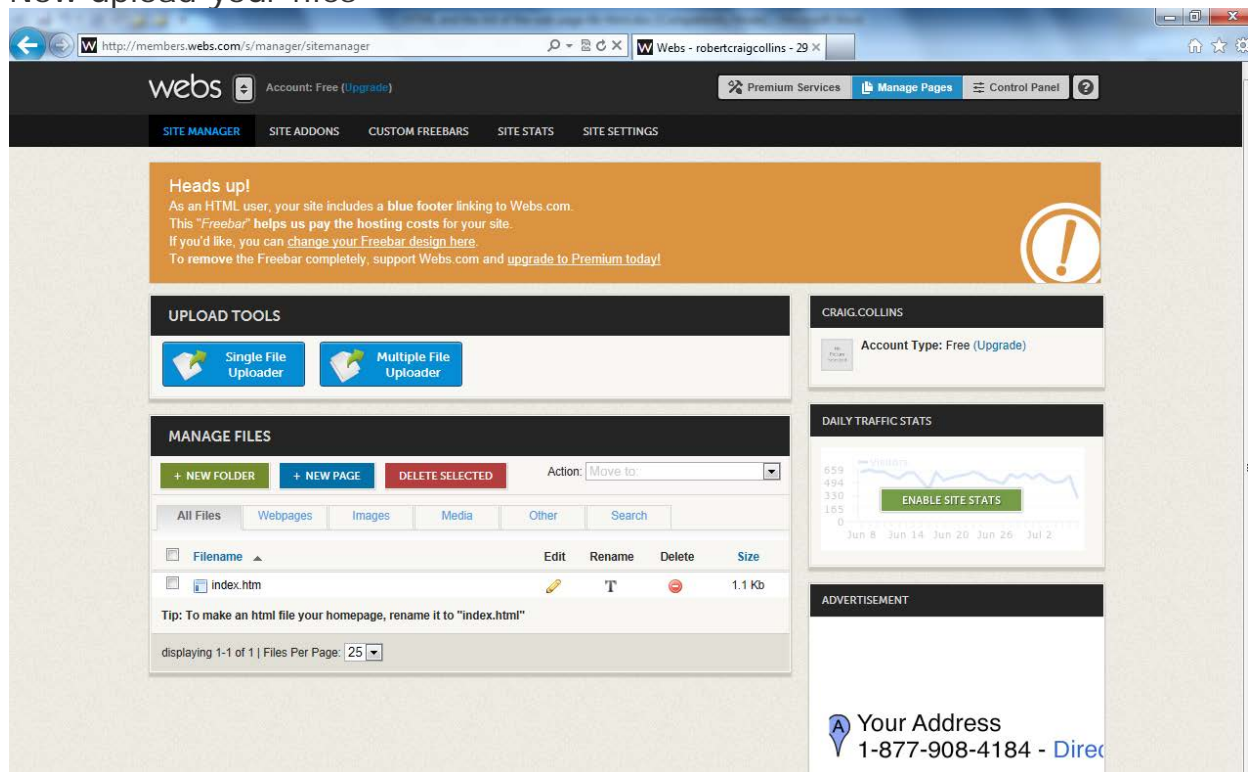
You can either use their tools, or upload your site. First verify...



Choose your domain



Now upload your files



YOUR ISP STEPS WILL DIFFER, *but should be similar*. AGAIN, EACH FREE ISP IS DIFFERENT. CHECK CLASS WEBSITE FOR SUGGESTIONS

Completing Overview 13

MUD 13 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 13 Respond in the class LMS Discussion forum to the following:

What is your capstone lab (portfolio) topic?

For the next time frame:

- Read Overview 14
- Each test has a review; you may wish to write out pertinent information from the readings and activities
- After completing this overview, you should be working on Lab 10



Overview 14

HTML issues continued, and Lab 10 continued

Test 3 Review	304
Current issues in HTML	See course web site
Course Evaluation	See course web site
Continue Lab 10 (due Overview 15)	296
Using a free ISP to host lab 10	299
Completing the Overview	306

Test 3 Review

Before continuing, verify you are caught up with class participation discussions and MUDs.

You will need to scroll down to see which discussions you have and have not posted to. Your participation grade will be penalized at the end of the semester for discussions you have not posted to.

Feel free to copy this to a word document and send it to me... I won't give you the right answers necessarily, but I'll let you know where you still need a little work.

Now that you are mastering the theory, it is time to ramp up the tests a bit...This will be a fairly challenging test.

Just as there are no multiple choice job interviews, the third test is designed to see not what you recognize, but what you have learned. The test and review below, have more picky fill in the blank and short answer /short essay questions, where you have to write out a short phrase or a short paragraph to answer the question. You'll have 40-45 minutes for the test, so you will need fairly rapid recall to finish in the allotted time. Go over your completed review frequently, though, and you'll do just fine!

You may also wish to re-review my 'study tips' and 'test taking tips.'
PS, The third part of the final will include the same information as Test 3.

Review (I actually suggest you use the review in your LMS)

- Complex Tables
 - How do you align table contents horizontally?
 - How do you align table contents vertically
 - How can you merge the following?

- How can you merge the following?

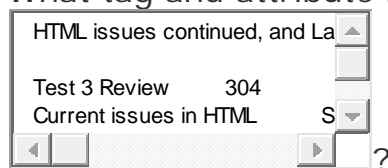
- Given the following:
`<td width="5">`
 What would happen if you typed in Supercolliding Super Conductor of Waxahatchie Texas?
- Given the following:
`<td width="5">`
 What would happen if you inserted the following: ``?

