INTRODUCTION TO HTML AND CSS: CLASS 2 INTRODUCTION TO CSS

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CSS

Stands for Cascading Style Sheets.

Refers to the hierarchical way that styles get applied to html elements.

WHAT WE'LL LEARN TODAY

A little CSS history:

- Terminology and syntax.
- Ways to attach CSS to your page.
- Selectors.
- Colors and Fonts.

HISTORY OF CSS

The 90s:

- HTML pages read from top to bottom, black font, no color, and all default browser styles.
- Fine for science papers, but designers said "We Want More!"
- 1993: The first graphical browser is born — "Mosaic"
- 1994: World Wide Web Consortium is inaugurated (W3C) and the World Wide Web is born.

Late 90s:

- 1996: Specifications for CSS1 are released (a year before HTML 4.0).
- CSS1 is buggy and poorly adopted.
- 1998: W3C releases CSS2.
- CSS2 is buggy and poorly adopted.
- Meanwhile, table-based layouts and browser wars are rampant!

The 00s:

- 1999 - 2000: Work is begun on CSS2.1 to fix bugs in CSS 2.
- 2004: The working draft becomes a candidate for adoption by the W3C. It reverts back to working draft in 2005.
- 2007: The working draft again becomes a candidate for adoption by the W3C
- 2010: It reverts back to a working draft.
- 2011: June 7th, CSS2.1 is finally "sanctified" by the W3C.

The latest:

- CSS3, begun in 2000, is still mostly in working-draft stage.

- Modular release (rather than one single adoption).

- 2013: Most modules still in working-draft stage

- ...some released and adopted by modern browsers.

LET'S CODE SOME CSS!

```
<head>
  <title>
     My Very First Web Page!
  </title>
  <style>
    h1 {
      color: blue;
      background-color: yellow;
    }
  </style>
</head>
```

CSS STYLE RULE

- There are no limits to the number of declarations in a style rule.

- Common convention is to use lower case throughout.

- Don't forget the semicolon at the end of the declarations!

- Don't forget the closing curly bracket!

ATTACHING CSS TO YOUR WEB PAGE

There are three ways:

- Inline

- Embedded

- Linked

INLINE

<p style="color: red;">Some text.</p>

- The style goes right inside the opening HTML tag.

- Uses "style", which is an HTML attribute.

- Difficult to use in large projects.

EMBEDDED

- "Embedded" inside the <head> element between an opening and closing <style> tag.

- If styles are identical across multiple pages in your site -- you'd have to copy and paste for each page.

LINKED

- All your styles go on their own style sheet!

- A <link> tag in your HTML file points to the location of the style sheet

  ```
  <head>
    <title>
       My Very First Web Page!
    </title>
    <link rel="stylesheet" type="text/css"
    href="style.css">
  </head>
  ```

ADVANTAGES OF LINKED (EXTERNAL) STYLE SHEETS

- Shared resource for several pages.

- Reduced file size & bandwidth

- Easy to maintain in larger projects.

SELECTORS

- The first item in a style rule.
- Describes what is being styled.

WHAT CAN WE USE AS SELECTORS?

- HTML tags.
- Classes and ids.
- Pseudo classes.
- Any combination of the above!

HTML TAGS:

The following would select every paragraph element.

```
p {
  property: value;
}
```

The following would select every image element.

```
img {
  property: value;
}
```

CLASSES AND IDS

- "Class" and "ID" are HTML attributes.
- Attributes "describe" elements and are followed by values.

In your HTML, it looks like this:

```
<p id="intro">
<span class="warning">
```

IDS VS. CLASSES

Think about these this way:

- ID: An id can only be used once on a page. Refers to a singular page element (like a footer).

- Think ~ A student ID number

- Class: Lots of elements can have the same class. I.E. There can be many spans with a class of "warning".

