

Internet Programming

Intermediate HTML

Dan Brandon, Ph.D., PMP

Special Characters

- Special Characters can be entered into an HTML document content by using the ISO 8859-1 standard (**Latin-1**)
- In the content, use an ampersand followed by either the “code name” or by a # then the “code number”; for example to insert the trademark symbol :
 - ®
 - ®

Special Characters (con't)

- ISO 8859 is a full series of 10 (and soon even [more](#)) standardized multilingual single-byte coded (8bit) graphic character sets for writing in alphabetic languages:
- [Latin1](#) (West European)
- [Latin2](#) (East European)
- [Latin3](#) (South European)
- [Latin4](#) (North European)
- [Cyrillic](#)
- [Arabic](#)
- [Greek](#)
- [Hebrew](#)
- [Latin5](#) (Turkish)
- [Latin6](#) (Nordic)

ISO-8859-1 (Latin1)

A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
	í	¢	£	¤	¥	¦	§	¨	©	ª	«	¬	­	®	¯
B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
°	±	²	³	´	µ	¶	·	¸	¹	º	»	¼	½	¾	¿
C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF
ø	ñ	õ	ö	ö	ö	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ

Special Characters (con't)

- The ISO 8859 charsets are not even remotely as complete as the truly great [Unicode](#) but they have been around and usable for quite a while (first [registered Internet charsets](#) for use with [MIME](#)) and have already offered a major improvement over the plain 7bit [US-ASCII](#)
- [Unicode](#) ([ISO 10646](#)) will make this whole chaos of mutually incompatible charsets superfluous because it unifies a superset of all established charsets and is out to cover all the world's languages. Only fully implemented in the latest browser versions:
 - `&#xyyy;` where `yyyy` is the hex unicode number
 - `సుసావగత` (Hello in Japanese)

http://unicode.org/

The Unicode Character Code Charts By Script

[SYMBOLS AND PUNCTUATION](#) | [NAME INDEX](#) | [HELP AND LINKS](#)

European Alphabets	African Scripts	Indic Scripts	East Asian Scripts	Central Asian Scripts
(see also Comb. Marks)	Ethiopic	Bengali	Han Ideographs	Kharoshthi
Armenian	Ethiopic	Devanagari	Unified CJK Ideographs (5MB)	Mongolian
Armenian	Ethiopic Supplement	Gujarati	CJK Ideographs Ext. A (2MB)	Phags-Pa
<i>Armenian Ligatures</i>	Ethiopic Extended	Gurmukhi	CJK Ideographs Ext. B (13MB)	Tibetan
Coptic	Other African scripts	Kannada	Compatibility Ideographs (.5MB)	
Coptic	N'Ko	Limbu	... Supplement (.5MB)	
<i>Coptic in Greek block</i>	Tifinagh	Malayalam	Kanbun	
Cyrillic	Middle Eastern Scripts	Oriya	(see also UniHan Database)	Ancient Scripts
Cyrillic	Arabic	Sinhala	Radicals and Strokes	Ancient Greek
Cyrillic Supplement	Arabic	Syloti Nagri	CJK Radicals	Ancient Greek Numbers
Georgian	Arabic Supplement	Tamil	KangXi Radicals	Ancient Greek Musical
Georgian	Arabic Presentation Forms A	Telugu	CJK Strokes	Cuneiform
Georgian Supplement	Arabic Presentation Forms B		Ideographic Description	Cuneiform
Greek	Hebrew	Philippine Scripts	Chinese-specific	Cuneiform Numbers
Greek	Hebrew	Buhid	Bopomofo	Old Persian
Greek Extended	<i>Hebrew Presentation Forms</i>	Hanunoo	Bopomofo Extended	Ugaritic
(see also Ancient Greek)	Syriac	Tagalog	Japanese-specific	Linear B
Latin	Syriac	Tagbanwa	Hiragana	Linear B Syllabary
Basic Latin	Thaana		Katakana	Linear B Ideograms
Latin-1	Thaana	South East Asian	Katakana Phonetic Ext.	Other Ancient Scripts
Latin Extended A	American scripts	Buginese	<i>Halfwidth Katakana</i>	Aegean Numbers
Latin Extended B	Canadian Syllabics	Balinese	Korean-specific	Counting Rod Numerals
Latin Extended C	Cherokee	Khmer	Hangul Syllables (4MB)	Cypriot Syllabary
Latin Extended D	Deseret	Khmer Symbols	Hangul Jamo	Gothic
Latin Extended Additional	Other Scripts	Lao	Hangul Compatibility Jamo	Old Italic
<i>Latin Ligatures</i>	Shavian	Myanmar	<i>Halfwidth Jamo</i>	Ogham
<i>Fullwidth Latin Letters</i>	Osmanya	New Tai Lue	Yi	Runic
Small Forms	Glagolitic	Tai Le	Yi (.6MB)	Phoenician
(see also Phonetic Symbols)		Thai	Yi Radicals	

To get a list of code charts for a character, enter its code in the search box at the top. To access a chart for a given block, click on its entry in the table. The charts are [PDF](#) files, and some of them may be very large. For frequent access to the same chart, right-click and save the file to your disk. For an alphabetical index of character and block names, use the [Unicode Character Names Index](#). For terms of use, conventions used in this

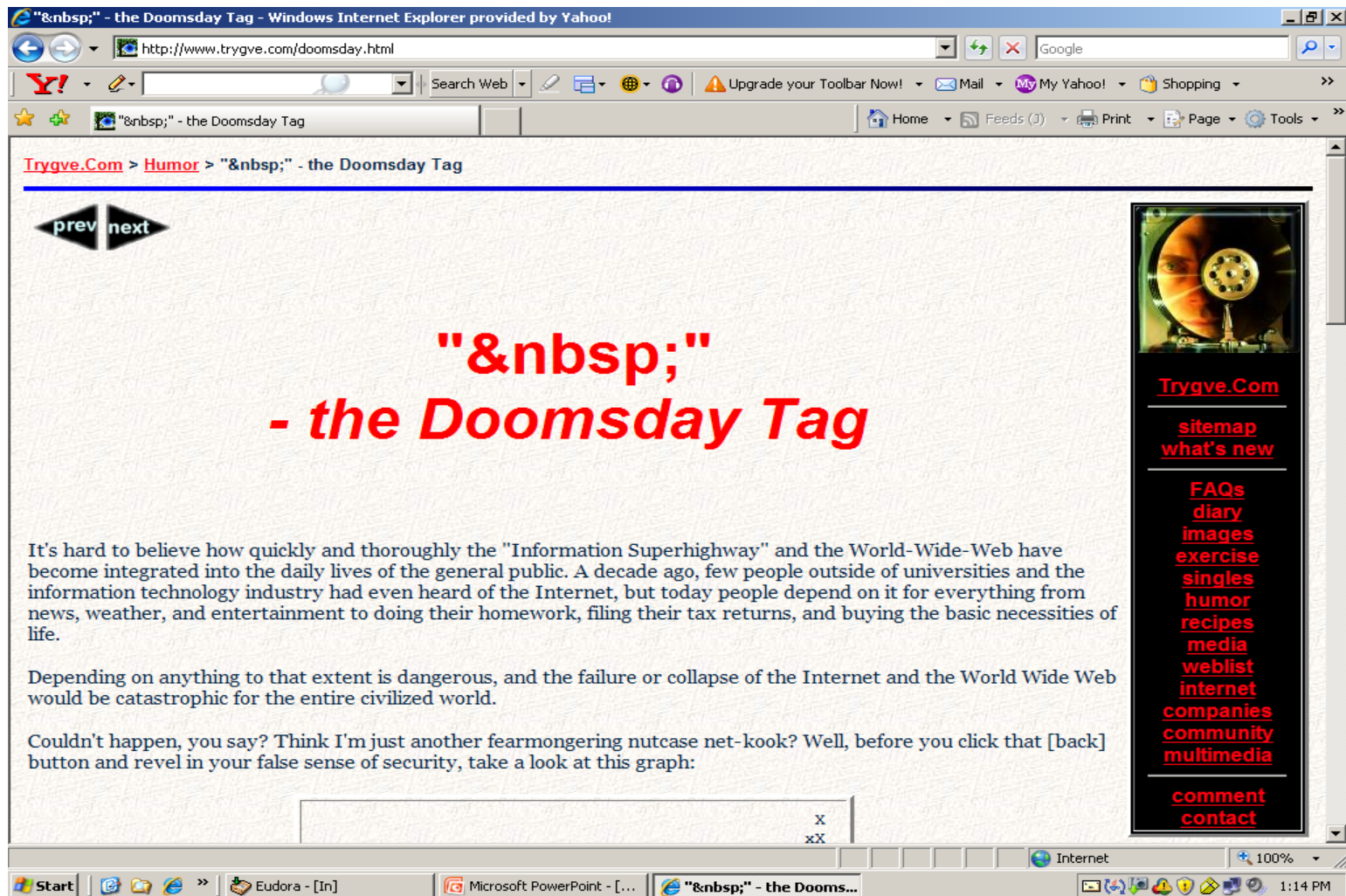
Spaces & Alignment

- Browsers will ignore additional spaces in content
- To retain extra spaces, you can use the special character ` ` (“non-breaking space”, ` `) or use the `<PRE>` tag which tells newer browsers not to remove extra space (note the PRE tag also forces mono spacing)
- However for much precise alignment use CSS & tables (discussed later)

()

- is the entity used to represent a non-breaking space. It is essentially a standard space, the primary difference being that a browser should not break (or wrap) a line of text at the point that this occupies.
- Many WYSIWYG HTML editors insert these entities in an effort to control the layout of the HTML document. For example, such an editor may use a series of non-breaking spaces to indent a paragraph like this:
 - `<P>`
 This first line of text is supposed to be indented. However, many browsers will not render it as intended.
`</P>`
- As the example mentions, some browsers will not, in fact, indent the text because of how that particular browser handles the entity. Some browsers collapse multiple, concurrent non-breaking spaces into a single space. This sometimes happens, even if there are regular spaces separating the consecutive entities. So keep in mind that this "technique" can not be relied on.
- There are some times when it is "acceptable" or "advisable" to use the entity so long as the consequences are understood:
- It's intended use of creating a space between words or elements that should not be broken. The only problems that can be associated with this use is that too many words strung together with non-breaking spaces may require some graphical browsers to show horizontal scrollbars or cause them to display the text overlapping table borders.
- If you need to have an empty table cell, it is often advised that you add a non-breaking space like `<TD> </TD>`. This is because some versions of Netscape seem to have problems with completely empty table cells.
- Indentation. It is generally discouraged to use a non-breaking space, or a series of non-breaking spaces to "force" an indentation. This practice is discouraged for two primary reasons. First, not all browsers handle the entity properly and may in fact ignore it when rendering the document. Second, the practice of trying to "force" a specific presentation is often frowned upon as it tends to fail and/or makes it more difficult for some readers whose browsers may be configured differently from your own.