- Frames

- Given the following design:



- Create the frame: tag create columns = "size, remaining size"
 Code `<` `>`
 Load the first frame: tag page to load identify the area
 Code `<` `>`
 Create the second frame: tag create rows to fill this column = "size, remaining size"
 Code `<` `>`
 Load the next frame: tag page to load identify the area
 Code `<` `>`
 Load the last frame: tag page to load identify the area
 Code `<` `>`
 Close the right side
 Code `<` `>`
 Close the whole frame structure
 Example `</frameset >`
- What two aspects can be controlled by attributes of frameset?
- What two aspects can be controlled by attributes of frame?
- What attribute is added to 'a href' to point to a specific frame?
- Forms
 - What tag encloses the form area?
 - What is action?
 - What is method?
 - What tag and attribute makes ?
 - What tag and attribute makes



- What tag and attribute makes ☐ ?
- What tag and attribute makes ☐ ?
- What tag makes ?
- What tag and attribute makes ?
- Styles
 - Discuss in-line vs. style sheets vs. cascading style sheets
- ftp
 - What does ftp stand for?
 - What is required to download files with ftp from a server?
 - What is required to upload files with ftp to a server?
 - Discuss what ftp supports, and doesn't support
 - Discuss ascii and binary files
- What have you learned this semester? Be specific.

See course web site to view hints on the review

HTML Issues, continued

See course web site

Completing Overview 14

• Submit by 11:59 AM, Friday, of the current week
(see due dates on course web site)

• Completed Course Evaluations

MUD 14 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

• Participation Discussion 14 Respond in the class LMS Discussion forum to the following:
What are some new things in web pages that you have seen or heard about?

For the next time frame:

- Read Overview 15
- After completing this overview, you should be finishing Lab 10



Overview 15

HTML issues continued, and Lab 10 continued

Test 3 Review	304
Test 3	
Course Evaluation	See course web site
Lab 10 due	296
Completing the Overview	308

Take Test 3

Turn in course evaluation, if not already done

SUBMITTING THE LAB (midweek due date)

Log into Your LMS, choose this class, choose Dropbox, select Lab 10. Browse to lab 10 documentation and upload it. (See page 80 or class website for detailed instructions) Check class web site for due date.

Begin studying for the final

Re-read the three test reviews, and go over your tests in YOUR LMS

Completing Overview 15

- Submit by 11:59 AM, Wednesday, of the current week (see due dates on course web site)
 - Lab 10

MUD 15 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 15 Respond in the class LMS Discussion forum to the following:
Questions about other web page issues?

For the next time frame:

- Final exam, three parts to be taken within 2 hours of starting part 1



Overview 16

Final Exam

Class has ended, nothing left but Finals.

No labs will be accepted, only the final remains

Focus on the final exam.

Prepare for the final

Re-read the three test reviews, and go over your tests in YOUR LMS

Take the final

Check the class website for the Final exam date; all three parts of the final must be taken within two hours of starting, and be complete by the posted due date.

Completing Overview 16

- Submit by end of course
(see due dates on course web site)
 - Final Exam

MUD 16 (My Understanding, Details)

Respond in the class LMS Discussion forum to the following:

What was helpful this week?

What do you hope we cover next week?

Please include feedback on additional content provided

- Participation Discussion 16 Respond in the class LMS Discussion forum to the following:
What other classes should TC offer in this area?
-

For the next time frame:

- Check grades in TConnect, or your local class grades system.

Appendix A

HTML COMMAND REFERENCE

REQUIRED <HTML>	-2-
REQUIRED <HEAD>	-2-
REQUIRED <TITLE>	-2-
REQUIRED <BODY>	-2-

Note: Forms are in Appendix B, page 15

Note: Frames are in Appendix C, page 17

Tags take the form `<tag attribute = "value">text to modify, if any`
|tag| | attribute | value |

Attributes are listed alphabetically; see tag/element for related attributes

<!> (Comment)	-03-
<a> (anchor, for making links)	-03-
<body> (body, contents of main window)	-05-
 (line break)	-06-
 (formats text)	-06-
<form> (all form related items, appendix B)	-15-
<frame> (frame, see appendix C)	-17-
<frameset> (frameset, see appendix C)	-17-
<H1-H6> (Headlines)	-07-
<head> (Computer use portion of web page)	-07-
<hr> (horizontal rule, a line across a page)	-08-
<html> (contains all parts of web page)	-08-
 (image)	-09-
 (list item)	-09-
 (ordered/numbered list)	-10-
<p> (paragraph)	-10-
<table> (table)	-12-
<td> (table detail or cell)	-12-
<title> (title)	-13-
<tr> (table row)	-13-
 (unordered/bulleted list)	-14-

Required tags

<HTML>

Name	HTML
Purpose	used to contain a web page
Syntax	<html> ... </html>
Required tag/attribute	</html>
Common parameters	n/a
Example	<pre> <html> <head> <title>title</title> </head> <body> Web content </body> </html> </pre>

<HEAD>

Name	Head or header
Purpose	used to contain a computer use part of page
Syntax	<head> ... </head>
Required tag/attribute	</head>
Common parameters	title 'style sheet' meta
Example	<pre> <html> <head> <title>title</title> </head> <body> Web content </body> </html> </pre>

<TITLE>

Name	Title
Purpose	used to generate text for title bar
Syntax	<title> ... </title>
Required tag/attribute	</title>; only place within <head>... </head>
Common parameters	n/a
Example	<pre> <html> <head> <title>title</title> </head> <body> Web content </body> </html> </pre>

<BODY>

Name	Body
Purpose	used to contain visible portion of a web page
Syntax	<body> ... </body>
Required tag/attribute	</body>
Common parameters	text bgcolor background link vlink alink
Example	<pre> <html> <head> <title>title</title> </head> <body> Web content </body> </html> </pre>

Other Tags (Element) and attributes

See also W3C online reference
Tags (Elements) www.w3.org/TR/html401/index/elements.html
Attributes www.w3.org/TR/html401/index/attributes.html

<!-->

Name	Comment
Purpose	used to insert comments that don't display
Syntax	<!--comment -->
Required tag/attribute	n/a
Common parameters	Also used in 'style sheet'
Example	<!--Author: Craig Collins --> <i>will not appear in the browser window</i>

