

Announcements

- ❖ Instructor: Nelson Padua-Perez (nelson@cs.umd.edu)
- ❖ Class Web Site:
- ❖ <http://www.cs.umd.edu/class/fall2010/cmssc122/>
- ❖ No posting of code in the forum
- ❖ Check class announcements daily

CSS (Cascading Style Sheets)

- ❖ Official W3C standard for controlling presentation
- ❖ Specification: <http://www.w3.org/TR/CSS21/>
- ❖ Style Sheets
 - ❖ Text file with rules. It includes no html
 - ❖ Style sheets files use a .css extension
 - ❖ Allows you to apply typographic styles (font size, line spacing, etc.)
 - ❖ Allows you to apply spacing instructions
 - ❖ Allows you to have page layout control
 - ❖ Smaller html files by avoiding redundancy in style specification
 - ❖ Easy update a collection of pages by updating only a single file
 - ❖ Example: ExternalFile.css
- ❖ Why CSS? <http://www.csszengarden.com/>

Rules

- ❖ Rule → Basic element of a style sheet
- ❖ Rule → describes the formatting associated with a page element
- ❖ Rule format

selector declaration

selector → identifies what should be styled in a web document (e.g., h1, p).
declaration → what and how that portion of the web document should be modified

- ❖ declaration → consists of *property: value* pair(s) enclosed in { }
- ❖ Examples:

```
h1 {color: green}
p {
  font-size: 10px;
  color: red;
}
```

- ❖ Notice there is a space after the colon (;)
- ❖ **Example:** ExternalFile.css
- ❖ Popular properties → color, font-family, font-size, text-decoration
- ❖ HTML Dog CSS Properties
- ❖ <http://www.htmldog.com/reference/cssproperties/>

Types of Style Sheets

❖ **Inline**

- ❖ Style information applied to specific tag (e.g., `<p style=...>`”).
- ❖ Avoid if possible.

❖ **Internal**

- ❖ Using the `<style>` tag in the header of the html document.
- ❖ Convenient to provide own style to a specific page.
- ❖ Example: `InternalStyle.html`

❖ **External**

- ❖ External style sheet which web pages link to (see `<link>` tag).
- ❖ Preferred approach.
- ❖ Example: `ExternalFile.html` and `ExternalFile.css`

CSS

- ❖ Why cascading?
 - ❖ Rules can come from different sources (inline, external file, etc.). The final set of rules that apply to a document comes from cascading all the sources
- ❖ Rule Conflict Resolution
 - ❖ To resolve conflicts, styles defined at a specific level override those set at a higher level
 - ❖ Example: you can set the color of body text to be blue but you can override to red the text in a list
 - ❖ When multiple style files are linked or imported the last will take precedence
- ❖ A child element inherits the same properties of its parent element (unless otherwise specified)

CSS Validator

- ❖ <http://jigsaw.w3.org/css-validator/>
- ❖ Notice you have three choices
 - ❖ By URI
 - ❖ By File Upload
 - ❖ By direct input

Colors

- ❖ You can specify colors using one of the following predefined colors:
yellow, white, teal, silver, red, purple, orange, olive, navy, maroon, lime, green, gray, fuchsia, blue, black, aqua
- ❖ Source for colors
http://www.w3schools.com/html/html_colors.asp
- ❖ You can specify a color by indicating the red, green and blue components. For example, all the following are equivalent:
 - ❖ red
 - ❖ `rgb(255,0,0)`
 - ❖ `#ff0000`

CSS Rules Review

- ❖ CSS rules has two parts:
 - ❖ selector → what part of the web page gets styled
 - ❖ property:value pairs → what to change and the nature of the change

Example:

```
h2 { font-size: 120%; color: blue; }
```

selector

*Property
:value*

*Property
:value*

About CSS

- ❖ **Comments** → Surrounded by `/* */`
- ❖ **Inheritance of Properties** → A child element inherits the same properties of its parent element (unless otherwise indicated by the CSS specification)

Kinds of Selectors

- ❖ **Type Selectors** → Those based on the name of an HTML tag (e.g., p, table, etc.)
 - ❖ p { color: red; }
- ❖ **Pseudo-classes** → attached to selectors to specify a state. Four popular pseudo-classes are:
 - ❖ a:link → initial color of a link
 - ❖ a:visited → color for a visited link
 - ❖ a:hover → color when mouse hover over link
 - ❖ a:active → color during the clicking of the link
- ❖ **Example:** Selectors.html, Selectors.css