Find at Amazon.com !



Editing Elements

- `ins` and `del` handle editing changes
- `ins` element:
 - Indicates inserted text
 - Typical browser display – underlined (as indicated by the HTML5 standard's "typical default display properties")
 - However, it's up to each browser vendor to determine an element's presentation when it's rendered
 - *Presentation* refers to the appearance and format of the displayed element
 - You can assume that browsers will display the text with an appropriate appearance, but that appearance might be different for different browsers

Editing Elements (con't)

- `del` element:
 - Indicates deleted text
 - Typical browser display – strikethrough
- For a quick demonstration of how an element works, go to the W3Schools' HTML5 tag reference page at <http://www.w3schools.com/tags>, click the relevant tag, and then click the "Try it yourself" link

q and cite Elements

■ q element:

- A quote that is to be rendered within the flow of surrounding text
- Typical browser display – insert surrounding quotes

■ Example:

<p>

In 1937, President Franklin Roosevelt stated

<q>The test of our progress is not whether we add more to the abundance of those who have much it is whether we provide enough for those who have little.</q>

<cite>Inaugural Addresses of the Presidents of the United States: from George Washington to Donald Trump</cite>

</p>

CITE Tag and Attribute(con't)

- When you display quoted text, if the text comes from a “work,” you should cite the work’s title using the `cite` element:
 - The W3C states that a work is a “book, paper, essay, poem, score, song, script, film, TV show, game, sculpture, painting, theater production, play, opera, musical, exhibition, legal case report, or other such work.”
- Typically, browsers display a `cite` container’s text with italics
- The purpose of the HTML `cite attribute` is to specify the URL which points to the source document or message
 - `<blockquote cite="value">.....</blockquote>`

CITE Tag and Attribute(con't)

- ❑ What is the difference between the `cite` element and the `cite` attribute?
 - ❑ The `cite` element is for a cited work, like a book title, whereas the `cite` attribute is strictly for a URL value
 - ❑ Browsers display the content in a `cite` element, whereas browsers do not display the content in a `cite` attribute

dfn Element

- **dfn** element:
 - Stands for "defining instance"
 - Indicates a word or expression that is to be defined
 - Typical browser display – italic
- **That element is often later manipulated via JavaScript**
- **Example** dfn element:

```
<p>  
  A <dfn>tooltip</dfn> is a pop-up box that provides  
  information  
  about the item that the mouse is hovering over.  
</p>
```

time Element

- `time` element:
 - Indicates a date or time
 - Typical browser display – default, same as surrounding text
- The `time` element's `datetime` attribute:
 - It provides a date and/or a time value in a format that JavaScript can understand (so you can manipulate the date/time value if there is a need to do so)
 - The most common date format is yyyy-mm-dd
 - The most common time format is hh:mm
- Examples:
 - `<time datetime="2019-10-01">Tuesday, October 1</time>`
 - `<time datetime="04:00">4 am</time>`
- Browsers do not display the `datetime` attribute's value, so normally you should include a date or time value between the start and end tags, as shown above

time Element (con't)

- To see all the date and time formats allowed for the `time` element's `datetime` attribute, go to the HTML5 standard's `time` element page (<https://www.w3.org/TR/html51/textlevel-semantics.html#the-time-element>)
- Unfortunately, that web page is rather complicated, so feel free to just rely on the `yyyy-mm-dd` and `hh:mm` formats shown earlier
- It's legal to omit the `datetime` attribute, but if you do so, the `time` element's enclosed content must use one of the formats prescribed in the HTML5 standard; for example:

```
<time>1967-07-15</time>
```

```
<time>08:00</time>
```

abbr Element

- **abbr element:**
 - Indicates an abbreviation or acronym
- **Example abbr element:**

```
<p>
  This year's
  <abbr title="World Wide Web Consortium">W3C</abbr>
  barbeque fundraiser is scheduled for
  <time datetime="12:00">noon</time> on
  <time datetime="2018-09-28">Friday, September 28</time>.
  Grillmaster Tim Berners-Lee will be flipping burgers.
</p>
```

- **The abbr element's title attribute:**
 - It provides the expanded text that the abbreviation represents
 - Typical browser display – **show the title value as a tooltip**

Code-Related Elements

- `code` element
 - Indicates programming code
 - Typical browser display – monospace
- `kbd` element
 - Indicates input for a program
 - Typical browser display – monospace
- `samp` element
 - Indicates output from a program
 - Typical browser display – monospace
- `var` element
 - Indicates a programming or math variable
 - Typical browser display – italic

sup, sub, and s Elements

■ sup element:

- Indicates a superscript
- Typical browser display – smaller font, slightly raised

■ sub element:

- Indicates a subscript
- Typical browser display – smaller font, slightly lowered

■ s element:

- Indicates contents that are no longer accurate or no longer relevant; with old versions of HTML, s was used to show stricken text for editing purposes, but the W3C now says s is not for editing
- Typical browser display – line-through

Grouping Elements

Element	Description
<code>blockquote</code>	Contains content that is quoted from another source, often with a citation and often indented on the page
<code>div</code>	Contains a generic grouping of elements within the document
<code>dl</code>	Marks a description list containing one or more <code>dt</code> elements with each followed by one or more <code>dd</code> elements
<code>dt</code>	Contains a single term from a description list
<code>dd</code>	Contains the description or definition associated with a term from a description list
<code>figure</code>	Contains an illustration, photo, diagram, or similar object that is cross-referenced elsewhere in the document
<code>figcaption</code>	Contains the caption associated with a figure
<code>hr</code>	Marks a thematic break such as a scene change or a transition to a new topic (often displayed as a horizontal rule)
<code>main</code>	Marks the main content of the document or application; only one main element should be used in the document
<code>ol</code>	Contains an ordered list of items
<code>ul</code>	Contains an unordered list of items
<code>li</code>	Contains a single item from an ordered or unordered list
<code>p</code>	Contains the text of a paragraph
<code>pre</code>	Contains a block of preformatted text in which line breaks and extra spaces in the code are retained (often displayed in a monospace font)

Block Quotes

- To indent a section of text you can use the block quotes tags:
 - `<blockquote>`
 - ...some text to be indented...
 - `</blockquote>`
- Within the block quote you still can use the paragraph and line break tags, and all other formatting tags

Lists

- Lists can be ordered (with numbers or letters) or can be unordered (with bullets)
- Ordered lists use the tag `<ol>` & `</ol>`, four types of symbols can be used (and you can use `Start=`)
 - `type=1`
 - `type=A`
 - `type=a`
 - `type=i`
- Unordered lists use `<ul>` & `</ul>`, three types of bullet symbols are available:
 - `type=disc`
 - `type=circle`
 - `type=square`

Lists (con't)

- For each item in the list, use `<li>`
- Example:
 - `<ol type=1 start=10>`
 - `<li>`Item
 - `<li>`Another item
 - `<li>`And still another item
 - `</ol>`