<A>

Name	Anchor
Purpose	used to create hypertext links
Syntax	 ...
Required tag/attribute	href or name
Common parameters	target
Example	TC <i>will appear as</i> <u>TC</u> and will link to http://www.templejc.edu

align

Name	alignment
Purpose	Align can be set to left, middle, or right
Syntax	<tag align="value"
Required tag/attribute	
Common parameters	na
Example	<p align="right">text </p> <i>the text will align to the right</i> <i>May be used with left, center, or right</i> <i>May be used with several tags</i>

alink

Name	Activated link
Purpose	<body> attribute used to change the link color when the link is clicked or activated
Syntax	<body alink="value"
Required tag/attribute	<body> </body>
Common parameters	na
Example	<body alink="red"> <i>the link color will change when the link is clicked</i>

alt

Name	Image alternative text for visually challenged
Purpose	 attribute used set alternative text
Syntax	
Required tag/attribute	src, alt
Common parameters	height, width
Example	Text <i>will appear as an image 10 pixels high and 50 pixels wide; if you point at the image, the words alternate text will appear</i>

background

Name	Background color
Purpose	<body> attribute used to set background image May also modify <table> <tr> <td>
Syntax	<body background="value"
Required tag/attribute	<body> </body>
Common parameters	na
Example	<body background="image.jpg"> <i>the picture image.jpg will fill the background of the webpage, if the image is small, the image will repeat until the web pages is covered</i>

<BODY>

Name	Body
Purpose	used to contain visible portion of a web page
Syntax	<body> ... </body>
Required tag/attribute	</body>
Common parameters	text bgcolor background link vlink alink
Example	<pre><html> <head> <title>title</title> </head> <body> Web content </body> </html></pre>

bgcolor

Name	Background color
Purpose	<body> attribute used to set background color May also modify <table> <tr> <td>
Syntax	<body bgcolor="value"
Required tag/attribute	<body> </body>
Common parameters	na
Example	<pre><body bgcolor="red"> or < body bgcolor="#ff0000"></pre> <p><i>the color red will fill the background of the webpage, if there is a background image, the image will repeat until the color is covered</i></p>

border

Name	Table border size
Purpose	<table> attribute used to set size of border
Syntax	<table border="value"
Required tag/attribute	<table> </table>
Common parameters	na
Example	<pre><table border="1"></pre> <p><i>The border can be set from 0 -6 or more pixels</i></p>

Name	Break
Purpose	used to insert line repeatable line breaks
Syntax	 or
Required tag/attribute	No </br>
Common parameters	n/a
Example	text text <i>displays as</i> text text

color

Name	Font Color
Purpose	 attribute used to set font color
Syntax	 text </face>
Required tag/attribute	<face> </face>
Common parameters	na
Example	 text <i>the typeface will change from the default to red</i>

face

Name	Type face
Purpose	 attribute used to set type face
Syntax	 text </face>
Required tag/attribute	<face> </face>
Common parameters	na
Example	 text <i>the typeface will change from the default to Arial if the Arial typeface is installed on the user computer</i>

Name	Font
Purpose	used to modify appearance of text
Syntax	 text
Note	Deprecated tag, HTML 4 uses styles
Common parameters	face and or size and or color
Example	 text <i>displays using Arial, one size smaller, and red:</i> text

<H1>-<H6>

Name	Headline
Purpose	Headlines are bold, a different size, with breaks
Syntax	<code><hx> ... </hx></code> where x is 1, 2, 3, 4, 5 or 6
Required tag/attribute	<code></hx></code>
Common parameters	n/a
Example	Text <code><h2></code> text <code></h2></code> text <i>displays as</i> text text text

<HEAD>

Name	Head or header
Purpose	used to contain a computer use part of page
Syntax	<code><head> ... </head></code>
Required tag/attribute	<code></head></code>
Common parameters	title 'style sheet' meta
Example	<code><html></code> <code> <head></code> <code> <title>title</title></code> <code> </head></code> <code> <body></code> <code> Web content</code> <code> </body></code> <code></html></code>

height

Name	Image or table height
Purpose	<code></code> attribute used to set height
Syntax	<code></code>
Required tag/attribute	alt
Common parameters	width
Example	Text <code>
</code> <code></code> <i>will appear as an image 10 pixels high and 50 pixels wide; if you point at the image, the words alternate text will appear</i> <i>Can also modify height of table, tr, or td</i> <i>May also be used with %</i>

href

Name	Anchor's hypertext reference
Purpose	<a> attribute used to point to link site
Syntax	 ...
Required tag/attribute	<a> ...
Common parameters	target
Example	TC

<HR>

Name	Horizontal Rule
Purpose	used to create a line across the web page
Syntax	Text <hr> text
Required tag/attribute	n/a
Common parameters	n/a
Example	Text <hr> text <i>displays as</i> Text <hr/> text

<HTML>

Name	HTML
Purpose	used to contain a web page
Syntax	<html> ... </html>
Required tag/attribute	</html>
Common parameters	n/a
Example	<html> <head> <title>title</title> </head> <body> Web content </body> </html>

Name	Image
Purpose	used to insert an image
Syntax	<code></code>
Required tag/attribute	src, alt
Common parameters	height, width, alt
Example	<p>Text
 <code></code></p> <p><i>will appear as an image 10 pixels high and 50 pixels wide; if you point at the image, the words alternate text will appear</i></p>

Name	List Item
Purpose	to insert an bulleted or numbered item into a list
Syntax	<code></code> <code>List Item [is optional]</code> <code></code>
Required tag/attribute	<code> ... </code> or <code> ... </code>
Common parameters	n/a
Example	<p><code></code> <code>First List Item</code> <code>Second List Item</code> <code></code></p> <p><i>displays as</i></p> <ol style="list-style-type: none">1. First List Item2. Second List Item

link

Name	Default Link color
Purpose	<code><body></code> attribute used to set link color
Syntax	<code><body link="value"></code>
Required tag/attribute	<code><body> </body></code>
Common parameters	na
Example	<p><code><body link="red"></code></p> <p><i>default color for a link that has not been clicked</i></p>

name

Name	Anchor name
Purpose	<a> attribute used to create named bookmark
Syntax	 [optional]
Required tag/attribute	n/a
Common parameters	n/a
Example	

