

CS 146: Intro to Web Programming and Project Development

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Introduction to CSS

CSS



- Cascading Style Sheets
- Style Sheet Language used for describing the presentation of a document written in a markup language
- Most often used for the styling of web pages, but
- Can be applied to any XML document
- CSS along with HTML and JavaScript-> cornerstone technology for Front End web development
 - Visually engaging webpages, user interfaces for web applications and mobile applications

CSS



- Define the appearance of elements in your page
- Can be written in your page (html code), or saved in an external file (.css) and then included in each one of your pages
- Saves tons of time: write your styling code once, and update your style sheet if you want a new look!



CSS – HTML separation

- Content/Presentation separation
- Improves content accessibility
- Provides more flexibility and control in the specification of the presentation characteristics
- Enables multiple HTML pages to share formatting
- Reduces complexity and repetition in the structural content



CSS versions

- CSS1 was released by W3C in 1996 (in CERN)
 - Included the core capabilities associated with CSS, such as the ability to format text, set fonts, and set margins
- CSS2 specification came out in 1998
 - Included all the attributes of CSS1, ways to position elements, and had increased emphasis on international accessibility and the capability to specify media-specific CSS
- CSS3 has split into “modules”; it contains the old CSS specification (which has been split into smaller pieces), and contains new modules as well

CSS3



- Some of the most important CSS3 modules are:
 - Selectors
 - Box Model
 - Backgrounds and Borders
 - Image Values and Replaced Content
 - Text Effects
 - 2D/3D Transformations
 - Animations
 - Multiple Column Layout
 - User Interface



Validating CSS code

- Use the W3C Validation Service:
 - <http://jigsaw.w3.org/css-validator/>



CSS Syntax

- A CSS rule-set consists of a selector and a declaration block

```
p {  
    color: red;  
    text-align: center;  
}
```

- The selector points to the HTML element you want to style
- The declaration block contains one or more declarations separated by semicolons
- Each declaration includes a CSS property name and a value, separated by a colon
- A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces



CSS Selectors

- CSS selectors are used to find, or select, HTML elements based on their element name, id, class, attribute, and more
- The element selector selects elements based on the element name
 - Note that simply writing a name of a tag will select every tag with that name in your HTML document



The ID Selector

- The id selector uses the id attribute of an HTML element to select a specific element
- The id of an element should be unique within a page, so the id selector is used to select one unique element!
- To select an element with a specific id, write a hash (#) character, followed by the id of the element
- The style rule below will be applied to the HTML element with id="table"

```
#table {  
    text-align: center;  
    color: red;  
}
```



The Class Selector

- The class selector selects elements with a specific class attribute
- To select elements with a specific class, write a period (.) character, followed by the name of the class
- In the example below, all HTML elements with class="center" will be red and center-aligned]

```
.center {  
    text-align: center;  
    color: red;  
}
```

- You can also specify that only specific HTML elements should be affected by a class (ex: p.center)



Grouping Selectors

- If you have elements with the same style definitions, it will be better to group the selectors, to minimize the code
- To group selectors, separate each selector with a comma

```
h1, h2, p {  
    text-align: center;  
    color: red;  
}
```



CSS Comments

- Comments are used to explain the code, and may help when you edit the source code at a later date
- Comments are ignored by browsers
- A CSS comment starts with `/*` and ends with `*/`; comments can also span multiple lines

```
p {  
    color: red;  
    /* This is a single-line comment */  
    text-align: center;  
}  
  
/* This is  
a multi-line  
comment */
```



Using CSS in your Site

- External Style Sheets: add this code in your `<head>`
`</head>`
 - `<link rel="stylesheet" type="text/css" href="filename.css" />`
- Internal Style Sheet: add the style sheet in the head
 - `<style type="text/css">`
`/* your style code */`
`</style>`
- Inline: add the style in the tag itself
 - `<p style="color:red;">red paragraph</p>`



Exercise

- Style one of your html files that includes <h1>, <h2> and <p> elements using the following code in an external css file:

```
h1, h2, p {  
    text-align: center;  
    color: red;  
}
```