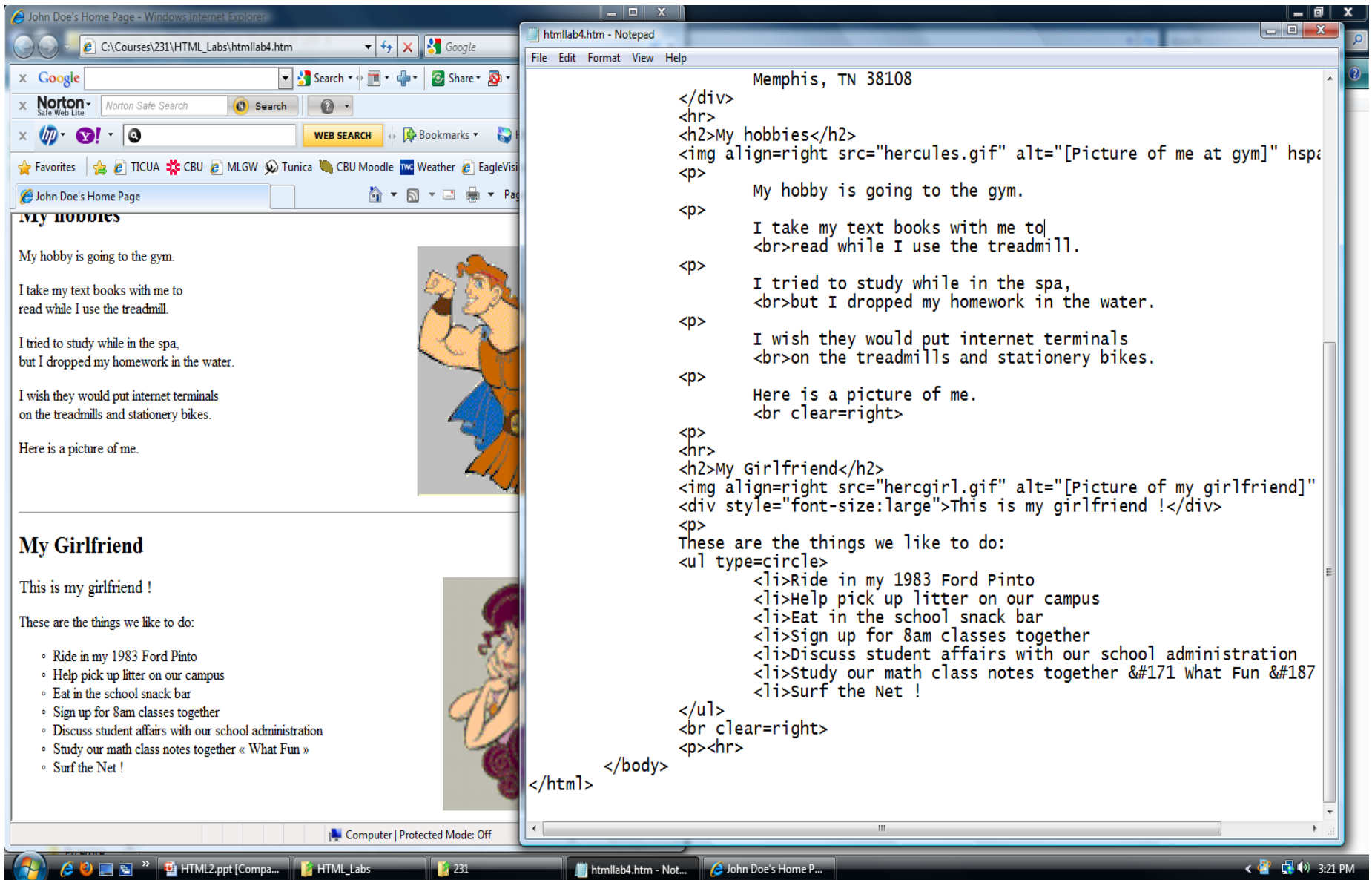
Glossary Lists

- Use glossary's for lists that have two parts
- The glossary is enclosed by `<dl>` and `</dl>`
- Each term is initiated by `<dt>`
- Then the definition is initiated by `<dd>`
 - `<dl>`
 - `<dt>Term1<dd>Definition1`
 - `<dt>Next Term<dd>Next Definition`
 - `</dl>`

Lab 4

- Add another section to your homepage, perhaps about your best friend or spouse/girlfriend/boyfriend or some other topic of interest to you
- Use a list in this new section
- Use some special characters in this new section
- Example →

Example Lab 4



Tables

- Tables can be used to organize information in a grid fashion
- The cells of the table can contain any type of information
- The use of tables within tables (nesting) may have some limitations in older browsers
- There are three parts to a table
 - Caption
 - Headings
 - Cells

Tables (con't)

- Create the entries in your table cells one at a time from the top left to the bottom right
- Each cell must have something in it, even it is just a space
- Start the table with the tag `<table>` which can optionally have a border and alignment:
 - `<table border align=right>`
- Borders can also be sized: `border=2`

Tables (con't)

- Next add a caption:
 - `<caption align=top>My Pets</caption>`
- Each row starts with the tag `<tr>` and ends with `</tr>`
- Each heading column starts with the tag `<th>` and ends with `</th>`
 - Both columns and rows can have headings
- Each non heading column starts with the tag `<td>` and ends with `</td>`

Tables (con't)

- You can control the width of the overall table and each column
- Widths can be specified in pixels or relative to the browser window width (in %)
- Example:
 - `<table border width=400>`
 - `<caption align=top>My Pets</caption>`
 - `<tr>`
 - `<th width=40%>Name</th><th width=60%>Type</th>`
 - `</tr>`

Example Simple Table

■ Example:

- `<table border>`
- `<caption align=top>My Pets</caption>`
- `<tr>`
- `<th>Name</th><th>Type</th>`
- `</tr>`
- `<tr>`
- `<td>Sam</td><td>Dog</td>`
- `</tr>`
- `<tr>`
- `<td>Dave</td><td>Cat</td>`
- `</tr>`
- `</table>`

Default Cell Formats

- Default formats:

- Header cells

- Contains content placed at the top of a column or beginning of a row
 - By default, displays text in bold and centers text horizontally
 - Marked using the `th` element

- Data cells

- Contains content within columns or rows
 - By default, displays text as unformatted text and is aligned to the left within the cell
 - Marked using the `td` element

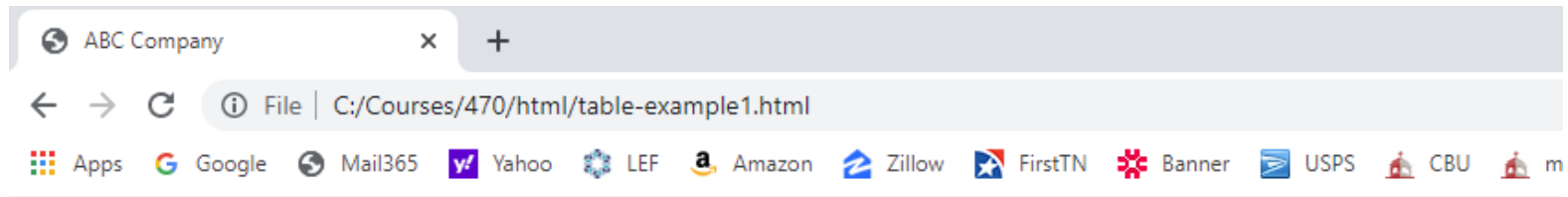
Default Cell Formats (con't)

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>ABC Company</title>
  </head>
  <body>
    <h1 style="text-align:center">ABC Product Sales</h1>

    <table border width=400>
      <caption align=top><h2>Product Sales by Type and Color</h2></caption>
      <tr>
        <th>Product</th><th>Red</th><th>Green</th><th>Blue</th><th>Total</th>
      </tr>
      <tr>
        <th align="left">Pens</th><td align="center">11</td><td align="center">12</td><td align="center">6</td><td align="center">29</td>
      </tr>
      <tr>
        <th align="left">Pencils</th><td align="center">8</td><td align="center">5</td><td align="center">3</td><td align="center">16</td>
      </tr>
      <tr>
        <th align="left">Erasures</th><td align="center">21</td><td align="center">41</td><td align="center">9</td><td align="center">34</td>
      </tr>
      <tr>
        <th align="right">Total</th><td align="center">40</td><td align="center">21</td><td align="center">18</td><td align="center">79</td>
      </tr>
    </table>
  </body>
</html>
```

Default Cell Formats (con't)

- Both row and column headings, default bold and centered



ABC Product Sales

Product Sales by Type and Color

Product	Red	Green	Blue	Total
Pens	11	12	6	29
Pencils	8	5	3	16
Erasures	21	41	9	34
Total	40	21	18	79

Tables (con't)

- Cells can span more than one row or column (but it is best to start out with simple tables)
- If a cell is to span more than one column, then use the 'Colspan=' argument in the TH tag set
- If a cell is to span more than one row, then use the 'Rowspan=' argument in the TD tag set
- You can control the alignment of information within an entire row of cells by putting the 'align=' argument in the TR tag set
- You can control the alignment of individual cells by putting the 'align=' argument in the TH or TD tag sets

Tables (con't)

- You can give table borders and grids special 3D like and other effects by using the border, cellpadding (space between table cell contents and cell borders), and cellspacing (border around/between cells) properties; for example:
 - `<table border="7" cellpadding="6" cellspacing="6">`
- Combine this with particular background colors for inside tables for best effects:
 - `<td align=center bgcolor=#.....>`

Using CSS for Table Borders

- One can also use CSS to style a table and its borders
- The CSS `border` property is used to add borders to any part of a web table
- Borders need not be of the same style
- Two style choices for borders
 - Separate borders
 - Collapsed borders

A	B	C
D	E	F
G	H	I

separate borders

A	B	C
D	E	F
G	H	I

collapsed borders

Using CSS for Table Borders (con't)

- To choose between separate or collapsed borders model apply the following property to the `table` element:

`border-collapse: type;`

where `type` is either `separate` or `collapse`

- The separate borders model sets the spacing between borders using:

`border-spacing: value`

where `value` is in CSS units of measure

- Borders from adjacent elements are merged to form a single border
- Borders are joined to combine their features

Using CSS for Table Borders (con't)

- Five rules to reconcile the differences between adjacent borders
 - If either border has a style of `hidden`, the collapsed border is hidden
 - Border style of `none` is overridden by another border style
 - The style of wider border takes priority over the narrower border if neither border is hidden
 - Double borders have higher precedence followed by solid, dashed, ridge, outset, groove and inset
 - If borders differ only in color, precedence is given to borders

Using CSS for Table Borders (con't)

in the separate borders model, the border around the table is hidden and the border around each cell is shown in blue

separate borders

A	B	C
D	E	F
G	H	I

```
table {border-style: hidden;
       border-collapse: separate;}
td    {border: 1px solid blue;}
```

in the collapsed borders model, the hidden border around the table takes precedence over the blue borders for individual cells

collapsed borders

A	B	C
D	E	F
G	H	I