Name	Ordered List
Purpose	to create a numbered list
Syntax	 List Item [is optional]
Required tag/attribute	 and
Common parameters	n/a
Example	 First List Item Second List Item <i>displays as</i> 1. First List Item 2. Second List Item

<P>

Name	Paragraph
Purpose	To add space before and after text
Syntax	<P>Text</P>
Required tag/attribute	</P>
Common parameters	n/a
Example	<P> This info will be separated from text above and below </P>

size

Name	Font size
Purpose	 attribute used to set type size
Syntax	 text </face>
Required tag/attribute	<face> </face>
Common parameters	na
Example	<p> text </p> <p><i>the typeface will change from the default to one size larger than default; may also use - (minus)</i></p> <p> text </p> <p><i>the typeface will change from the default (3) to size 1(extra small); range is 1-6</i></p>

src

Name	Image source
Purpose	 attribute used to point to filename
Syntax	
Required tag/attribute	alt
Common parameters	height, width
Example	<p>Text
</p> <p></p> <p><i>will appear as an image 10 pixels high and 50 pixels wide; if you point at the image, the words alternate text will appear</i></p>

<TABLE>

Name	Table		
Purpose	used to organize info into rows and columns		
Syntax	<code><table border="value" width="value"></code>		
Required tag/attribute	<code><TR><TD></code>		
Common parameters	border, width		
Example	<pre><table border="1" width="50%"> <tr> <td>X<td><td>0</td> </tr> </table></pre> <p>Creates a one row (tr) table that contains 2 table details or cells (td) that has a thin border and occupies 50% of the available space</p> <table border="1"><tr><td>x</td><td>o</td></tr></table>	x	o
x	o		

target

Name	target
Purpose	<code><a></code> attribute used to point to named location
Syntax	<code> ... </code>
Required tag/attribute	n/a
Common parameters	target
Example	<code>TC</code>

<TD>

Name	Table detail, or cell		
Purpose	used to subdivide a row into cells		
Syntax	<code><td> content </td></code>		
Required tag/attribute	<code><TABLE><TR></code>		
Common parameters	bgcolor, background, width		
Example	<pre><table border="1" width="50%"> <tr> <td>X<td><td>0</td> </tr> </table></pre> <table border="1"><tr><td>x</td><td>o</td></tr></table>	x	o
x	o		

text

Name	Body color
Purpose	<body> attribute used to set text color
Syntax	<body text="value"
Required tag/attribute	<body> </body>
Common parameters	na
Example	<pre><body text="red"> or < body bgcolor="#ff0000"></pre> <p><i>the color red will be used for all unmodified text</i></p>

<TITLE>

Name	Title
Purpose	used to generate text for title bar
Syntax	<title> ... </title>
Required tag/attribute	</title>; only place within <head>... </head>
Common parameters	n/a
Example	<pre><html> <head> <title>title</title> </head> <body> Web content </body> </html></pre> <p><i>The word title will appear on the title bar</i></p>

<TR>

Name	Table row		
Purpose	used to subdivide a table into rows		
Syntax	<tr> <td>content </td></td>		
Required tag/attribute	<TABLE><TD>		
Common parameters	bgcolor, background, width		
Example	<pre><table border="1" width="50%"> <tr> <td>X<td><td>0</td> </tr> </table></pre> <table border="1"> <tr> <td>x</td><td>o</td></tr> </table>	x	o
x	o		

Name	<i>Un</i> Ordered List
Purpose	to create a bulleted list
Syntax	<code> List Item [is optional] </code>
Required tag/attribute	<code></code> and <code></code>
Common parameters	n/a
Example	<code> First List Item Second List Item </code> <i>displays as</i> <ul style="list-style-type: none">• First List Item• Second List Item

vlink

Name	Visited Link color
Purpose	<code><body></code> attribute used to set visited links color
Syntax	<code><body vlink="value"</code>
Required tag/attribute	<code><body></code> <code></body></code>
Common parameters	na
Example	<code><body vlink="red"></code> <i>sets color for a link that has already been clicked</i>

width

Name	Image width
Purpose	<code></code> attribute used to set width
Syntax	<code></code>
Required tag/attribute	alt
Common parameters	height
Example	Text <code>
</code> <code></code> <i>will appear as an image 10 pixels high and 50 pixels wide; if you point at the image, the words alternate text will appear</i> <i>May also be used with % May also be used with tables</i>

Appendix B

FORMS, see Overview 11

```
<html>
<head><title>Your Title</title></head>
<body ...>
<a href=" ../index.html">To Home</a>

<form action="http://studentweb.templejc.edu/imed1316/cgi-
bin/FormValues.asp"
      method="post">

<!--alternate action=: "mailto:email address"-->
<!--alternate method: "get"-->

text<input type="text" name="item">

<!--each field should have a unique name-->
<br>

text<textarea name="item1"
rows="3" cols="10">
</textarea>
<br>

<input type="radio" name="item2" value="something">text<br>
<input type="radio" name="item2" value="something else">text
<!--for radio only, the fields share the same name-->
<br>

<input type="checkbox" name="item3a">text<br>
<input type="checkbox" name="item3b">text
<br>

<SELECT SIZE="3" name="item4">
<OPTION VALUE="1">text
<OPTION VALUE="2">text
<OPTION SELECTED VALUE="3">text
</SELECT>
<br>

<input type="submit" value="Submit">


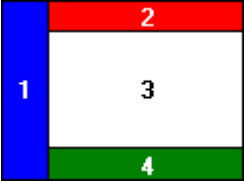
</form>
</body>
</html>
```