Kinds of Selectors

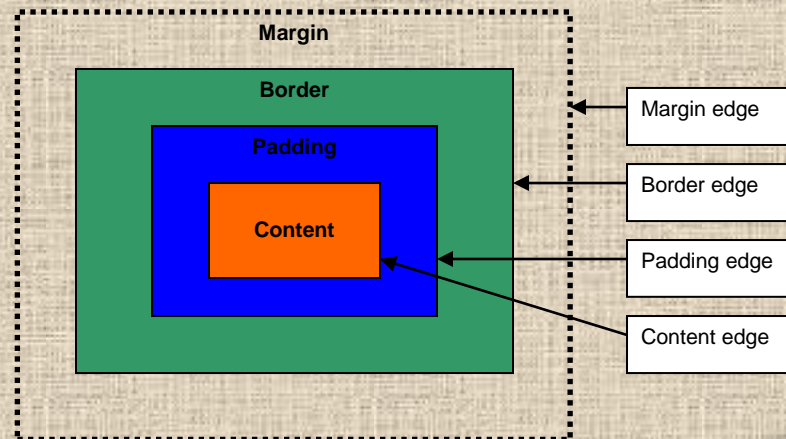
- ❖ **Class Selectors** → Allow us to apply the same CSS rules to different elements
 - ❖ Use when you need to apply a style many times in your document.
 - ❖ Created with a period (also known as full stop)
 - ❖ **Example:** Selectors.html, Selectors.css
- ❖ **ID Selectors** → Like class selectors but appear only once in the document
 - ❖ Used when you need to apply a style only once in your document.
 - ❖ Created using #
 - ❖ **Example:** Selectors.html, Selectors.css
- ❖ **Others** (will see them later on)
 - ❖ Descendant Selectors, child selectors, attribute selectors, universal selectors

Additional HTML Elements

- ❖ `<div>` and ``
 - ❖ Allow you to delimit a section of the HTML body
- ❖ ``
 - ❖ Used to wrap inline content (e.g., text sequence)
- ❖ You can apply style to the sections defined by `span` and `div`
- ❖ The following example divide the document in three main areas
- ❖ **Example:** `SpanDiv.html`, `SpanDiv.css`

Box Model

- ❖ Each block element (e.g., p) contains four edges (top, bottom, right, and left) defining a box
- ❖ Four sections can be identified with a block element
 - ❖ Content → what lies in the middle of the box (text, image, etc.)
 - ❖ Padding → surrounds the content
 - ❖ Border → surrounds the padding and represents the box border
 - ❖ Margin → surrounds the border



<div> is a block element

- ❖ <div> Defines a block-level entity
 - ❖ Browser starts a div element's content on its own line.
- ❖ <body> also defines a block-level entity
- ❖ You can use your box model knowledge to add more style to your pages
- ❖ **Example:** BoxModel1.html, BoxModel1.css

Box Model

- ❖ Let's explore more of the box model with the following examples
- ❖ **Example:** BoxModel2.html, BoxModel2.css
- ❖ **Example:** Padding.html, Padding.css
- ❖ The margins, borders, padding, and background properties of block elements (e.g., body, p, etc.) are not passed to their child block-level elements

Setting Size

- ❖ Percentages → size of the font is based on the size of the parent element
- ❖ Length units
 - ❖ centimeters (cm)
 - ❖ millimeters (mm)
 - ❖ points (pt) - 1 pt → 1/72 inch
 - ❖ picas(pc) - 1pica → 12 pts
 - ❖ inches (in)
- ❖ Relative
 - ❖ ex → height of the lowercase x in the font
 - ❖ px → pixels
 - ❖ em
 - ❖ Corresponds to the value of the font-size property of the element on which is used. If it appears in the font-size property itself it refers to the font-size of the parent element.
 - ❖ If the parent is body tag and no font size is specified then the size is looked in the user's preferences specified in the browser
 - ❖ Allows you to define scalable style sheets
 - ❖ Preferred unit

Font-size Keywords

- ❖ xx-small
- ❖ x-small
- ❖ small
- ❖ medium
- ❖ large
- ❖ x-large
- ❖ xx-large
- ❖ larger
- ❖ smaller
- ❖ **Example:**
FontsizeKeywords.html, FontsizeKeywords.css