```
table {border-style: hidden;
       border-collapse: collapse;}
td    {border: 1px solid blue;}
```

Using CSS for Table Borders (con't)

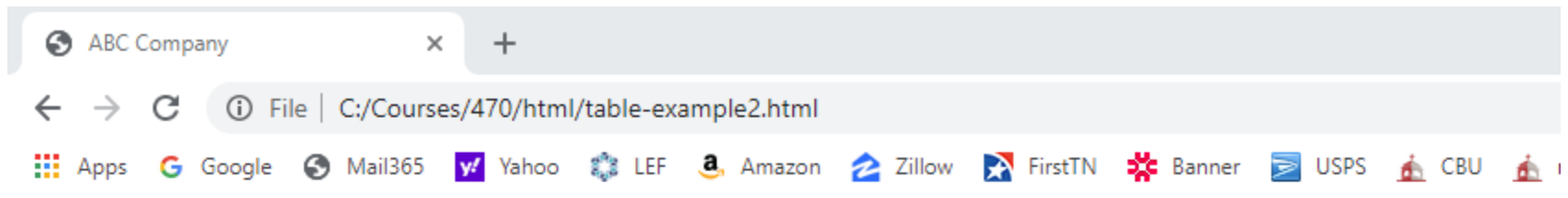
table-example2.html - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>ABC Company</title>
    <style type="text/css">
      table.sample {
        border-width: 5px; border-spacing: 2px; border-style: outset; border-color: gray; border-collapse: separate; background-color: white;
      }
      table.sample th {
        border-width: 1px; padding: 1px; border-style: inset; border-color: gray; background-color: white; -moz-border-radius: ;
      }
      table.sample td {
        border-width: 1px; padding: 1px; border-style: inset; border-color: gray; background-color: white; -moz-border-radius: ;
      }
    </style>
  </head>
  <body>
    <h1 style="text-align:center">ABC Product Sales</h1>
    <table class="sample" width=400>
      <caption align=top><h2>Product Sales by Type and Color</h2></caption>
      <tr>
        <th>Product</th><th>Red</th><th>Green</th><th>Blue</th><th>Total</th>
      </tr>
      <tr>
        <th align="left">Pens</th><td align="center">11</td><td align="center">12</td><td align="center">6</td><td align="center">29</td>
      </tr>
      <tr>
        <th align="left">Pencils</th><td align="center">8</td><td align="center">5</td><td align="center">3</td><td align="center">16</td>
      </tr>
      <tr>
        <th align="left">Erasures</th><td align="center">21</td><td align="center">41</td><td align="center">9</td><td align="center">34</td>
      </tr>
      <tr>
        <th align="right">Total</th><td align="center">40</td><td align="center">21</td><td align="center">18</td><td align="center">79</td>
      </tr>
    </table>
  </body>
</html>
```



Using CSS for Table Borders (con't)



ABC Product Sales

Product Sales by Type and Color

Product	Red	Green	Blue	Total
Pens	11	12	6	29
Pencils	8	5	3	16
Erasures	21	41	9	34
Total	40	21	18	79

Table Styling Wizard

[<http://www.somacore.com/p141.php>]

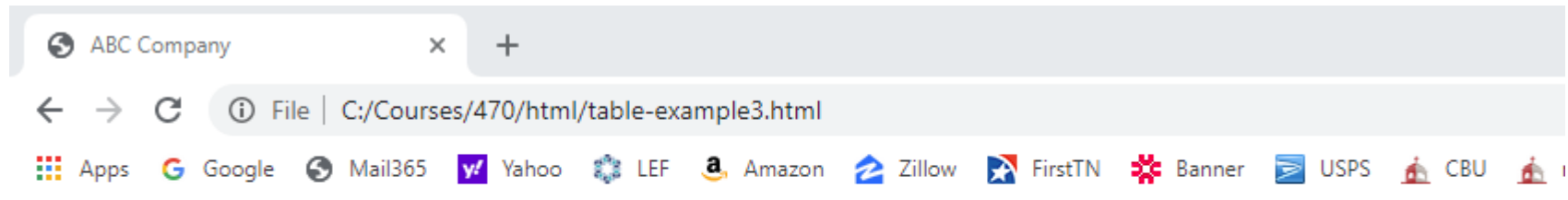
TABLE										
border-width (px)	1px	2px	3px	4px	5px	thin	medium	thick	0px	
border-spacing	2px	1px	3px	4px	5px	0px				
border-style	outset	none	hidden	dotted	dashed	solid	double	ridge	groove	inset
border-color	gray	white	blue	green	black	red	custom:			
border-collapse	separate	collapse								
background-color	white	#FFFFFF0	#FAF0E6	#FFF5EE	#FFFAFA	custom:				

TD/TH										
border-width (px)	1px	2px	3px	4px	5px	thin	medium	thick	0px	
padding	1px	2px	3px	4px	5px	0px				
border-style	inset	none	hidden	dotted	dashed	solid	double	ridge	groove	outset
border-color	gray	white	blue	green	black	red	custom:			
background-color	white	#FFFFFF0	#FAF0E6	#FFF5EE	#FFFAFA	custom:				
-moz-border-radius	0px	3px	6px	9px	12px					

Row and Column Groups

- You can also specify the number of columns in the TABLE tag which will allow the browser to download the full table faster:
 - `<table border=6 cellpadding=3 width=90% cols=5>`
- You can group table rows into header, footer, and body sections using the **THEAD, TBODY, and TFOOT** tags
- Thus a different style can be set for each row group
- THEAD tag and data should come before TBODY data
- Column grouping uses the COLGROUP tag

Row and Column Groups (con't)



ABC Product Sales

Product Sales by Type and Color

Product	Red	Green	Blue	Total
Pens	11	12	6	29
Pencils	8	5	3	16
Erasures	21	41	9	34
Total	40	21	18	79

Row and Column Groups (con't)

table-example3.html - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <meta charset="utf-8">
```

```
    <title>ABC Company</title>
```

```
    <style type="text/css">
```

```
      table.sample thead{background: rgb(153,0,153); color:white}
```

```
      table.sample tfoot{background: black; color:white}
```

```
    </style>
```

```
  </head>
```

```
  <body>
```

```
    <h1 style="text-align:center">ABC Product Sales</h1>
```

```
    <table border class="sample" width=400>
```

```
      <caption align=top><h2>Product Sales by Type and Color</h2></caption>
```

```
      <thead>
```

```
        <tr>
```

```
          <th>Product</th><th>Red</th><th>Green</th><th>Blue</th><th>Total</th>
```

```
        </tr>
```

```
      </thead>
```

```
      <tbody>
```

```
        <tr>
```

```
          <th align="left">Pens</th><td align="center">11</td><td align="center">12</td><td align="center">6</td><td align="center">29</td>
```

```
        </tr>
```

```
        <tr>
```

```
          <th align="left">Pencils</th><td align="center">8</td><td align="center">5</td><td align="center">3</td><td align="center">16</td>
```

```
        </tr>
```

```
        <tr>
```

```
          <th align="left">Erasures</th><td align="center">21</td><td align="center">41</td><td align="center">9</td><td align="center">34</td>
```

```
        </tr>
```

```
      </tbody>
```

```
      <tfoot>
```

```
        <tr>
```

```
          <th align="right">Total</th><td align="center">40</td><td align="center">21</td><td align="center">18</td><td align="center">79</td>
```