Notes:


Appendix C

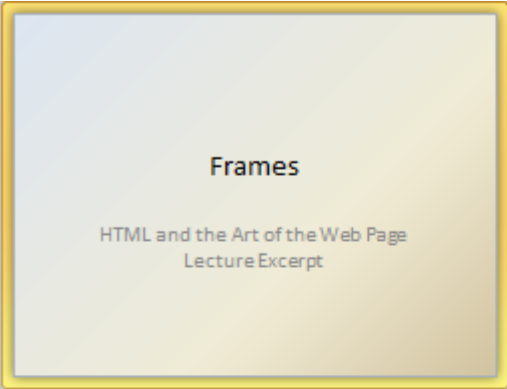
FRAMES, See Overview 10

<FRAMESET>

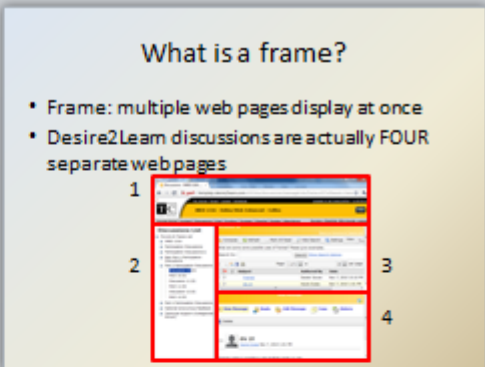
Name	Creates a web page that displays multiple pages
Purpose	Carves out space in a framed web page
Syntax	<pre><FRAMESET [rows or cols]="Value"> <FRAME SRC="value"> </FRAMESET></pre>
Required tag/attribute	<FRAME></FRAMESET>
Common parameters	Rows or cols
Example	<pre><FRAMESET ROWS="20%, *"> <FRAME SRC="white.htm"> <FRAME SRC="black.htm"> </FRAMESET></pre> <p><i>Frameset creates two spaces, one 20% of the screen, the other (*) occupies the remaining space that would look similar to</i></p>  <p><i>Frame determines which web pages go in the spaces</i></p> <p><i>Note: a frameset can be further carved up with additional framesets</i></p> <pre><HTML> <FRAMESET COLS="20%, *"> <FRAME SRC="frame1.htm"> <FRAMESET ROWS="20%, *, 20%"> <FRAME SRC="frame2.htm" name="topframe"> <FRAME SRC="frame3.htm" name="middleframe"> <FRAME SRC="frame4.htm" name="bottomframe"> </FRAMESET> </FRAMESET> </HTML></pre> 

<FRAME>

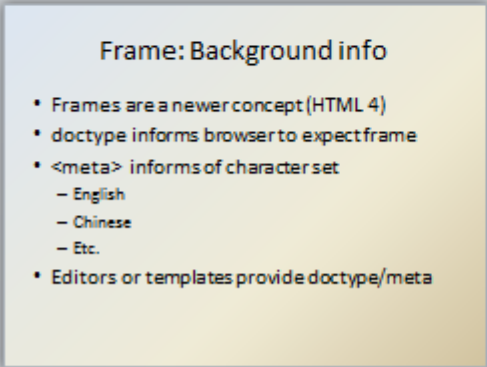
Name	Creates a web page that displays multiple pages
Purpose	Populates a space within a framed web page
Syntax	<pre><FRAMESET [rows or cols]="Value"> <FRAME SRC="value"> </FRAMESET></pre>
Required tag/attribute	<FRAMESET></FRAMESET> SRC
Common parameters	name
Example	<pre><FRAMESET ROWS="20%, *"> <FRAME SRC="white.htm" name="left-side"> <FRAME SRC="black.htm" > </FRAMESET></pre> <p><i>Frame is used to fill the two spaces created by frameset</i></p>  <p>(To open a web page within a named frame, use target)</p>



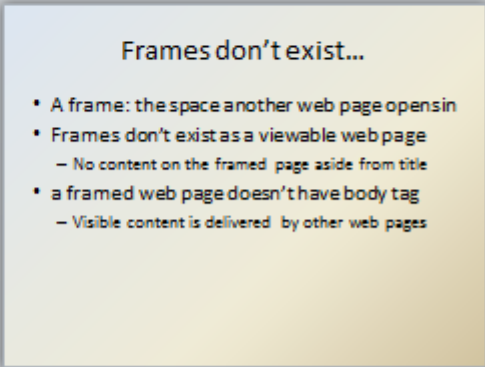
1



2



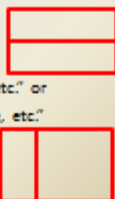
3



4

Frame Tags and attributes

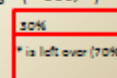
- `<frameset>`: similar to table
- carves the browser window up
 - Carve out rows: `rows="value, value, etc."` or
 - Carve out columns: `cols="value, value, etc."`
- Frameset requires ending `</frameset>`



5

Frame Tags and attributes²

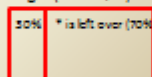
- frameset carves empty window into rows/cols
 - The number of values listed indicate the number of row or columns to make
 - The value can be in pixels (`"300"`) or percent (`"50%"`)
 - You may omit one value and let the browser figure out how much space is left using `*` (`"300,*"`)
- `<frameset rows="30%,*">`
`</frameset>`



6

Frame Tags and attributes³

- frameset carves empty window into rows/cols
 - The number of values listed indicate the number of row or columns to make
 - The value can be in pixels (`"300"`) or percent (`"50%"`)
 - You may omit one value and let the browser figure out how much space is left using `*` (`"300,*"`)
- `<frameset cols="30%,*">`
`</frameset>`



7

Frame Tags and attributes⁴

- `<frame>`: similar to table detail `<td>`
 - Places content within the divided space
- `<frame>`: similar to image
 - Requires a `src="value"` locates web page to display
 - no ending ``, no ending `</frame>`
- `<frame>`: similar to anchor `<a>`
 - Requires `name="value"` can't link to an anchor if not named

8

Creating a frame¹

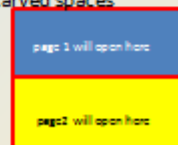
- Draw out the shape
- I see two equal rows, so I code
`<frameset rows="50%,*">`
`</frameset>`



9

Creating a frame²

- Add web pages to carved spaces
- `<frameset rows="50%,*">`
`<frame src="page1.htm" name="upper">`
`<frame src="page2.htm" name="lower">`
`</frameset>`



10

What can be but into a ...?

