Introduction to Web & HTML
Topics

- Web Terminology
- HTML
  - What is HTML
  - Parts of an HTML Document
  - HTML Tags
    - Required
    - Common
Internet vs. WWW

- Most people use the two terms interchangeably but they are in fact different.
- The Internet is a vast, international network, made up of computers and the physical connections (wires, routers, etc.) allowing them to communicate.
- The World Wide Web (WWW or just the Web) is a collection of software that spans the Internet and enables the interlinking of documents and resources.
  - Provides a way of accessing information on the Internet.
- For more information about the history of the Internet and WWW:
  
  http://en.wikipedia.org/wiki/Internet
Web Servers and Clients

- A Web server is a computer that is programmed to send files to browsers on other computers connected to the Internet.
- The Web browser, such as Firefox or Internet Explorer, is the client that sends a request for a Web page.
- The Web server answers the request and delivers the requested page to the browser so you can view it.
HTTP

- Stands for HyperText Transfer Protocol
- Allows computers on the WWW to communicate with one another.
- Handles the “request” sent to the Web server and the “response” received from the Web server.
Web Server-Client Diagram

Web Server

HTTP Request

HTTP Response

Client Browser
URLs

- Stands for Uniform Resource Locator
- Also called the Web page’s address
- You typically type it into your Web browser’s location bar when you want to view a Web page

http://www.umbc.edu

- Protocol needed to communicate with Web server
- Name of Web server
HTML

- Stands for HyperText Markup Language
- Used to create a Web page
- Made up of tags that specify the structure of the document (this section is a heading, this section is a paragraph, etc..)
- An excerpt from a sample HTML document:

```html
<html>
  <head>
    <title>Bob’s Web page</title>
  </head>
  
  <body>
    <h1>This is my first Web page</h1>
  
```
HTML Tags

- Most HTML tags work in pairs. There is an opening and a closing tag. For example:
  
  ```html
  <p>Some content here.</p>
  ```

- The `<p>...</p>` tag displays a paragraph
- `<p>` opens the paragraph (opening tag)
- `</p>` closes the paragraph (closing tag)
- “Some content here.” will be displayed on the page
Self-closing Tags

- Some HTML tags are self closing. For example:

  `<br />`

- The `<br />` tag will display a line break.
Required Tags

- All HTML documents should have `html`, `head` and `body` tags, along with the `DOCTYPE` identifier.
  - `!DOCTYPE` - Tells the browser which set of standards the page adheres to
  - `<html>...</html>` -- Surrounds the contents of the entire page
  - `<head>...</head>` -- Lists the identification information on the page, such as the title
  - `<title>...</title>` -- Gives the name of the page that appears in the top of the browser window
  - `<body>...</body>` -- Frames the content of the page to be displayed in the browser
<!DOCTYPE html>
<html>
<head>
  <title>CMSC104 HTML Template</title>
</head>
<body>
  This is just a basic HTML template to be used in CMSC104.
</body>
</html>

Example file: template.html
Basic HTML Template Screenshot

This is just a basic HTML template to be used in CMSC104.
Some Common HTML Tags and Their Meanings

- `<p>...</p>` -- Creates a paragraph
- `<br />` -- Adds a line break
- `<hr />` -- Separates sections with a horizontal rule
- `<h1>...</h1>` -- Displays a heading (h1-h6)
- `<!--...-->` -- Inserts a comment
- `<ol>...</ol>` -- Creates an ordered list
- `<ul>...</ul>` -- Creates an unordered list
- `<img />` -- Inserts an image into the document
- `<a>...</a>` -- Inserts a link into the document
Paragraph Example

The exam next week will consist of T/F, multiple choice, short answer and pseudocode questions. You cannot use a calculator.

After the exam, we will learn JavaScript. It should be fun!!
Paragraph Example

Screenshot

The exam next week will consist of T/F, multiple choice, short answer and pseudocode questions. You cannot use a calculator.

After the exam, we will learn JavaScript. It should be fun!!
<p>
Roses are Red. <br />
Violets are Blue. <br />
You should study for Exam 1. <br />
It will be good for you!
</p>
Line Break Example
Screenshot

Roses are Red.
Violets are Blue.
You should study for Exam 1.
It will be good for you!
The exam next week will consist of T/F, multiple choice, short answer and pseudocode questions. You cannot use a calculator.

After the exam, we will learn JavaScript. It should be fun!!
Horizontal Rule Example Screenshot

The exam next week will consist of T/F, multiple choice, short answer and pseudocode questions. You cannot use a calculator.

After the exam, we will learn JavaScript. It should be fun!!
Heading Example

\(<h1>\text{This is heading 1</h1}>\)
\(<h2>\text{This is heading 2</h2}>\)
\(<h3>\text{This is heading 3</h3}>\)
\(<h4>\text{This is heading 4</h4}>\)
\(<h5>\text{This is heading 5</h5}>\)
\(<h6>\text{This is heading 6</h6}>\)
Heading Example Screenshot

This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6
<!-- This is just some sample html to illustrate the use of a comment -->

<p>
    Here is my paragraph.
</p>

<!-- Here is another comment -->
Here is my paragraph.
Ordered List Example

<ol>
  <li>Print Review Questions for Exam 1.</li>
  <li>Work on Review Questions for Exam 1.</li>
</ol>
Unordered List Example

<ul>
  <li>country music</li>
  <li>monday mornings</li>
  <li>brussels sprouts</li>
</ul>
Unordered List Screenshot

- country music
- monday mornings
- brussels sprouts
Link Example

<a href="http://www.cs.umbc.edu/104/">CMSC104 Main page</a>
Link Screenshot

CMSC104 Main page

http://www.cs.umbc.edu/104/
Image Example

<img src="linux-tux.png" alt="Tux the Penguin" />
Image Screenshot
Working Example

- To see an example page that uses all of the tags we discussed today, visit

http://userpages.umbc.edu/~dblock/lecture6.html