```
        </tr>
```

```
      </tfoot>
```

```
    </table>
```

```
  </body>
```

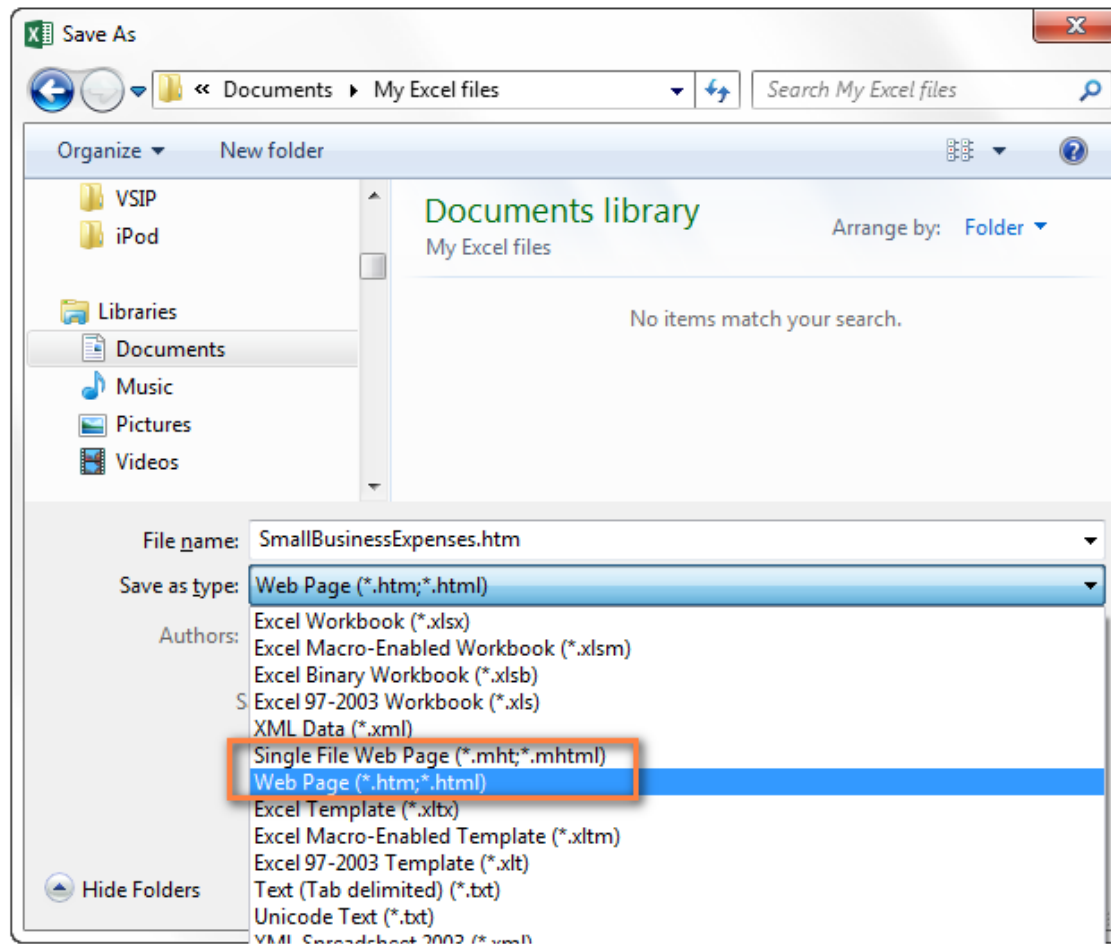
```
</html>
```



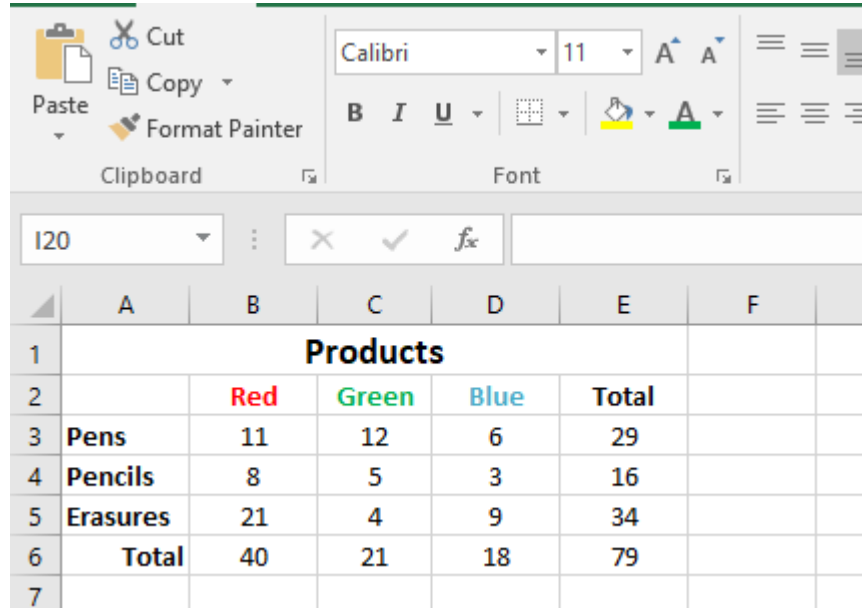
Page Layout

- Tables can be used to define the layout of your entire page, so that you have more control over where everything goes
- This is the older method of web page layout
- However with modern HTML versions, CSS (Cascading Style Sheets) are supported which provides another way to accomplish this

Excel to HTML



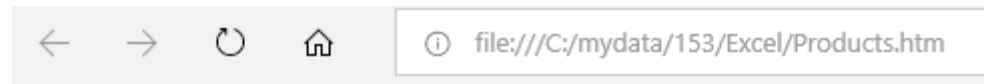
Excel to HTML (con't)



The screenshot shows the Microsoft Excel interface. The ribbon includes the 'Clipboard' group with 'Cut', 'Copy', 'Paste', and 'Format Painter' buttons, and the 'Font' group with 'Calibri' font, size '11', and bold, italic, underline, and color options. The formula bar shows 'I20'. The table below is as follows:

	A	B	C	D	E	F
1	Products					
2		Red	Green	Blue	Total	
3	Pens	11	12	6	29	
4	Pencils	8	5	3	16	
5	Erasures	21	4	9	34	
6	Total	40	21	18	79	
7						

Builds very complex HTML;
Unnecessarily complex
Third party tools (TABLEIZER)
also available



Products				
	Red	Green	Blue	Total
Pens	11	12	6	29
Pencils	8	5	3	16
Erasures	21	4	9	34
Total	40	21	18	79

Table Tutorial



CSS Table Layouts

- One can use CSS to arrange other content (as paragraphs, lists, etc.) into a table like display

Display Style	Equivalent HTML Element
<code>display: table;</code>	table (treated as a block-level element)
<code>display: table-inline;</code>	table (treated as an inline element)
<code>display: table-row;</code>	tr
<code>display: table-row-group;</code>	tbody
<code>display: table-header-group;</code>	thead
<code>display: table-footer-group;</code>	tfoot
<code>display: table-column;</code>	col
<code>display: table-column-group;</code>	colgroup
<code>display: table-cell;</code>	td or th
<code>display: table-caption;</code>	caption

Lab 5

- Add another section to your home page
- In that section use a table

John Doe's Home Page - Windows Internet Explorer

htmlab5.htm - Notepad