- If you carve up a web page with a frameset, you can either fill the frameset with a frame to hold a web page... or
- Another frameset
 - such a putting a table in a table

11


Creating a complex frame¹

- Draw out the shape: which goes all the way, rows or cols?
- Column 1 goes top to bottom
- So I will start with cols, I will later subdivide the 2nd column



12

Creating a complex frame ²


- `<frameset cols="50%,*">` 
 - `<frame src="page1.htm" name="lefty">`
 - `????`

- But what is going in the second column?



13

Creating a complex frame ³

- `<frameset cols="50%,*">` 
 - `<frame src="page1.htm" name="lefty">`
 - `????`


- But what is going in the second column?

- Another frameset divided into rows



14

Creating a complex frame ³


- `<frameset cols="50%,*">` 
 - `<frame src="page1.htm" name="lefty">`
 - `<frameset rows="50%,*">`
 - `</frameset>`

- Now add the frames



15

Creating a complex frame ⁴

- `<frameset cols="50%,*">` 
 - `<frame src="page1.htm" name="lefty">`
 - `<frameset rows="50%,*">`
 - `<frame src="page2.htm" name="upp">`
 - `<frame src="page3.htm" name="dwn">`



16

Advanced attributes

- `Scrolling="no"`
 - Removes scroll bar
 - May be hard to see whole page
- `Noresize`
 - Prevents end user from clicking on frameborder and dragging to change the size
- See also `framespacing`, `framepadding`, and `framebordercolor`

17

Creating frames

- Use a template
- Use an editor
 - Nvu\Kompozer can't even spell frame
 - Dreamweaver
 - Choose `New\More...Page from Sample\Frameset`
 - Dreamweaver wants to create the frame, and the pages that go in the frame at the same time...
 - ... will require you to edit frame page code to point to existing web pages.

18

Campus Specific Orientation

Orientation
Controlling File Names
Locating Files in Windows
Web Enhanced Support
Feedback
Syllabus
Attendance Policy
How to use web resources

Due to the many different schools that use this book, Campus specific information is being delivered via this appendix.

This version of the book is intended for students taking
IMED 1316
through
Temple College
being taught by
R. Craig Collins.



All references to the campus Learning Management System (LMS) refer to Brightspace, by D2L for Temple College students.
I will refer to our system simply as D2L.

Note, much of nuts and bolts of the class, such as the syllabus, and instructions on using Brightspace by D2L, is in the Week 1 Content area of D2L for this class.

Review the News item in D2L for links to the items you need this week.

Notes for Temple College students

Reminder: Did you check your School eMail account? Did you check the Junk folder?

This document will explain how IMED 1316, Web Page Design I, works.

You should be an independent learner to be successful in this class, or at least have the discipline to take responsibility for getting tasks done on time.

Whether you take this class online or in a traditional setting, both are IDENTICAL, as far as content, expectations, time required, and due dates go.

About the only difference is that on-line students have to read the lecture; however please note that videos of my demos are on the class website so all may 'watch' critical skills, too.

So, to keep both the online and on-campus students completely even on timing and effort, please note the following:

- You are expected to log into D2L on a regular basis.
You may work ahead, finishing up multiple weeks at a sitting if you like, but at a minimum:
you must check your email daily
and log into D2L at least twice a weekly
-once early in the week to look over the News item, and the D2L Content has made available to you, such as videos, and
-obviously at the end of the week to submit discussions, quizzes, and dropbox items.
- On-campus students have a sign in sheet; online students prove your attendance by logging in and posting in the D2L Discussions area
- Labs 1-9 are due Friday morning, at 11:59am (just before Noon) for both on-campus and online students.
- **The capstone lab, lab 10, is required;** you will start in the middle of the semester, and you will have more than two weeks to work on it at the end of the semester...
note that the due date is typically in the *middle* of Week 15.
Check class web site and D2L for exact due dates.
- Tests 1, 2, and 3 are taken in D2L, and are timed, for both on-campus and online students.
- **IMPORTANT:** online students have the same deadline as the on-campus students, typically Tuesdays at noon.
Online have the option of doing the test early, but recall from the syllabus that I don't tolerate missed deadlines.

- **The final exam is required.** There are three parts to the final exam, one part is similar to Test 1, one part is similar to Test 2, etc. The on-campus students only get two hours to take all three parts of the final, so online students are expected to finish all three parts within two hours of starting the first portion.
- The college sets the schedule for when on-campus students must take the final. You are expected to finish your Final at the same time, though again, you may take the tests early.
Check class web site and D2L for exact due dates.

These rules are not arbitrary. After many years of teaching traditional and on-line classes, I know the best way to finish a class is not to get behind.

Finally, I have several lab periods on campus where students may drop by for help. You are always welcome to come to the lecture or drop in for lab if you are near campus. If not, please make sure you email me if you encounter any issues!

**Web Resources delivered via Brightspace, by D2L, our course web site.
I will just refer to this as D2L.**

FAQ

Announcements

Free software download links

Temple College Course Management: Brightspace (by D2L)

Tutorials on using D2L

and

Temple College Desire2Learn Login info

Temple College eMail

Using eMail

and

Temple College eMail Login info



Lab Procedures

General Lab Directions

Note: There is not enough time in lecture to cover all the material; read your book BEFORE you begin the lab

Note: Typically labs will require you to invest some time in the lab, outside of class lecture hours

•Note: Please read any related overview material before starting your lab
Check with your Instructor for due date, typically Friday, 11:59AM
(Check class web site announcements, or D2L)

• **NOTE:** Do NOT use CAPITAL letters OR spaces in file names.

