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## Activity 1: Introduction to Cascading Style Sheets (CSS)

In the lecture, we covered three ways of including **styles** (or **stylesheets**) into a html document. They are: **inline style**, **embedded style** and **external style**.

|  |
| --- |
| 1. <html> 2. <head> 3. <title>Webpage Title</title> 4. <link rel='stylesheet' href='style.css'/> 5. <style> 6. #content span { color:red; } 7. .more { color:rgba(0,255,0,0.5); } 8. </style> 9. </head> 10. <body> 11. <div id='content'> 12. <h1 style='color:navy;'>Arbitrary Heading</h1> 13. <p>Arbitrary paragraph containing <span>words</span>.</p> 14. <p><span class='more'>... more words here!</span></p> 15. </div> 16. </body> 17. </html> |

**Line 4:** What are the benefits for having external stylesheets?

Ans: Easier for developers, designers to group and organize styles together in different css file.

**Line 6 & 7:** What do the '#' and **'**.' characters refer to in CSS? What type of selector is used on line 6?

Ans:

* ‘#’ character means it will follow by an id of an element
* ‘.’ Character mean it will follow by a class

**Lines 11 & 14:** What is the difference between class and id selectors? Are there any restrictions on the number of elements that can have the same class or id?

Ans: id selector is more specific than class, because there should be only 1 unique id per element whereas class could have many element belong to it.

**Line 14:** What color will this span's text be?

Ans: Light green

## Activity 2: CSS Pseudo Classes and Elements

To denote a **pseudo class**, we use the colon character : — "*Pseudo" in Greek means "false" or "deception".*

What is a **pseudo class** or **element**?

Ans: Pseudo-class are use to select and style a special state of the element

Explain how the following pseudo class selectors affect hyperlinks.

|  |
| --- |
| a:link { ... }  a:visited { ... }  a:hover { ... }  a:active { ... } |

Ans:

* a:link : will affect the unvisited link i.e. change default color
* a:visited: will affect the already visited link i.e. change color
* a:hover: will affect the element when the mouse is hover over it i.e. lit up
* a:active: will affect the element when you click on the link

What benefits are there when grouping according to the **L**o**V**e **HA**te rule?

* **l**inked and **v**isited states together?
* **h**over and **a**ctive states together?

|  |
| --- |
| /\* Order matters when styling hyperlinks: Remember the LoVe HAte rule! \*/  a:link, a:visited { ... }  a:hover, a:active { ... } |

Ans: Link, visited state must be active before the hover or active state to be active. Because the last specification (active) will be applied, if active is not last the other specification will override the state

What will the following pseudo class selectors do to list and table row elements?

|  |
| --- |
| /\* Make list elements more readable \*/  li:first-child { ... }  li:last-child { ... }  /\* Make table row elements more readable \*/  tr:nth-child(2n+1) { ... } |

Ans: This pseudo class selector will style the first instance of li element for first-child

Style the last instance of li element for last-child

It will do the same for the row element of 2n+1 instance

To denote a **pseudo element** we use two colon characters ::

Pseudo elements are like pseudo classes except that a new "virtual" element is created. This is how pseudo classes different from pseudo elements.

Describe the elements affected and the pseudo elements that are created with the following styles:

|  |
| --- |
| /\* Make paragraph page elements more enticing \*/  #leader p::first-line { ... }  .story p::first-letter { ... }  /\* Increase the impact of blockquote elements \*/  blockquote::before {  content: "\201C" ;  font-size: 300%;  margin-right: 0.2em;  }  blockquote::after {  content: "\201E";  font-size: 300%;  margin-left: 0.2em;  } |

Ans:

#leader p::first-line :Select the first line of the paragraph that has id leader for styling

.story p::first-letter Select the first letter of the paragraph in class story for styling

blockquote::before Insert the letter \201C before each blockquote

blockquote::after Insert the letter \201E after each blockquote

The paragraph styles are also examples of **contextual** selectors. Explain what this means? Is there a limit on the number of id='leading' and class='story' blocks we can have in the webpage?

Ans:

* Contextual selectors: A selector that let you stylize an element in a specific context like a paragraph in a div element.
* There is no limit on the number of id and class block we can have in the webpage. However, we should differentiate the id number.

Name some new HTML5 pseudo states. How do these new pseudo states reduce work for web developers?

::first of type: Select the first child of any element. Reduce the time to rewrite every type of child of that element

::before, ::after : use for insert content before or after and element. Reduce coding time for reoccurring elements

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## Activity 3: Replacing Class Selectors with a Contextual Selector

If you over-rely on class selectors, an "inevitable" typo is bound to be made (see example below). How can switching to a contextual based solution reduce the number of class attributes below and make the styling foolproof?

**WARNING:** THIS IS A COUNTER EXAMPLE, ie an example of bad code. Don't copy! See lab for better code!

|  |
| --- |
| a.navlinks:link, a.navlinks:visited {  /\* Non-interacted css styles here \*/  }  a.navlinks:hover, a.navlinks:active {  /\* Interacted css styles here \*/  }  <nav>  <ul>  <li><a href='home.php' class='navlinks'>Home</a></li>  <li><a href='contact.php' class='navlinks'>Contact</a></li>  <!-- Uh oh ... typo below! -->  <li><a href='shop.php' class='badlinks'>Shop</a></li>  </ul>  </nav> |

Ans: Contextual selector reduce the number of time you have to retype the class attribute name for every element since you can specify any specific element to change.

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## Activity 4: CSS Attribute Selectors

What type of hyperlink does the following css selector style? What is displayed and where?

|  |
| --- |
| a[target='\_blank']::after {  content: url('external-icon.png');  } |

Ans: The selector style a hyperlink that open in another tab and display an icon/image next to the hyperlink

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## Activity 5: Color Models

What colors do #DB8 (12 bit color) and #DDBB88 ( 24 bit color) represent?

Ans: 12-bit color: D represent bit for red color, B represent bits for green, 8 represent bits for blue

24-bit: represent the same thing, but the extra digit adds a small change to each channel (color depth)

How many colors can be represented with these two formats?

Ans: 12-bit: 4096 colors

24-bit: 16.7 million colors and shades

What does each character in the color format represent?

Ans: Each character represents a number starting with A as 11 and ending with F as 16

Are #GGA and #GGGGAA real colors? If not, why not?

Ans: No, because Character G is out of bound for Hexidecimal

What is the difference between rgb(255, 100, 255) and rgba(255, 100, 255, 0.5)?

Ans: rgba has an extra element for opacity of color

How does the **HSL** color model work and what advantages does it have over the **RGB** color model?

Ans: HSL: Hue select the color on the color wheel, based on degree of rotation

Saturation: Select the saturation level of that color, 100% saturation is full color and 0% is grey

Light: How much brightness is in the color, 100% will give you white regardless of Hue and Saturation level

It is easier for human to read and understand than RGB color