- Think ~ A student as a member of a class

CLASSES

A class name is preceded by a period in your style rule.

```
<p class="warning">

.warning {

property: value;

}
```

IDS

An id name is preceded by a pound sign in your style rule.

```
<p id="intro">


#intro {

property: value;

}
```

NAMING YOUR CLASS OR ID:

- Can use letters, numbers, underscore or dash (but don't start with a number or a dash followed by number).

- No spaces — use a hyphen or underscore

- CSS is case-insensitive, but the convention is to use all lowercase letters.

- In your HTML, class and id names are in quotes (just like all other attribute values).

PSEUDO CLASSES

- Describes a "current condition" of an HTML element, rather than an "attribute".

- Link pseudo classes are the most common

- example: a:hover (to style a link when user "hovers" over it).

LINK PSEUDO CLASSES

- a:link ~unvisited link

- a:visited ~visited link

- a:hover ~mouse over link

- a:active ~activated link

If present, a:hover must come after a:link and a:visited.

If present, a:active must come after a:hover.

Examples:

```
a:link {
    color: blue;
  }
 a:visited {
   color: yellow;
  }
 a:hover {
   color: green;
  }
 a:active {
   color: purple;
  }
```

COMPOUND SELECTORS

Combining selectors to get really specific!

- Select all em elements that are within a paragraph

    p em {

      property: value;

    }

- Select all link elements in elements with an id of "intro".
    #intro a {
      property: value;
    }

STYLING WITH COLOR AND FONTS
Choose your colors and your fonts.

COLOR

The color property sets the color of the font.

The background-color property sets the color of the background.

Color value can be defined in one of three ways:

- By a recognized color name

- By a hexadecimal value

- By an RGB value

RECOGNIZED COLOR NAMES

The 17 standard colors are:

aqua, black, blue, fuchsia, gray, grey, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.

There are 141 named colors. You can check them all out at:
http://www.w3schools.com/cssref/css_colornames.asp

HEXADECIMAL VALUES

Example — color: #A53C8D

This is a pound sign followed by three pairs:

- The first pair equates to red value
- The second pair equates to green value
- The third pair equates to blue value

RGB VALUES

Example — color: rgb(165, 60, 141)

Three comma-separated numbers from 0 to 255

- The first number equates to red value
- The second number equates to green value
- The third number equates to blue value

CSS3 introduces a 4th value, "a", setting opacity

Example — color: rgba(165, 60, 141, 0.5)

5 DIFFERENT PROPERTIES TO STYLE FONT!

1. font-style:
   - example: font-style: italic;
   - values: "normal", "italic", or "oblique"
2. font-variant
   - example: font-variant: small-caps;
   - values: "normal", "small-caps", or "inherit"
3. font-weight
   - example: font-weight: bold;
   - values: "normal", "bold", "bolder", "lighter"
4. font-size:
   - example: font-size: 12px;
   - values:
   - fixed: pixels (ie 12px)
   - relative: percents (ie 100%) and ems (ie 1.5em)
5. font-family:

Specific to general, in a comma-separated list.
Fonts with two-word names are in quotes.

example:

font-family: Corbel,'Helvetica Neue', Helvetica, Arial, sans-serif;

BONUS FONT PROPERTIES!

text-transform

- example: text-transform: uppercase;
- values: "capitalize", "uppercase", "lowercase", or "none"

line-height

- example: line-height: 1.5;
- values: numbers, percents, pixels, or "ems"

SHORTHAND FONT DECLARATION

example:

- font: italic small-caps bold 34px/150% "Times New Roman", Times, serif;
- font-style → font-variant → font-weight → font-size / line height → font-family

you must declare at minimum the font-size and font-family

- example: font: 34px "Times New Roman", Times, serif;

CSS PROPERTIES

Many CSS properties have self-explanatory names:

- background-color
- font-family
- font-size
- color
- width
- height

Comprehensive list of all CSS properties: https://developer.mozilla.org/en-US/docs/Web/CSS/Reference