•Most labs have 3 parts:

Part 1 (HTML tag & attribute documentation... how you use HTML to prepare you to do the lab activities) 30%,

Part 2 Web Page Activity (where you make web pages), 40%, and

Part 3 Hands On/Q&A, (questions about the lab activity) 30%

Typically, the Part 1 documentation and Part 3 'Hands On Q&A' grade is generated by taking one quiz based on questions presented in the book after you have completed the web page activity.

So, to get the best score, fill out the lab documentation and 'Hands On' items first. **Then** take the lab quiz in D2L.

You may, of course, submit electronic copies of all your notes along with your web pages, but I will not grade notes.

You MAY use any notes or resources you have when taking lab quizzes, and you may take as long as you want on the quiz, just don't **submit** the quiz until you are finished.

(You MAY use your book or notes when taking a major test, but not copies of prior tests... NOTE: tests are timed, and you won't have time to look up everything.)

Storage

Many students can benefit from owning a thumb drive, as floppy disks hold so little, and many new computers do not have floppy drives. Thumb drives are also known as jump drives, USB drives, etc.



TC Students may also store files on their network O:\ drive, which can be accessed over the Internet when off campus. Or, students using Desire2Learn may store files in their D2L Locker (See course web site for details.)

Plan B

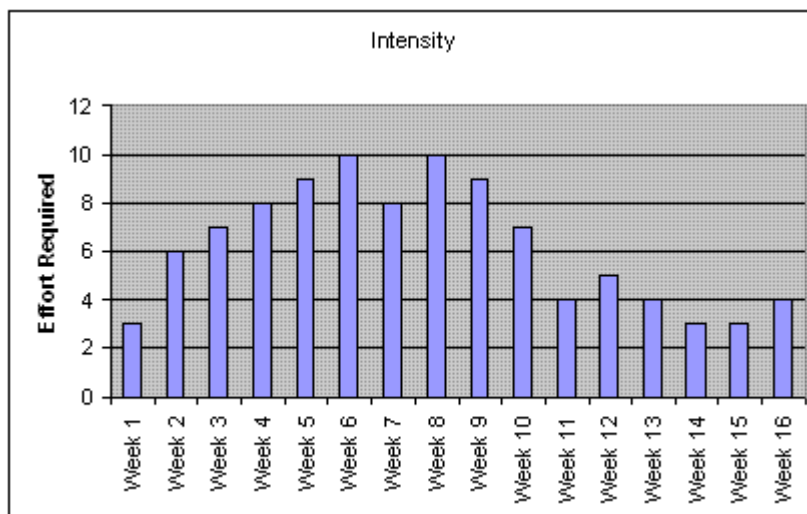
In order to complete this class, you need to use a computer. Have a backup plan in case your home computer crashes.

Assistance

Aside from office hours, and regular class time, I also will allow any student to drop into any traditional class I am teaching, if there are open seats. Most classes end with lab time, and I normally have scheduled lab-only hours for room WTC 522 (usually one afternoon and one evening a week), and I will work with any student on any subject during any of these lab times. Check my office hours (course web site) for details...

Planning your semester

This semester takes into account the normal highs and lows of a semester, and is basically front loaded... allowing for soak time and practice at the end of the semester, prior to the capstone events.



Note: Many web pages on class related sites open in separate windows... adjust your pop up blocker accordingly!

Teaching Style

REACT

- *Relate; see how things you already know apply to a new topic
- *Experience; guided activities to allow students to use the new knowledge
- *Apply; lab work to allows students to work on new material on their own
- *Cooperate; share knowledge during the learning phase
- *Transfer; take newly learned skills and set them to novel situations to verify learning occurred

Blooms Taxonomy

- *Level I: Knowledge (define)
- *Level II: Comprehension (summarize)
- *Level III: Application (use)
- *Level IV: Analysis (discover)
- *Level V: Synthesis (create)
- *Level VI: Evaluation (select or compare-contrast)

Pivotal Questions

Presents students with situation and asks them, based on other experiences, how the situation can be resolved... this way the student actually starts solving problems during the learning process.

Make Up Work

All material is due on a specified date, electronically submit the material if you cannot attend class. Late work may not be accepted, or may be heavily penalized.

A missed test grade is generated as a percentage of the relevant section of the Final Exam; the lowest test grade may be replaced by a percentage of a markedly improved relevant section of the Final.

Key to success in my classes

Attend classes, participate, and turning in your homework almost guarantees passing; test grades build on that success.

eLearning students and traditional students must check into D2L at least twice a week, and participate using the Discussions area of D2L.

The majority of my tests are short answer/fill in the blank, to ascertain what you have actually learned, to duplicate the real test before getting a job, the job interview.

Cheating prevents me from seeing what you are weak in, which prevents you from learning it. So, don't cheat, or break the rules.

Controlling File Names

Windows 7

Many computers are set up to hide known file extensions; this can be very confusing for computer students.

