**CSS - Cascading style sheets**

* Cascading Style Sheets (CSS) is a stylesheet language describe how documents are presented on screens.
  + **style sheet language** (style language) : expresses the presentation of structured documents and can be reused.
  + **Cascading in CSS** : Since more than one stylesheet rule could apply to a particular piece of HTML, there has to be a known way of determining which specific stylesheet rule applies to which piece of HTML

**Type of CSS :**

* **External Style Sheet :** Define style sheet rules in a separate .css file and then include that file in your HTML document using HTML <link> tag
* **Internal Style Sheet :** Define style sheet rules in header section of the HTML document using <style> tag
* **Inline Style Sheet :** Define style sheet rules directly along-with the HTML elements using style attribute
* **Syntax:**
  + Selector {property:value}
  + Example : p { font-size : 12px, color: #474747; }

**Different selectors :**

* **Element selector** : selects element based on tag
  + - p { font-size : 12px, color: #474747; }, this would make all the <p> tags in page to have font-size : 12px and the set the color to #474747;
* **ID selector :** selects element based on the id attribute
  + - #paragraph1 { font-size : 12px, color: #474747; }, this will apply the style only to the paragraph which has the id set to paragraph1
* **Class selector :** selects element based on class attribute
  + - .paragraph\_cls { font-size : 12px, color: #474747; }, this will apply style only to those paragraphs which has the class paragraph\_cls
* **Group different selectors :** Suppose you want the same set of styles to applied to more than one elements, either you could use the same class name for all the elements or group specific types and write the style once.
  + - p { font-size : 12px, color: #474747; }  
      h5 { font-size : 12px, color: #474747; }  
      h4 { font-size : 12px, color: #474747; }
    - The above example can be grouped to avoid repetition  
      P, h5, h4 { font-size : 12px, color: #474747; }

**Colors:**

* In CSS colors are mostly specified using the following ways
  + Color name : black, red, green, yellow
  + RGB value : rgb(255, 172, 0)
  + HEX value : #FF0000, #000000, #FFFFFF

**Backgrounds :**

* Background-color : specify bg color for an element
  + p { background-color: #e2e2e2; }
* Background-image : sets bg image
  + p { background-image: url("https://www.planwallpaper.com/static/images/colorful-triangles-background\_yB0qTG6\_dyJop8X.jpg"); }
* Background-repeat : repeats an image vertically or horizontally using repeat-y, repeat-y properties
  + p { background-image: url("https://www.planwallpaper.com/static/images/colorful-triangles-background\_yB0qTG6\_dyJop8X.jpg"); background-repeat: repeat-x;}
  + No-repeat : can be used to restrict image repeat.

**Fonts :**

* font-family: Arial, 'Helvetica Neue', Helvetica, sans-serif;
* font-size: 24px;
* font-weight: bold;

**Text :**

* Color:”red”;
* Letter-spacing:3px;
* Word-spacing:5px;
* Text-align:center;
* text-decoration:underline; // line-through, overline, blink
* text-transform:capitalize; // uppercase, lowercase

**Border :**

* border : 1px solid red;

**Links : (pseudo-classes)** // add special effects to element, without using any client side scripts (javascript)

* a:link {color: #e2e2e2;}
* a:visited {color: #cccccc;}
* a:hover {color: #FF0000;}
* a:active {color: #eeeeee;}

**Margin :**

* margin: 2px 2px 4px 4px; // top, right, bottom, left
* margin-top : 4px;
* margin-right : 4px;
* margin-bottom : 2px;
* margin-left : 2px;

**Padding :** create space between content of the element and its border

* padding: 2px 2px 4px 4px; // top, right, bottom, left
* padding-top : 4px;
* padding-right : 4px;
* padding-bottom : 2px;
* padding-left : 2px;

**Position :**

* position : relative; // changes position of element relative to where it is supposed to appear
* position : absolute; // position relative to nearest positioned element
* position : fixed; // positions relative to viewport

**px vs em**

* em is a scalable unit.
* If depends on the current font-size of the document.
* If the font-size of the document is 20px;
* Then 1em = 20px;

**Layers :**

* **Z-index** property allows to create different layers in your webpage
  + <div style="background-color:red;padding:20px;width:200px;position:relative;top:60px;">this is a red div</div>  
    <div style="background-color:yellow;padding:20px;position:relative;width:200px;z-index:999">this is a yellow div</div>

**Pseudo Elements :**

* Add special effects to some selector.
* No need to client scripts to achieve these effects
* **:first-line**
  + p:first-line { text-decoration: underline; }
* **:first-letter**
  + p:first-letter { font-size: 20px; }
* **:before**
  + p:before { content : “Read more”};
* :**after**
  + p:after { content : “Read more”};