Basic HTML

What is HTML?

- HyperText Markup Language (HTML) is a "language" that can be used to tell a browser how to display a web page.

- In simple cases the bulk of the material will be text to display, and the HTML commands will be interspersed in the text. Images are also an important part of the web.

HTML is a markup Language

- standard text with embedded format codes
- HTML uses paired and unpaired tags
- tags identify elements or structure of document
- example: `<h1>Chapter 1</h1>`

HTML is "interpreted" by your browser

- the browser reads and interprets the HTML text (code) in real time
- not all browsers interpret in *exactly* the same way, so results may vary
- however, it is easy to make changes to the HTML code and immediately see the effect. Very nice for debugging!

Simple HTML Commands

- HTML commands (also called "tags") are always enclosed in angle brackets, e.g. `<title>`
- tags are case insensitive, so `<title>` and `<TITLE>` mean the same thing.

Paired HTML tags

- most HTML tages come in pairs, one starting an effect, the other ending it
- the second tag in the pair is always the same as the first, but preceded by the character "/"
- example: `<title> War and Peace </title>`

Location of HTML tags

- the effect of an HTML tag is not influenced by where it appears in the file, e.g. at the beginning, middle or end of a line.
- this works just as well:

```
        <title>
     War and Peace
        </title>
```

Basic Document Structure

```
<HTML>        announces an HTML document
<HEAD>        instructions about the document
<Title>           </Title>
</HEAD>
<BODY>

              visible page elements go here
</BODY>
</HTML>       end of the HTML document
```

Titles in HTML

- titles appear in the title bar of the page
- titles create a frame of reference for the user
- example: `<title> My First Web Page </title>`

A Simple HTML Example

```
<html>               says this is a HTML document
<head>               the following goes in the header
<title> War and Peace </title>
</head>
<body>               start the main body
<h1> Chapter 1 </h1>
The end.             Chapter 1 gets made into a main heading
</body>
</html>              end of the HTML document
```

Placement of text in HTML

```
<body>
<h1> Chapter 1 </h1>
The                  these two words will still appear on
end.                 one line, alone.
</body>
```

Breaking Lines

```
<body>
<h1> Chapter 1 </h1>
The                  this will force the two words to appear
<br>                 on separate lines
end.
</body>
```

Headings in HTML

- headings of different weights are used to introduce sections (weights 1 to 6). Smaller number means heavier weight !?!
- example: `<h1> Chapter 1 </h1>`
            `<h2> My Early Years </h2>`

appears as:

Chapter 1
My Early Years

Comments

- comments may be added to an HTML file to inform those who might modify or maintain the pages.
- example:
  ```
  <!—This is a comment for the reader
  of the HTML file, and will not appear
  on the page!-->
  ```

Text in HTML

- simple text is enclosed in paragraph tags
- example: `<p>The rain in Spain stays mainly`
           `only on the plain.</p>`

appears as:
            The rain in Spain stays mainly on the Plain.

Text in HTML

- break tags help to format lines
- example: `<p>Roses are red,<br>`
  `violets are blue,<br>`
  `sugar is sweet . . .`
  `</p>`
  appears as:
  > Roses are red,
  > violets are blue,
  > sugar is sweet . . .

Text in HTML

- font faces and other attributes may be specified
- example:
  `<p><font face="Arial">`
  `The rain in Spain stays mainly`
  `on the plain.`
  `</font></p>`
  appears as: (in Arial)
  > The rain in Spain stays mainly on the plain.

More Text Formatting

- text can be styled using italics and boldface
- text fonts may be sized using either absolute or relative sizes
- special effects are available, such as subscripts, superscripts, underlining and colour
- text may also be hidden as comments

Text Styling

- create italics using
  `special <i>effects</i>`
  which produces
  special *effects*
- create boldface using
  `special <b>effects</b>`
  which produces
  special **effects**

Text Font Size

- font size may be numbered using absolute values between 1 and 7
- font size may be sized relatively using $+n$ or $-n$ (where n is some integer)
- example: `<font size=7> X </font>` produces X

Special Text Effects

- examples:
  `X<sup>2</sup>` produces X^2

  `T<sub>1</sub>` produces T_1

  `<u>War and Peace></u> by Leo Tolstoy`
  produces
  <u>War and Peace</u> by Leo Tolstoy

  `<font color="red">red text</font>`
  produces
  red text

Specifying Colours

- can specify colours by name
  ```
  <font color="red">
  ```
- can specify colours by hex value
  ```
  <font color="#3399CC">  (this is sky blue)
  ```
- each pair of digits are R (red), G (green), B (blue) values (16,777,216 unique values/colours)

Lists

- ordered lists (automatically numbered)
- unordered lists (bullet points)
- definition lists (terms and explanations)

Ordered Lists

	displayed as:
`Outline `	Outline
`<ol>`	1. Introduction
`<li>Introduction`	2. Body
`<li>Body`	3. Conclusion
`<li>Conclusion`	4. Endnotes
`<li>Endnotes`	
`</ol>`	

Unordered Lists

	displayed as:
`Types of Lists `	Types of Lists
`<ul>`	• ordered lists
`<li>ordered lists`	• unordered lists
`<li>unordered lists`	• definition lists
`<li>definition lists`	
`<li>Endnotes`	
`</ol>`	

Inline Graphics

- images that are placed on the page along with text and other elements
- restricted to accepted image file formats: `.gif`, `.jpg` and `.png`
- example: `<img src="logo.gif">`

Hyperlinks

- references to other elements: pages, images, resources, etc.
- causes automatic request for linked element
- example:
  ```
  <a href=http://www.cse.yorku.ca/course/
  1520>  </a>
  ```

Getting Organized

- create a folder for all your web stuff
- use Wordpad or Notepad to write a small document in HTML
- save the document with an .htm extension in your web stuff folder
- the document will save with a browser icon (your default browser)
- click on the icon