To set your computer to display the entire file name:

- Use Start to open My Computer or Windows Explorer

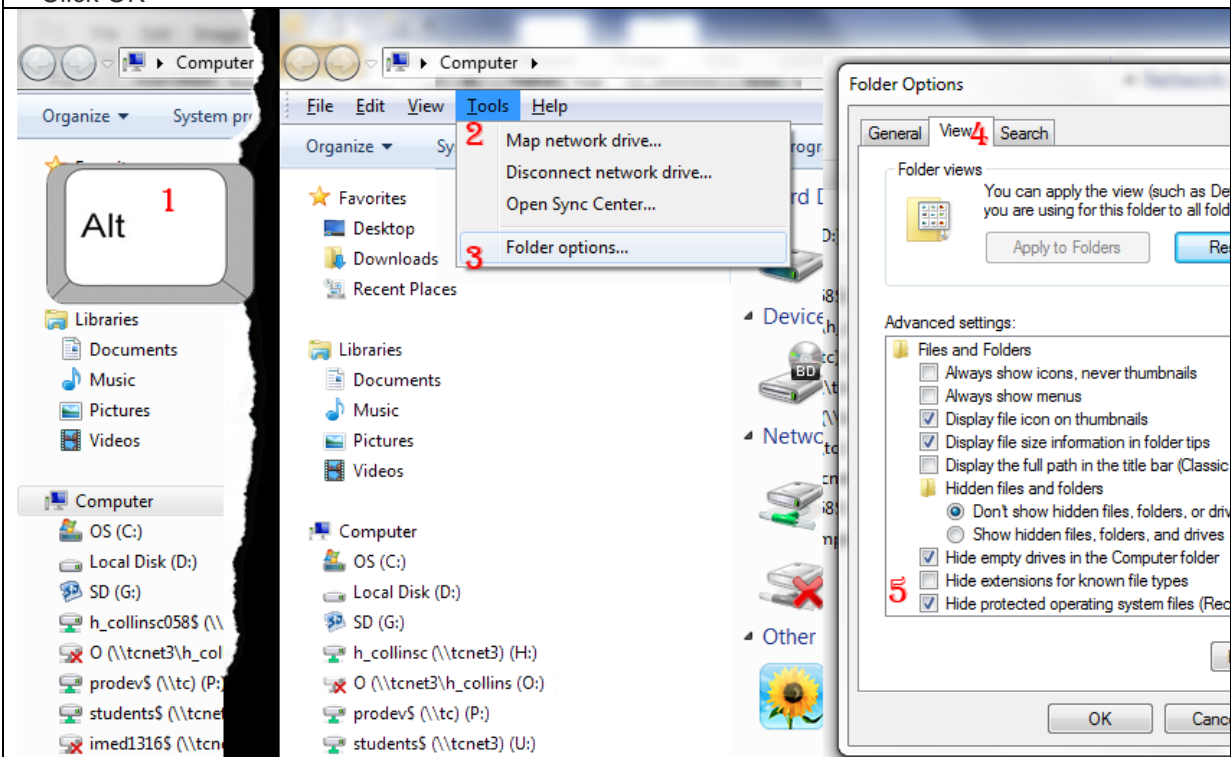
1 (Tap [Alt] key to reveal Tools, then select Folder Options)

2/3 Choose Tools\Folder Options...

4 Choose the View tab

5 **De-select** the check mark next to 'Hide extensions for known file types'

- Click OK

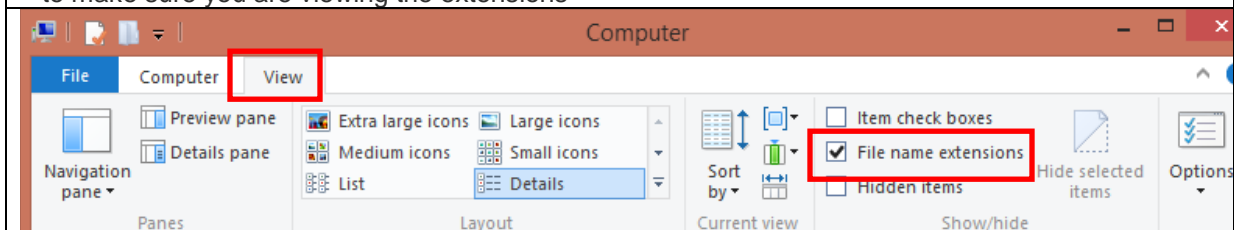


Windows 8 or 10

Many computers are set up to hide known file extensions; this can be very confusing for computer students.

To set your computer to display the entire file name:

- From Start, simply type File Explore or Computer
- Choose View tab
- On the right of the ribbon, Select File Name extensions to make sure you are viewing the extensions



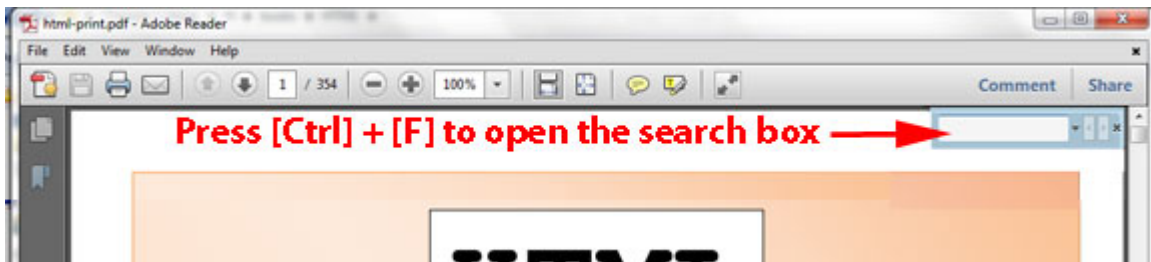
HTML and the Art of the Web Page- Campus Specific Orientation

Your notes:

INDEX

As there is an electronic version of this document that is searchable, there is no printed index.

Instead, open the pdf version, and use the Find feature (press [Ctrl] + [F] if you don't see Find on the right of the main menu)



HTML
and the *Art* of the
Web page
WORKBOOK

Why learn HTML?

HTML underlies almost all web pages, so the best way to learn about using the hottest web page editor is to understand what processes the editor is doing for you.

Further, many editors make incorrect assumptions or deliver unexpected results in web pages that need correcting; being able to manually fix or create or improve a web is a required skill.

Sample HTML Template

```
<html>
<head>
    <title> Title goes here </title>
    <!-- your name goes here -->
</head>

<body
  background=" "
  bgcolor=" "
  text=" "
  link=" "
  vlink=" ">

Stuff to display in the web page goes here

<br>
<a href=" " >clickable text for a link</a>
<br>

<br>

<br>

</body>
</html>
```

ISBN