

Announcements

- CMSC 198N – Introduction to Computer Programming via the Web

- Web site:

<http://www.cs.umd.edu/class/spring2007/cmssc198N/>

- Announcements section in web site
- Rules regarding Forum Use
- Quiz on Friday
- Project to be posted tomorrow Thursday

HTML

- Language used to define web pages
- What the server sends to the browser
- Browser reads HTML and renders the page
 - May require downloading data from server (e.g., images)

HTTP

- Hypertext Transfer Protocol (HTTP) – protocol that defines how user agents (e.g., browser) and web server can communicate
- HTTP is a request/response protocol between clients and servers
- Some methods (operations) defined as part of the protocol
 - GET – Use to download a resource (e.g., image, web page). Most common method used.
 - HEAD – Returns only the header
 - POST – Submits data (e.g., form data) to the server
- Do not confuse with HTML
- Demo

Creating Web Pages

- HTML - Hypertext Markup Language
- HTML Standard
 - Developed by the World Wide Web Consortium (W3C)
 - <http://www.w3.org>
 - Latest version HTML 4.01
- Document is described through a series of commands and directives present in a text file.
- HTML goal is to describe structure only. Presentation should be left to cascading style sheets.
- When interpreted by an HTML **viewer**, those commands determine the appearance of the page
- HTML documents are entirely ASCII text
- Commands are explicitly inserted
- Great HTML/CSS tutorial site:
 - <http://www.htmldog.com/>

HTML

- Three versions of HTML
 - HTML 4.01 Strict (excludes deprecated tags and attributes)
 - HTML 4.01 Transitional (less restrictive including appearance elements)
 - HTML 4.01 Frameset (identical to transitional but allows <body> to be replaced with <frameset>)
- Web Standards Project (www.webstandards.org)
 - Industry watchdog convincing web browsers developers to adhere to web standards.
- HTML 4.01 is the last version for HTML. Next version is XHTML 1.0
- XHTML
 - Uses same tags as HTML 4.01
 - Enforces rules like closing tags, tags in lowercase, and others.
- **We will use XHTML in this class**

Validation

- You can use W3C Markup Validation Service (<http://validator.w3.org/>) to validate your html.
- Also through firefox you can use ***tidy*** for html validation. Tidy also provides suggestions for code that cannot be validated.

HTML Tags

- ❖ Tag – specifies a command or directive. It surrounds content and apply meaning to that content
- ❖ General format:
<elementName attributes>
- ❖ Most HTML elements have two tags:
 - ❖ start tag and end tag
 - ❖ Example: `<h1> text </h1>`
- ❖ Tags and attributes will be in lowercase (XHTML requirement)
- ❖ Some tags are self-closed (ending them in `/>`)
`<hr />` `<br />` `<meta />` `<img />`

Attributes

- ❖ An attribute extends or modify a tag
- ❖ Attributes
 - ❖ Only appear in the start tag
 - ❖ You can have several attributes in one tag each separated by spaces
 - ❖ Order is immaterial
 - ❖ Some take values which are specified after an =
- ❖ General format
 - ❖ `<ELEM ATTR="attrValue">Displayed Text</ELEM>`
- ❖ Example
 - ``
- ❖ All attribute values will be enclosed in “ “ for XHTML compliance.

Nested Tags / Spaces / Comments

- Nested tags are possible but don't overlap sets of them. Avoid the following:

<i>Message</i>

- Browser Processing
 - Multiple spaces are converted to one space
John Mary Peter
John Mary Peter
 - Line returns are ignored
 - Unrecognized tags are ignored
 - Comments
 - Represented by <!-- --> Note: (two sets of double -)
 - Examples
 - <!--The html code example starts at this point-->
 - Comments can not be nested

HTML Basic Skeleton

- ❖ An html document has two main parts.
 - ❖ **Header** – provides information about the document
 - ❖ **Body** – contents of the page
- ❖ **Example 1 (htmlDoc1.html)**

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" lang="en" xml:lang="en">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" />
    <title>Template</title>
  </head>

  <body>
    <!--HTML CODE HERE-->
  </body>
</html>
```

- ❖ Let's validate the above document

How to Develop HTML Documents

- Text Editor
 - Any text editor (e.g., wordpad, notepad, pico, etc.)
- HTML Editors
 - Utilities designed to write HTML
 - Examples: CoffeeCup HTML Editor, HTMLjive
- Authoring tools
 - Frontpage – Good for beginners
 - Dreamweaver – Fairly complex but powerful
 - NVU – Free and available for (Windows, Linux, Mac)
- List of editors can be found at:
[http://dir.yahoo.com/Computers and Internet/Software/Internet/World Wide Web/HTML Editors/](http://dir.yahoo.com/Computers_and_Internet/Software/Internet/World_Wide_Web/HTML_Editors/)
- Recommended:
 - PHP Designer - <http://www.mpsoftware.dk/phpdesigner.php>

Frequently Used Tags

- `<head> </head>`
 - It does not generate displayed contents
 - Contains other tags (e.g., `<title> </title>`)
- `<title> </title>`
 - Part of the header
 - It is required
 - Search engines depend on it, so use meaningful titles

Frequently Used Tags

- Heading tags
 - `<h1> text </h1>`
`<h2> text </h2>` ... and so on until
`<h6> text </h6>`
 - Higher numbers imply smaller headers
- Paragraph tag
 - `<p> paragraph </p>`
- Code – Use to define computer code
 - `<code> </code>`
- Horizontal Line - `<hr />`