CSS Fundamentals

Before you start with CSS webpages usually begin as a sketch!

a layout of where everything is going to be on the page as well as color and style of font, which is all CSS.

The are 3 types of Cascading Style Sheets:

inline - old, found in the html tags, not used anymore

```
<h1 style="color: blue; margin-left: 30px;">
```

infile - again old, but would be found in the head section

```
<head>
    <style type="text/css">
        place rules here
    </style>
```

external - a CSS file with rules that can be used by multiple pages.

```
<link rel="stylesheet" href="styles.css">
```

linked in the head section

the rel attribute stands for "relationship", and is one of the key features of the <link> element — the value denotes how the item being linked to is related to the containing document.

href - The URL that the hyperlink points to. Links are not restricted to HTTP-based URLs — they can use any URL scheme supported by browsers:

- Telephone numbers with tel: URLs
- Email addresses with mailto: URLs
- SMS text messages with sms: URLs
- Executable code with javascript: URLs
- While web browsers may not support other URL schemes, websites can with registerProtocolHandler()

Moreover, other URL features can locate specific parts of the resource, including:

- Sections of a page with document fragments
- Specific text portions with text fragments
- Pieces of media files with media fragments

CSS 2.1 vs CSS 3

CSS3 aims to extend CSS2. It took CSS2 9 years to reach Recommendation status by W3c. To help accelerate the standardization, CSS was divided into modules (CSS3)

rounded corners, shadows, gradients, transition/aminations and new layouts multicolumn, flex boxes, grid layouts.

Rules Cascade - order matters inheritance applies

The last rule Rules - if two selectors are identical the second rule takes precedence, usually but it really is:

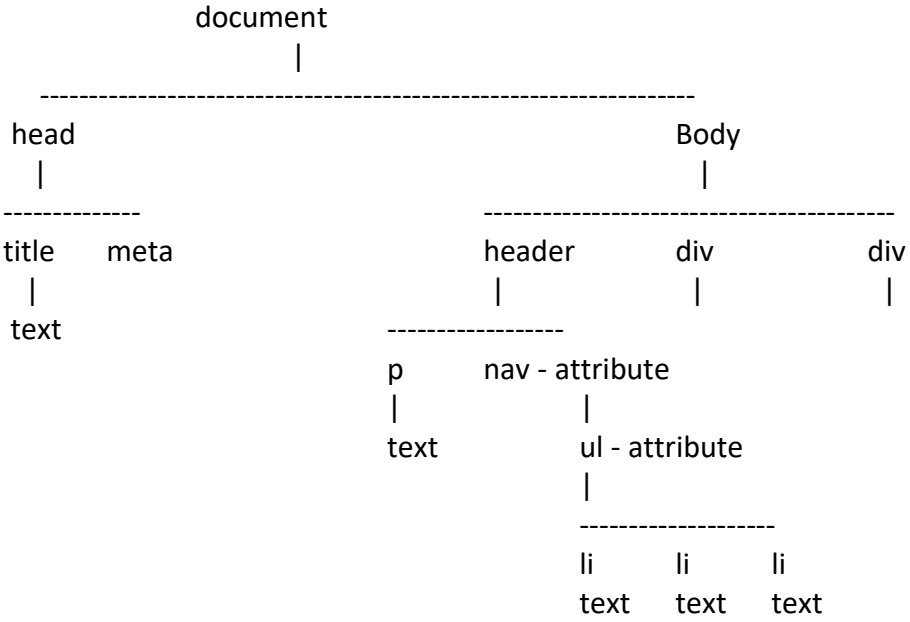
1. Importance	!important	don't use unless you have to override foreign CSS like Bootstrap or normalize CSS
2. Specificity	Type, class, id	
3. Source order	the last rule rules	

The common rule for all non-html files is to place them in their own folders so images should be in an image folder and CSS in a styles folder.

The Dom is a tree-like structure. Each element, attribute, and piece of text in the markup language becomes a Dom node, The nodes are defined by their relationship to other Dom nodes.

4 types of nodes:

Document (only 1), Element (every tag), Attribute (of a tag), and Text



Browsers parse the HTML and create a Dom then parses the CSS applying the rules, It then "paints" the visual representation to the screen.

syntax of a CSS rule

```
h1 {              ← selector with curly braces
  color: red;             ← declarations end with semicolon
  font-size: 5em;         property / value pairs
}
```

Selectors are case sensitive there are multiple kinds

Base or simple selectors

Universal	*	Targets all elements of any type
Type/Selector	h2, p, div	
Class	.top .note	can be used for multiple tags

If the browser encounter's CSS it doesn't understand it ignores it and moves on to the next declaration. Sometimes this is due to misspelling (not often with today's editors and linters) but usually due to browsers themselves as newer rules may not be added to the browser yet.
To keep up to date on what browser can use
https://Caniuse.com

Not only do browsers have different capabilities but they also apply CSS rules differently which is why normalize.css was created it makes browsers render all elements more consistently and in line with modern standards. It targets only the styles that need normalizing. Does this mean you need to download it into your page? No, you can use a CDN

Content delivery/distribution network - is a geographically distributed network of proxy serves (a server that acts as an intermediary for requests from clients seeking resources from other servers) and their data centers,

The goal of a CDN is to provide high availability and high performance by distributing the service spatially relative to end-users

server in Cali - no reason to send all the data from here when there is a:

CDN in Memphis - which is closer, so data can come from a shorter distance to a Client in Oxford, MS

Issues: CDN providers profit either from direct fees paid by content providers using their network, or from user analytics and tracking data collected as their scripts are being loaded onto customer's websites

https://cdnjs.com cloudfare.com
favicon's .cc and .io

Sass Script
Sass Syntactically awesome style sheets
it is a preprocessor scripting language that is interpreted or compiled into CSS. The newer syntax SCSS (sassy CSS) uses block formatting like CSS. The original syntax
used "indented syntax" like python and used newline characters to separate rules. It provides a mechanism to seem like OOP. It introduced variables, nesting of code, loops
(@for, @each and @while), arguments, and more