**Cascading Style Sheets**

-language used to specify the presentation aspects(i.e. layout and formatting of structurally marked up(e.g. HTML, XML, XHTML, SVG, etc.) document)

- developed by Hakon Wium Lie(HTML Cascading Style Sheets/CHSS) and Bert Bos(Stream-based Style Sheet Proposal/SSP)

**CSS Rules:**

1.Selector - structure used as a condition

2. Selector Syntax - chain of one or more sequences.

**Simple Selectors:**

type selector - p{

}

universal selector - \*{

}

attribute selector

-[attr]

-[attr=value]

-[attr~=value]

-[attr|=value] - language attribute

-[attr^=value]

-[attr$=value]

-[attr\*=value] -end

class selector

ID selector - #nav{

}

pseudo classes

-first child pseudo class (:first-child)

li:first-child{

}

-link pseudo class

a:link, a:visited{

}

-user action pseudo class

:hover

:active

:focus

-target pseudo class

:target URL #x

-language pseudo class

:lang

**CSS Rule Precedence**

**1. by origin**

* user agent important declarations(highest priority)
* user important declarations
* author important declarations
* user normal declarations
* user agent normal declarations
* user agent normal declarations (normal priority)

**2. by specifity**

- the more specific the higher the

* Inline style
* Number of ID selectors
* Number of class selectors, attribute selectors and pseudo classes
* Number of type selectors and pseudo-elements

**3. by order**

- the later declaration wins

**CSS Declarations**

1. properties

* Shorthand properties
* Vendor specific extensions (a.k.a vendor prefixes)
* Experimental value

2. values

* Keywords
* Numbers (integers and reals in decimal notation
* Dimensions – numbers with units
* Length – font-relative: em, ex, ch, rem-adjustable
* View port percentage: vw, vh, vmin, vmax
* Absolute lengths: cm, mm, q, in, pi, pc, px
* Angle units: deg, grad, rad, turn
* Duration units: s, ms
* Frequency units: hz khz
* Resolution: dpi, dpcm, dppx
* Percentages
* URLs and URIs
* Colors
* Strings
* Functions

**CSS Preprocessors**

LESS

SASS

SCSS

**HTML Preprocessors**

* Haml
* Markdown
* Slim
* Pug

**JavaScript**

-developed by circa 1995 by Brendan Eich at Netscape Communications as the scripting language for the Netscape Navigator Browser

-formerly called Mocha then LiveScript then JavaScript

-standardized by ECMA International as ECMAScript

-externally link to HTML(you can place it anywhere)

- Linked/Embedded in web pages using the <script> element

* Linked:

<script type=”text/javascript” src=”scripts.js” /> </script>

* Embedded (either in the <head> or the <body> element)

<script type=”text/javascript”>

<!—hidescript from non-JavaScript browsers…

/\* script code goes here \*/

//end of scripting hiding … -->

</script>

<noscript>

…content to show when scripting not available

</noscript>

Defer- execute it at the end

Async-asynchronous

Window-global object