**Cascading Style Sheets (CSS)**

- language used to specify the presentation aspects (e.g. layout and formatting) of structurally marked up documents

- developed by Hakom Wium Lie (CHSS) and Bert Bos (SSP)

- Versions:

CSS 1 (December 1996)

CSS 2.1 (June 2011)

CSS 3

- CSS Preprocessors, CSS Frameworks

Sass, Less, 960 Grid System, Bootstrap, Foundation, Materialize, etc.

**HTML/XHTML Stylesheets**

- author styles

> external stylesheets (recommended)

uses the link element

(ref, type, href, media, title

\*alternate stylesheet supported in firefox

> embedded styles

responsive design

for quick prototyping

> inline styles

- user agent styles (example default CSS 2.1 stylesheet for HTML 4)

CSS Statements

- At-Rules

@charset

@import

@media

@font-face (define and download webfonts)

@keyframes (keyframe animation)

@page

- CSS Rule Sets (aka CSS Rules, Style Rules)

consists of a selector, followed by a brace-enclosed declaration block \_\_\_\_\_\_

e.g. \*body is the selector

body {

display: none;

color: blue;

}

CSS Selectors

- selector

> structure used as a condition in a CSS rule to determine which elements in the document tree are matched by the selector and are thus targeted by the formatting specified in the CSS rule declaration block

> the matched elements are called the subjects of the selector \_\_\_

- selector syntax

> chain of one or more sequences of simple selectors separated by combinators, with one pseudo-element possibly appended to the last sequence

example: div #abc > p.xyz[title] + span:first\_child::after

>, + = contributor

after = pseudo-element

span:first\_child::after = pseudo-class

> sequence of simple selectors

- chain of simple selectors not separated by combinators

- always starts with a type selector or a universal selector

- cannot contain other type selectors or universal selectors

> group of selectors

- comma - separated list of selectors representing the union of all elements selected by each of the selectors in the list

e.g. h1, h2, h3

- simple selectors

> type selector (p, div, span)

> universal selector (\*)

> attribute selector

[attr]

[attr=value]

[attr~=value] (class attribute)

[attr|=value] (language attribute)

[attr^=value] (start CSS3)

[attr$=value] (end CSS3)

[attr\*=value] (anywhere in between CSS3)

> class selector (<p class="xyz">)

> ID selector (<div id="abc"> \*for ID attribute)

> pseudo-selector

- dynamic psuedo-class

link pseudo-classes

:link

:visited

user action pseudo-classes

:hover

:active

:focus

- target pseudo-class

:target (CSS3)

- language pseudo-class

:lang()

- UI element states psedo-class

:enabled (CSS3)

:disabled (CSS3)

:checked (CSS3)

:indeterminate (CSS3)

- structural pseudo-class

:root

:first-child

:last-child

:only-child

:nth-child()

:nth-last-child

:first-of-type

:last-of-type

:only-of-type

:nth-of-type()

:nth-last-of-type()

:empty

\*all CSS3 except first-child

- negation

:not (CSS3)

> combinators

- descendant combinator (whitespace ie space, tab, line feed, carriage return, form feed)

- child combinator (>)

- sibling combinators

adjacent sibling combinator (+)

general sibling combinator (~) CSS3

> pseudo-elements

::first-letter , :first-letter

::first-line , :first-line

::before , :before

::after , :after

CSS Rule Precedence

> by origin and importance

user agent important declarations

user important declarations

author important declarations

author normal declarations

user normal declarations

user agent normal declarations

> by specificity

inline style

number of ID selectors

number of class selectors, attribute selectors and pseudo-classes

number of type selectors and pseudo-elements

> by order