```
<p>
  Here is a picture of me.
<br clear=right>
</p>
<hr>
<h2>My Girlfriend</h2>
This is my girlfriend !</div>
<p>
These are the things we like to do:
<ul type=circle>
  <li>Ride in my 1983 Ford Pinto
  <li>Help pick up litter on our campus
  <li>Eat in the school snack bar
  <li>Sign up for 8am classes together
  <li>Discuss student affairs with our school administration
  <li>Study our math class notes together &#171 What Fun &#187
  <li>Surf the Net !
</ul>
<br clear=right>
<p><hr>
<h2>My Pets</h2>
<p>
<table border width=400>
  <caption align=top>Pet Types and Names</caption>
  <tr>
    <th width=40%>Name</th><th width=60%>Type</th>
  </tr>
  <tr>
    <td>Fred</td><td>Pigeon</td>
  </tr>
  <tr>
    <td>Alice</td><td>Skunk</td>
  </tr>
  <tr>
    <td>Mike</td><td>Aligator</td>
  </tr>
</table>
<p><hr>
</body>
</html>
```

Here is a picture of me.

My Girlfriend

This is my girlfriend !

These are the things we like to do:

- Ride in my 1983 Ford Pinto
- Help pick up litter on our campus
- Eat in the school snack bar
- Sign up for 8am classes together
- Discuss student affairs with our school administration
- Study our math class notes together « What Fun »
- Surf the Net !

My Pets

Name	Type
Fred	Pigeon
Alice	Skunk
Mike	Aligator

Done Computer | Protected Mode: Off 10:56 AM

Hypertext Links

- Links are the key to “non-linear” navigation of Internet information
- You can set up links from one point in a document to another
- You can set up links to other documents of yours
- You can set up links to another document anywhere
- Links can be set up from text (words) or images

Text Links

- By clicking on a text link a person follows a pointer to another place
- The text link shows up in another color, and most browsers change the color of the text link after you click on it once
- Links use the `<a>` tag set – “anchor”
- To link to another document use the HREF argument:
 - `<a href="MyDoc2.html">Click here for Doc 2</a>`

URL's

- The Universal Resource Locator indicates the location of a document (file); URL's are case sensitive
- A complete URL includes:
 - Service/protocol (“http” for web pages)
 - Server domain/DNS name
(://www.myCompany.com)
 - Port (optional; :80 for most servers)
 - Directory path (if not given, a “default page name” will be used)
 - Optional query string (for searches or form data)

URL's (con't)

- There are two types of paths:
 - Absolute - a complete path description
 - Relative - specifies location relative to where the current document is
- Absolute paths:
 - `http://www.cbu.edu/~jdoe`
 - `http://www.asu.edu/user/jodie/welcome.html`
- Relative paths:
 - `filename.html` [file is in same directory]
 - `otherdir/filename.html` [file is in a subdirectory "otherdir"]
 - `../otherdir/filename.html` [go up a directory, then go to otherdir]

Links within Documents

- Links can take you to other places within your same document
- You have to set up the link using a label (or anchor) name:
 - `<a href="#mylabel">Click here to go there</a>`
- The label (anchor) is specified with the NAME argument:
 - `<a name="mylabel">...</a>`

Links within Documents (con't)

- Anchor example:

- `<h3 align=center><a name="DEMO">Demographic Info</a></h3>`

- Try not to insert other tags within an anchor tag

- To link to a specific anchor in another document:

- `<a href="myDoc2.html#myCars">Click here to see my cars</a>`

“Legality” of Linking

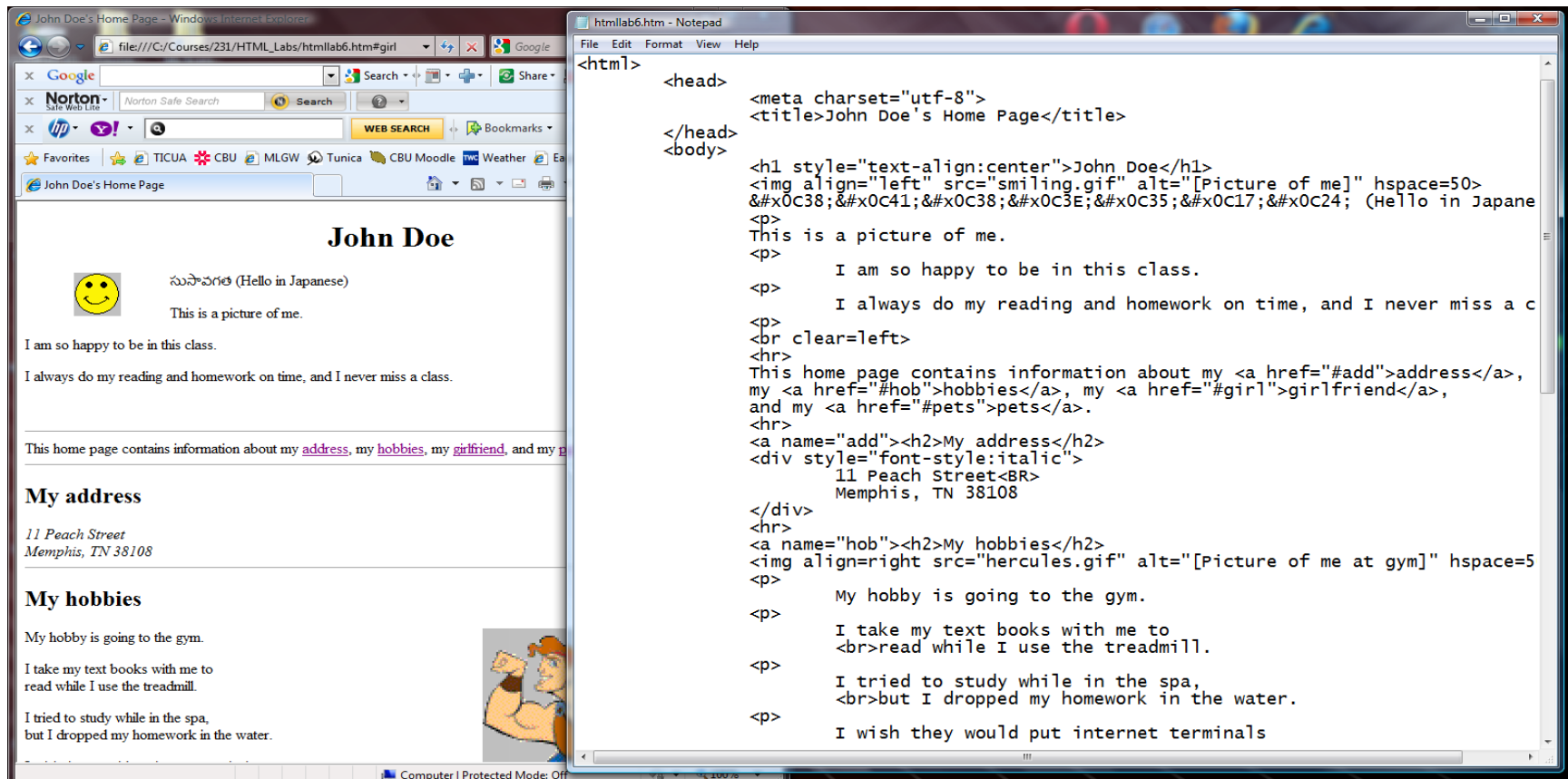
- In the early days of the web, sites freely linked to one another
- Linking that looks like information sharing, recommendations, or commentary is still generally OK
- Linking that looks like a misappropriation or deceptive presentation of someone else’s content is not OK
- Another problem is with “**deep linking**” (not linking to the home page of another company); this is the cause of many lawsuits, particularly where multimedia is concerned !
- Today one must be very careful, and it is best to get permission when linking to another company on a commercial web site

Opening up a New Window for Links

- You can leave your current page on the screen and open up links in a new window:
 - `<a href="myLink.html" target="_blank">Click here to link</a>`
- To open up all links in one new window (instead of a new window for each link), give the target window a specific name:
 - `<a href="myLink.html" target="myWindow">Click here to link</a>`

Lab 6

- Set up hypertext links in the top of your home page to go to the other sections



Graphic Links

- You can also make your image act like links
- Just define the image tags within the link tags:
`<a href=...><img=...></a>`
- Example:
 - `<a href="../../Jane/JaneDoe.html"></a>`

Image Borders

- Browsers normally display 'borders' around image links and not around images that are not links
- You can override this with the 'Border' argument:
 - ``
- Borders are measured in pixels
- Note that you may confuse users by changing the expected defaults

E-Mail Link

- Most browsers can send e-mail
- You can place a link in your home page to the browsers e-mail window:
 - `<a href="mailto:jdoe@mail.cbu.edu">Click here to send me e-mail</a>`
- Note that you will not be able to test this out locally (unless you configure the email address of you browser); later when your page is on the server, this will work

Adding Email Subject & Body

- `<a style="color: blue; text-decoration: underline;" shape="rect"`
- `href="mailto:jdoe@xyz.edu`
- `?subject=I%20downloaded%20the%20Homework%20Case%20Study&`
- `body=Professor%2C%20letting%20you%20know%20that%20I%20downloaded%20the%20Homework%20case%20study."`
- `linktype="2" target="_blank">jdoe@xyz.edu.</a>`

FTP and Making Files Available for Download

- Most browsers can automatically invoke ftp
- You can also place a link in your home page to download a file :
 - `<a href="http://http.xyz.edu/home/jdoe/WWW/myFile.doc">Click here to download a copy of this word document</a>`
- Some browsers will give you an option to download the file or open it up in a program (specified by matching file suffix)

Telnet

- To have a link to open up a telnet session with a server:

- `<a href="telnet://sheba.cbu.edu">Log onto Sheba</a>`

Link Protocols

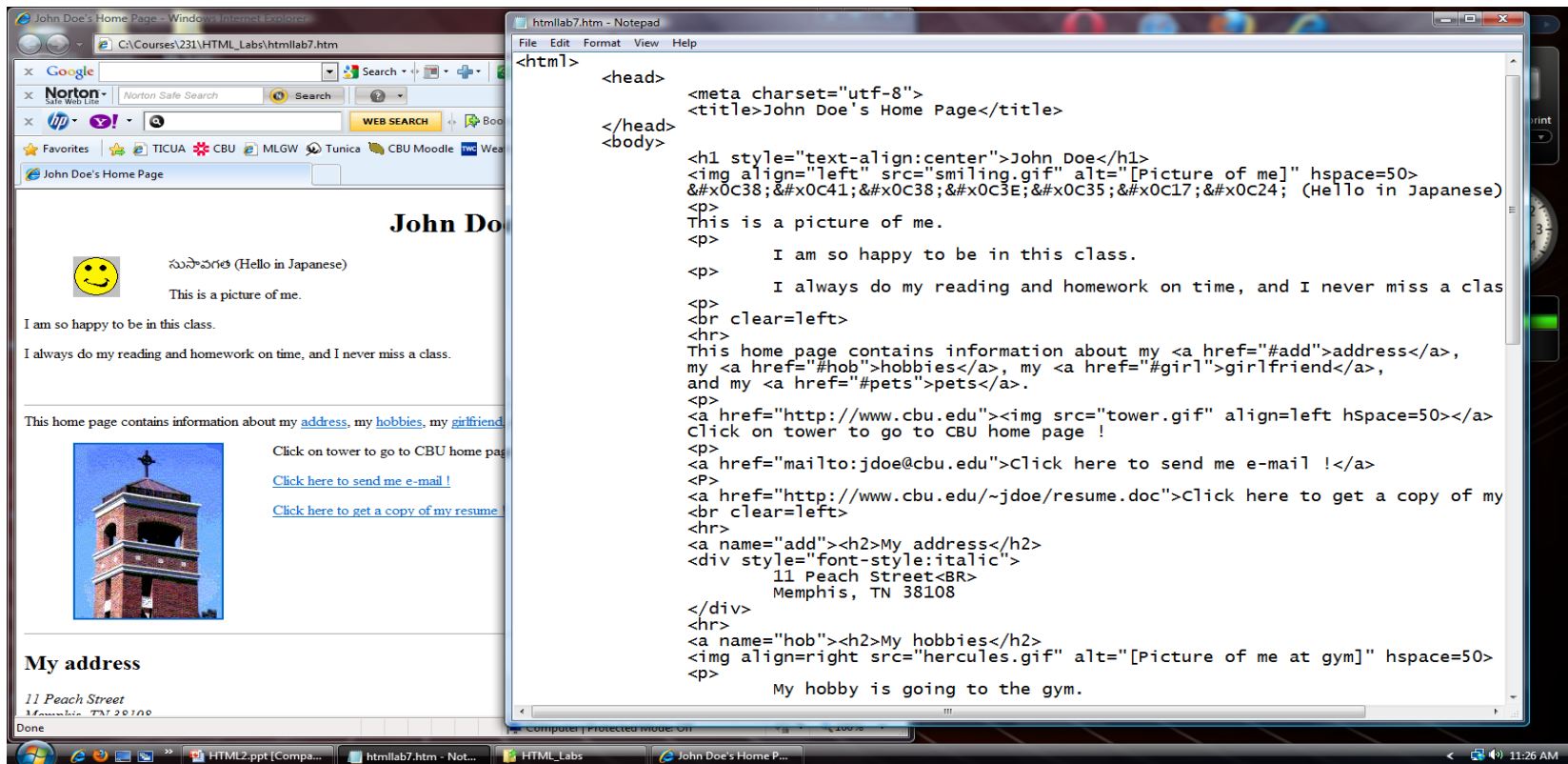
Scheme	Description
Fax	A fax phone number
file	A document stored locally on a user's computer
ftp	A document stored on an FTP server
geo	A geophysical coordinate
http	A resource on the World Wide Web
https	A resource on the World Wide Web accessed over a secure encrypted connection
mailto	An email address
tel	A telephone number
sms	A mobile text message sent via the Short Message Service

Hyperlink Tutorial



Lab 7

- Use a graphic to link to the CBU home page
- Place an e-mail link in your page



Colors

- The colors used for text, background, links (both unvisited and visited) can be set
- Colors are specified by specifying their name or by giving a value for the red, green, and blue content in levels:
 - rrggbb
 - ffffff is white (f for full)
 - 000000 is black (no color)
- There are 216 “browser-safe” colors):
 - www.hidaho.com/colorcenter/cc.html

Color Names

- Modern browsers will also let you specify a name for basic colors:
 - Black, White, Red, Green, Blue, Yellow
 - Aqua, Grey, Navy, Silver, Olive, Teal
 - Lime, Purple, Fuchsia, Maroon

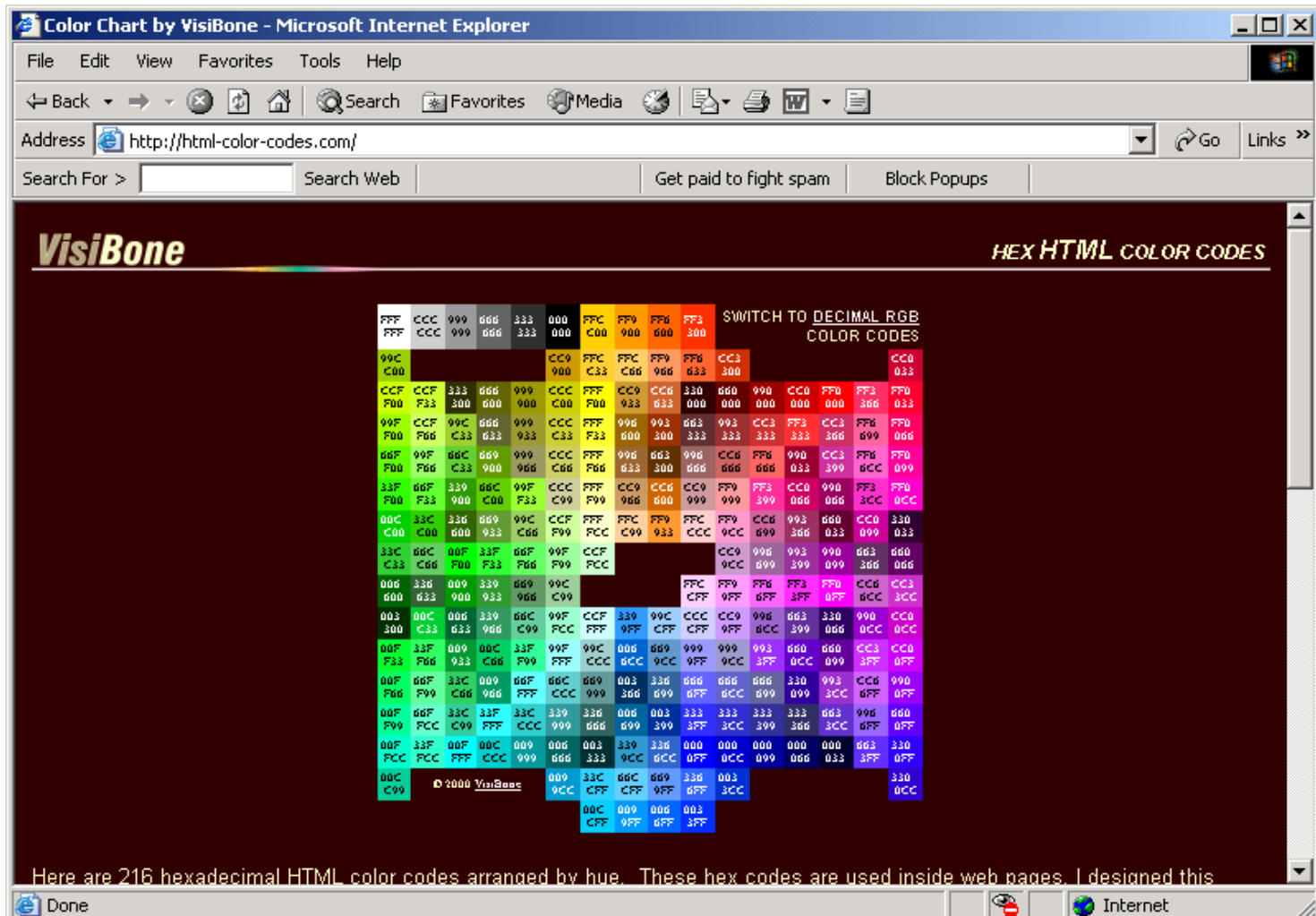
Common Color Names and Codes

■ 000000 - BLACK	■ A52A2A - BROWN
■ BEBEBE - GREY	■ FF8000 - ORANGE
■ FF0000 - RED	■ FF00FF - MAGENTA
■ 8000FF - PURPLE	■ FF0080 - PINK
■ 0000FF - BLUE	■ 000080 - NAVY
■ 00FFFF - CYAN	■ E06000 - PEACH
■ 00FF00 - GREEN	■ B03060 - MAROON
■ FFD700 - GOLD	■ 87CBEB - SKY
■ FFFF00 - YELLOW	■ B0C4DE - LT BLUE
■ F5F5DC - BEIGE	■ FFA0C0 - SALMON
■ D2691E - CHOC	■ 00C0A0 - AQUA

Body Colors

- Use the BGColor argument for background
- Use the Text argument for text color
- Use the Link argument for link color
- Use the VLink argument for visited links
- These are put into the BODY definition:
 - `<body bgcolor="252525" text="757575" link="505050" vlink="101010">`

A Color WebSite



Another Color WebSite

Webmonkey | Reference: Color Codes - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Copy Paste

Address http://hotwired.lycos.com/webmonkey/reference/color_codes/ Go Links »

Search For > Search Web Get paid to fight spam Block Popups

Hex Code	Color	Hex Code	Color	Hex Code	Color
#FFFFFF		#CCFFFF		#99FFFF	
#FFFFCC		#CCFFCC		#99FFCC	
#FFFF99		#CCFF99		#99FF99	
#FFFF66		#CCFF66		#99FF66	
#FFFF33		#CCFF33		#99FF33	
#FFFF00		#CCFF00		#99FF00	
#FFCCFF		#CCCCFF		#99CCFF	
#FFCCCC		#CCCCCC		#99CCCC	
#FFCC99		#CCCC99		#99CC99	
#FFCC66		#CCCC66		#99CC66	
#FFCC33		#CCCC33		#99CC33	
#FFCC00		#CCCC00		#99CC00	
#FF99FF		#CC99FF		#9999FF	
#FF99CC		#CC99CC		#9999CC	
#FF9999		#CC9999		#999999	
#FF9966		#CC9966		#999966	
#FF9933		#CC9933		#999933	

Type your search now

Ask

Ask.com

Done Internet

Another Color WebSite

So You Want A Basic Color Code, Huh? - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address <http://www.htmlgoodies.com/tutors/colors.html> Go Links >>

Search For > Search Web Get paid to fight spam Block Popups

Goodies to Go!

Your e-mail

Subscribe

Get your Goodies to Go newsletter free by email

Sign up now!

Other Related Newsletters

Hex and Word Colors Codes

Almost gross of color, 140 in all...

For an explanation of Hex Codes, [click here](#).
Also... see the list of [Non-Dithering Colors](#).

Please note:
"Aqua" and "Cyan" produce the same color: 00FFFF
"Fuchsia" and "Magenta" produce the same color: FF00FF

Aliceblue F0F8FF	Antiquewhite FAEBD7	Aqua 00FFFF
Aquamarine 7FFFD4	Azure F0FFFF	Beige F5F5DC
Bisque FFE4C4	Black 000000	Blanchedalmond FFEBCD
Blue 0000FF	Blueviolet 8A2BE2	Brown A52A2A
Burlywood	Cadetblue	Chartreuse


PAESSLER
Software Solutions
WWW.PAESSLER.COM


invent

Go wireless
with the HP Compaq
Business Notebook
nc6000.



Introduction
The Non-Technical Introduction

Primers
HTML
Ad Banners
JavaScript
Perl & CGI
ASP
Database-SQL

Internet



