Objectives

- To understand what a webpage really is
- To learn how to make a webpage
What is a webpage?

- “A document or resource of information that is suitable for the World Wide Web and can be accessed through a web browser and displayed on a computer screen” (Wikipedia)

- Webpages are housed on a server

- They can either be generated by a computer program run on a server or they can be static pages.
  - Because of restrictions on who is allowed to run programs, most of the content you will create will probably be ‘static’
  - However, there is a programming language called Javascript interpreted by web browsers that allows code to be executed on the client side and what is displayed to be modified
What does a webpage really look like?

- What so you see when you look at a web page is an interpretation of a set of display instructions provided by an underlying text document.

- The conventions of these pages are defined by a number of standards.

- Activity: ‘View Page Source’ (try http://www.w3.org/Consortium/Overview)
Webpage Standards

• A webpage is generally composed according to a standard such as HTML (HyperText Markup Language) or the more recent XHTML (Extensible Hypertext Markup Language).
  • HTML was invented in 1991 and came out of earlier activities dating back to the 1960s
  • XHTML incorporates the elements of HTML but also can be processed as XML (Extensible Markup Language), a general standard for exchanging marked up data. It started around 1998.
How do you locate a webpage?

• A webpage is identified on the Worldwide Web by a URL, which stands for “Uniform Resource Locator” that gives the address of the page.

• This usually takes the form of “http://blahblah.com/blahdirectory/blahfilename.html”.

• Some sites start with https://, which indicates that an extra level of security is in effect.
Webpage Conventions: Elements

• A webpage contains a number of elements, such as paragraph or a linebreak or a heading.

• All of these elements, as well as the structure of the document, are indicated by specific “tags”. These tags generally take the form:
  • <yourtaghere> ... </yourtaghere>

• Sometimes additional information is stored in the start tag, for example:
  • <a href="http://sasli.wisc.edu">SASLI webpage</a>
Webpage Document Structure

• The structure of an HTML or XHTML is also designed using tags. The basic format of an HTML document is:

  • <html>
    <head>
      <!-- The header information is here -->
    </head>
    <body>
      <!-- The body of the webpage is here -->
    </body>
  </html>
Document Structure: Header

- The initial lines of the web page and the information in the `<head>` tags tell the web browser what convention it is being following (HTML, XHTML, etc) and also information such as what language it is in and how the text is encoded (more on that later).
Document Structure: Header 2

- There are often other general elements in the headers, such as:
  - `<style>`: indicates general rules (color, size, alignment) about how text should be displayed.
  - `<script>`: contains Javascript code that is executed on the client computer when the page loads or in response to clicking elements, moving over them, etc.
  - `<link>`: can indicate a link to another file that contains rules about how text is to be displayed. These are usually CSS (Cascading Stylesheets), which allow people looking at a webpage on a cellphone to see it differently than people on a laptop, and such things.
Document Structure: Body

• The elements inside the <body> tags are where the primary elements that are displayed on the web browser are placed.
There are a limited number of document elements. These include:

- `<p>..</p>`: Indicates a paragraph of text.
- `<i> .. </i>`: Indicates in *italics*
- `<br>` or `<br/>`: Indicates a linebreak
- `<h1>..</h1>`: Indicates the topmost (largest) heading
- `<h2>..</h2>`: Indicates the the second largest subheading
- `<h3>..</h3>`: 3rd Largest, and so on
- `<a href="webpage.html">Text for Webpage</a>`: Indicates an “anchor” for an external webpage indicated by an href (hypertext reference). “Text for Webpage” is what is displayed on the page.
Common Document Elements 2

- `<table>` <!-- indicates start of table -->
  - `<tr>` <!-- indicates start of table row -->
    - `<td>`First Cell of a table row`</td>`
    - `<td>`Second Cell of a table row`</td>`
  - `</tr>` <!-- end of table row -->
- `</table>` <!-- end of table -->
- `<img src="picturefilename">`: Show a picture
- `<div>`: A “division” or block of text.
- And many more.
Summary: What is a webpage?

- A webpage is a text file that is formatted according to certain conventions, such as HTML or XHTML, that contains numerous elements that are interpreted and displayed on a web browser.
Activity: Make a website

- For this activity, you will make a website on the course management system at U of W, https://learnuw.wisc.edu
- Fortunately, there is online HTML editor (MCE editor) that takes care of the HTML tags.
- When you are done, you will also look at the HTML source of what you have created.
- Why? Later we will embed links and other elements into the webpage.