CSS (Cascading Style Sheets)

- A style sheet language used for designing the presentation of a document written in markup language. One of the most used in creating styles of web pages and user interfaces in HTML and XML.

Versions

CSS 1

* The first CSS specification to become an official W3C Recommendation, published on December 17, 1996.

CSS 2

* CSS level 2 specification was developed by the W3C and published as a recommendation in May 1998. A superset of CSS 1, CSS 2 includes a content of new features or capabilities like absolute, relative, and fixed positioning of elements and z-index, the concept of media types, support for aural style sheets (which were later replaced by the CSS 3 speech modules) and bidirectional text, and new font properties.

CSS 2.1

* CSS level 2 revision 1, often referred to as "CSS 2.1", The fixed version of CSS 2, removes poorly supported or not fully interoperable features and adds already implemented browser extensions to the specification.

CSS 3

* CSS 3is a larger specification than CSS 2 defining various features and is divided into many separate documents called "modules". Each module extends features that are present in CSS 2.

CSS Frameworks

SASS

CCSS

960 Grid System

Bootstrap

Foundation

Materialize

Reset CSS

* Create something like the default stylesheet and link to documents

Media

* Screen, print, speech (CSS3)

Media query

* Information about the device used
* For responsive designs

Alternate stylesheet

* For alternative designs
* Goes along with title (for the name of the alt)

CSS Statements

* At-Rules (not all are fully supported)
  + @charset – character set used
  + @import – get another css
  + @namespace – formatting svg
  + @document – rules for a specific page
  + @font-face – define a font; embedding font
  + @keyframes – for animation
  + @media – media queries
* CSS Rule Sets
  + Consists of a selector

CSS Selectors

* Selectors
  + Determine which elements are to be formatted
  + Matched elements are called subjects
* Selector syntax
  + Chain of sequences of simple selectors separated by combinators, with one pseudo-element possibly appended to the last sequence
  + Sequence of simple selectors
    - Chain of simple selectors not separated
    - Always start with a type selector or universal selector
    - Cannot contain other type selector or universal selector in one sequence

Simple Selectors

* Type selector
* Attribute selector
  + Targeting an element based on the attribute
  + [attr]
  + [attr=value] – attribute must be exact
  + [attr~=value] – one value among space-separated values
  + [attr|=value] – for targeting the lang attribute; starts with the value
  + [attr^=value] – starts with
  + [attr$=value] – ends with
  + [attr\*=value] – anywhere
* Class selector
  + Starts with a dot (.)
  + .p {}
* ID selector
  + Starts with the pound sign (#)
  + #a {}
* Pseudo-class
  + Implicit class
  + Dynamic
    - Link
      * :link – all links
      * :visited – links that were visited
    - User-action
      * :hover – pointer hovering over an element
      * :active – activate elements (i.e. clicking a button)
      * :focus – for forms; focus is moved to the element
  + Target
    - :target – targeting specific element when visiting
  + Language
    - Target language attribute
    - :lang()
  + UI element states
    - :enabled
    - :disabled
    - :checked
    - :indeterminate
  + Structural
    - DOM tree
    - :root – the root element
    - :first-child – element that is a first child
    - :last-child – element that is the last child
    - :only-child – only child of an element
    - :nth-child() – target child based on number
    - :nth-last-child() – count from last
    - :first-of-type – first of its type in a section
    - :last-of-type – last of its type in a section
    - :only-of-type – only of its type in a section
    - :nth-of-type() – nth of its type in a section
    - :nth-of-last-type() – start counting from last
    - :empty – does not have any content
  + Negation
    - Descendant
      * White space (i.e. space, tab, line feed, carriage return, form feed)
    - Child (>)
      * Immediate descendant
    - Sibling
      * Same parent
      * Adjacent sibling (+) – immediately follows
      * General sibling (~) – any element that follows
    - Pseudo-element
      * :first-letter/::first-letter – just the first letter
      * :first-line/::first-line – first line of the content
      * :before/::before – content before an element
      * :after/::after – content after an element

CSS Statements

a. At rules

i. @charset

ii. @import

iii. @media

iv. @page

CSS Declarations

* Properties
* Shorthand properties
* Vendor specific extensions (aka vendor prefixes)
* Values
* Keywords
* Numbers (int, real numbers in decimal notation)
* Lengths
* Length units:
* em
* px
* in
* cm
* mm
* pt (point 1/72”)
* pc (pica 1/6”)
* Percentages
* URLs and URIs
* Counters
* Colors
  + Rgb(\_,\_,\_)
  + Rgba(\_,\_,\_,\_) a: alphachannel/opacity
  + Hsl: hue, saturation, lightness hsl(\_,\_,\_) ang hsla(\_,\_,\_,\_)
* Strings

Others w/c are also used as the same, but not lengths:

* angles: transformation
  + 1. deg
  + 2. rad
  + 3. grad
  + 4. turn
* time: animation
  + 1. ms
  + 2. s
* frequencies: speech
  + 1. hz
  + 2. khz
* iv. resolution