```
htmlab8.htm - Notepad
File Edit Format View Help

<html>
  <head>
    <meta charset="utf-8">
    <title>John Doe's Home Page</title>
  </head>
  <body bgcolor="101010" text="ffffff" link="ff0000" vlink="00ff00">
    <h1 style="text-align:center">John Doe</h1>
    
    &#x0c38;&#x0c41;&#x0c38;&#x0c3E;&#x0c35;&#x0c17;&#x0c24; (Hello in Japanese)
    <p style="color:green">
      This is a picture of me.
    <p>
      I am so happy to be in this class.
    <p>
      I always do my reading and homework on time, and I never miss a clas
    <p>
    <br clear=left>
    <hr>
    This home page contains information about my <a href="#add">address</a>,
    my <a href="#hob">hobbies</a>, my <a href="#girl">girlfriend</a>,
    and my <a href="#pets">pets</a>.
    <p>
    <a href="http://www.cbu.edu"></a>
    Click on tower to go to CBU home page !
    <p>
    <a href="mailto:jdoue@cbu.edu">Click here to send me e-mail !</a>
    <p>
    <a href="http://www.cbu.edu/~jdoue/resume.doc">Click here to get a copy of my
    <br clear=left>
    <hr>
    <a name="add"><h2>My address</h2>
    <div style="font-style:italic">
      11 Peach Street<BR>
      Memphis, TN 38108
    </div>
    <hr>
    <a name="hob"><h2>My hobbies</h2>
    
    <p>
      My hobby is going to the gym.
```

Font Colors

- Although the color of the text seems like it would be part of CSS Font, it actually is a standalone attribute in CSS:
 - `<p style="color:#f00;">This paragraph is red.</p>`
 - Or
 - `<p style="color:red;">This paragraph is red.</p>`
- More on color later in the course in CSS lesson

Marquee Tag (scrolling)

- `<P>I love <MARQUEE behavior=scroll direction=right height=20 width=120 bgcolor=white hspace=5>MIS 231</MARQUEE> (its my favorite class</P>`
- More on dynamic content later on in the course in JavaScript lessons



Images for Background

- You can use an image as the background for your home page
- You specify the image to use in the BODY definition
- That image will be tiled as much as necessary to fill up your home page viewing area:
 - `<body Background="myimage.gif">`
- There are many sites on the web to find backgrounds

HTML1

Contents + Aspect

(HTML directly defines the aspect of the various sections/parts of the page)

HTML code

```
<FONT SIZE="+2" COLOR="red"><B>Upload failed!</B></FONT>
```

HTML 4.01 and HTML 5

Contents

(nature/meaning of the various sections/parts defined by HTML)

HTML code

```
<span class="warning">Upload failed!</span>
```

+

Aspect of contents

(defined by CSS)

CSS code

```
.warning {font-size : 20px; color : red; font-weight : bold; }
```

CSS & BODY Styling

- A classical <body> tag looks something like this:
 - `<body background="graphic.jpg" text="#FFFFFF" bgcolor="#000000">`
- To convert that into CSS, it looks like this:
 - `body { background-image: url(graphic.jpg); color: #FFFFFF; background-color: #000000; }`
- CSS also adds some special features; one of the most important is the background-repeat property
- It has these values: repeat, repeat-x, repeat-y, or no-repeat
 - A regular web page has a default of background-repeat: repeat, which means the image is repeated both horizontally and vertically
 - With CSS, you can set the background to repeat horizontally (repeat-x), repeat vertically (repeat-y), or not repeat at all (no-repeat)
- We can edit the style mentioned above to have the body's background never repeat by adding background-repeat: no-repeat:
 - `body { background-image: url(graphic.jpg); color: #FFFFFF; background-color: #000000; background-repeat: no-repeat; }`

10 Ways to Make Your Home Page(s) Load Quicker !

- 1 - Keep your home page (including dependencies such as images and applets) to below 65K
- 2 - For more content, subdivide into linked pages; find most common used paths by visitors and provide quick navigation thereto
- 3 - Use the right graphics file format (use JPEG for photos and GIF for drawings)
- 4 - Use compression for graphics
- 5 - Try color reduction for color images

Load Quicker (con't)

- 6 - Try to interlace (incrementally load) your GIF files
- 7 - Recycle graphics (use same images on different pages) - these are cached
- 8 - Put Java applets in JAR files
- 9 - Reevaluate the value of each image and applet & get rid of unnecessary ones
- 10 - Use Java and/or Dynamic HTML to minimize server interaction

Top 10 reasons your home page stinks !*

- 10 - Your header picture is over 50K
- 9 - You put in a 400K picture of yourself and you appear in the lower left 20K
- 8 - We can only stomach so many pictures of your kids and pets
- 7 - You have a link to the White House
- 6 - Blink (Yawn)

Stinks (con't)

- 5 - Ticker Tape Status Bars (Javascript)
- 4 - You use construction signs on your page
- 3 - Your home page consists of a desperate plea for a job
- 2 - You use some ??? 4-bit GIF that looks like a film negative left out in the desert for five years
- 1 - **You're own your own hot list !**
 - * Jeff Glover

Element Properties/Attributes

- Each HTML tag has a number of properties (or arguments)
- In this course we only used the most common tag properties
- To find all the tags and all the properties for these tags, one can download the current reference material from the W3C web site

Web Development Issues Covered Later in this Course

■ Client side

- Forms (basics are covered in the appendix of this learning session)
- Frames
- Image maps
- Cascading Style Sheet
- META tags
- Javascript (form validation, document object model, dynamics)
- AJAX
- Drawing
- Mouse movements
- Multimedia
- Geolocation
- Web artistry and aesthetics
- WYSIWYG products (Dreamweaver, Frontpage. etc.)

■ Server side

- Programming
- Database access
- Security
- Web applications

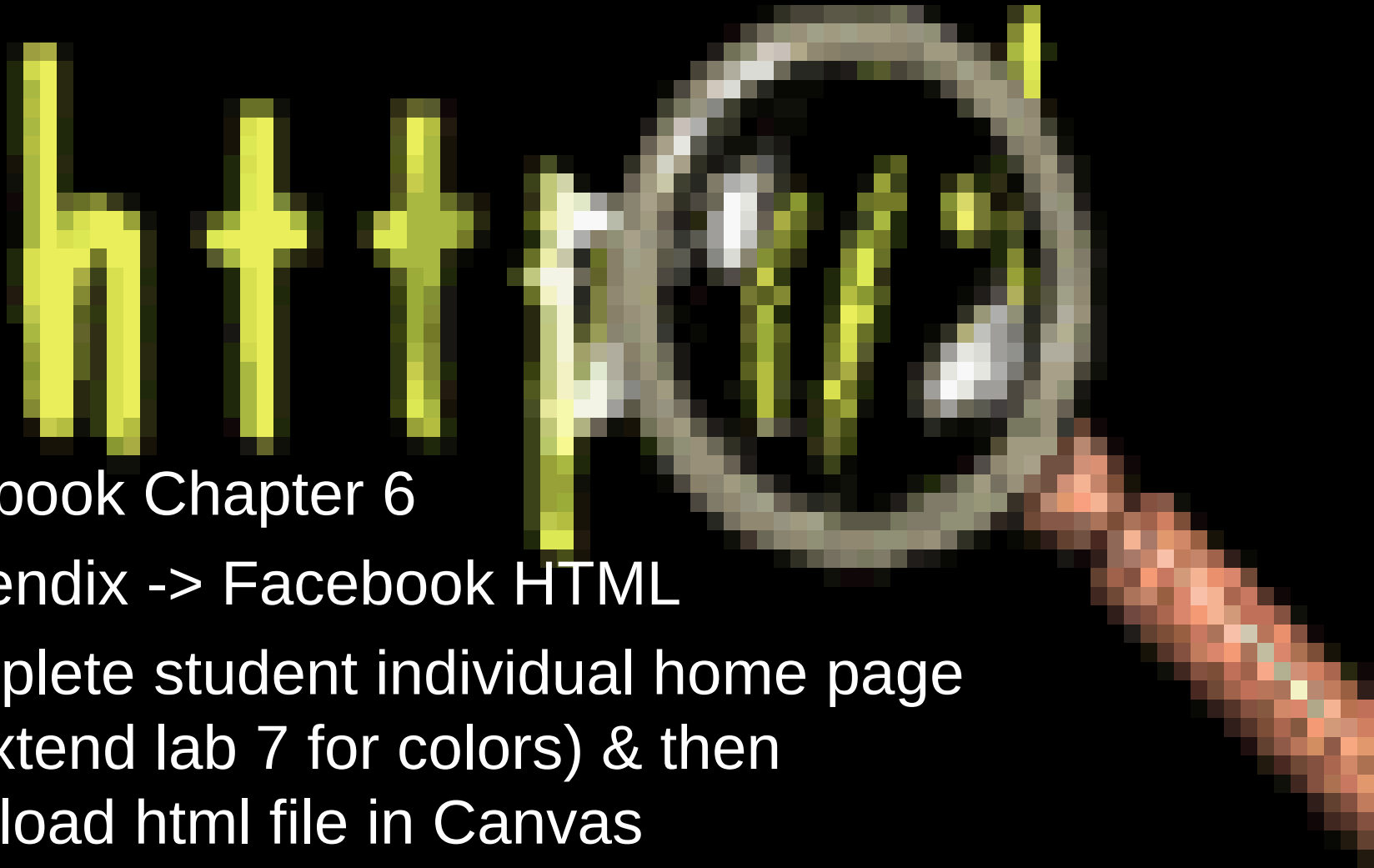
■ Overall

- Content management
- Multiple languages and cultures
- Web services (SOAP, etc.)
- Hosting services
- Getting your page noticed (web site marketing)

References

- Creating Web Pages with HTML [0-7600-5532-7] Introduction, [0-7600-5533-5] Comprehensive
- Creating Killer Web Sites [1-56830-433-1]
- Planning and Designing Effective Web Sites [0-7600-4988-2]

Homework



Textbook Chapter 6

Appendix -> Facebook HTML

Complete student individual home page
(extend lab 7 for colors) & then
upload html file in Canvas

Use HTML on Facebook

1. My Box

It is a powerful [WYSIWYG](#) editor for HTML in Facebook applications. You can edit the box by adding your blog's logo, Twitter Icon, YouTube Videos and other profile icons and then link them. You can directly add HTML code over there and then check the preview. [My Box](#) is a free application on Facebook where you can easily create a [HTML](#) box for your profile and then embed that on your facebook profile.

My Box



Use HTML on Facebook (con't)

2. My Info

Only HTML editor without any WYSIWYG where you can paste or write HTML codes as per your choice and then show that on your facebook profile. [My Info](#) is better option for those who are familiar with HTML and CSS otherwise go for My Box.

 **My Info - Hello, Sanjeev!**

[Profile Box](#) [Custom Tab](#)

New Feature! We're now beta testing the ability to add custom images, links, and text di
section. Be sure to let us know if you run into any issues!

Sanjeev's PROFILE BOX: Enter Text, HTML, or FBML:

```
<div style="text-align: center;"><a href="http://http://www.clickonf5.org/"></a></div><div style="text-align: center;"><a href="http://www.twitter.co
src="http://www.clickonf5.org/content/uploads/2009/08/twitter_icon.png" alt="clickonf5 on Twitter" al
vspace=""></a></div><div style="text-align: center;"><a href="http://www.youtube.c
src="http://www.clickonf5.org/wp-content/uploads/2009/08/youtube_icon.png" alt="Youtube Channel
vspace=""></a><a href="http://http://www.flickr.com/photos/clickonf5"><img src="http://www.clickon
```

HTML Code

Use HTML on Facebook (con't)

3. My HTML

It is similar to My Info but it doesn't have Narrow and Wide box option which actually adds a div for width of the box. If you are planning to add HTML code in your Facebook Box then that should have more width i.e. wider but If you are planning to have HTML on profile page in sidebar then that should be narrow. This width feature is provided in "My Info" editor but is missing from [My HTML](#).

To implement the newly created HTML box for your own, just go for editing your installed applications and then edit the application setting from there. If you are using My Info, then click on Edit Setting for My Info in your installed applications. Add the application on "Box" and then enter in your Facebook Box on [Profile Page](#) of Facebook and then move the HTML box from there to Profile page in Sidebar.

I can proudly say that once I added the HTML links of my blog, [twitter account](#) and other profiles, I got more numbers on followers and more hits on **Internet Techies**.