Introduction to CSS
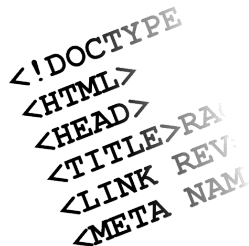
By Amit Tyagi

What is CSS

- **C**ascading **S**tyle **S**heets
- Contains the rules for the presentation of HTML.

HTML + **CSS** = **Web Page**

- CSS was introduced to keep the presentation information separate from HTML markup (content).

Before CSS

- Initially Designers used presentation tags like (FONT, B, BR, TABLE etc.) and spacers GIFs to control the design of web pages.

```
<body>
<table width="600" border="10" cellpadding="0" cellspacing="0" bordercolor="#FF00FF">
  <tr>
    <td><table width="100%"  border="10" cellpadding="0" cellspacing="0" bordercolor="#0000FF">
      <tr>
        <td><table width="100%"  border="10" cellpadding="0" cellspacing="0" bordercolor="#FF0000">
          <tr>
            <td> </td>
          </tr>
        </table></td>
      </tr>
      <tr>
        <td><table width="100%"  border="10" cellpadding="0" cellspacing="0" bordercolor="#FF0000">
          <tr>
            <td> </td>
            <td> </td>
          </tr>
          <tr>
            <td> </td>
            <td> </td>
          </tr>
        </table></td>
      </tr>
      <tr>
        <td><table width="100%"  border="10" cellpadding="0" cellspacing="0" bordercolor="#FF0000">
          <tr>
            <td> </td>
          </tr>
        </table></td>
      </tr>
    </table></td>
  </tr>
</table>
</body>
</html>
```

- Any modification in the design of websites was a very difficult and boring task , as it evolves manually editing every HTML page.

Providing support for multiple browsers was a difficult task.

This site is best viewed using current versions of Microsoft Internet Explorer at a screen resolution of 800 x 600 or higher.

Sources of Styles

Author (developer) Styles

- **Inline Styles** - As inline attribute "style" inside HTML tags

  ```
  <div style="font-weight: bold;">I am bold</div>
  ```

- **Embedded Styles** - As embedded style tag with in HTML document.

  ```
  <html>
      <head>
              <title>Welcome to Vendio!</title>
              <style>
                 .footer {
                    width:90%;
                 }
              </style>
              -------
      </html>
  ```

- **Linked Styles** - Inside separate files with .css extension

  ```
  <link rel="stylesheet" href="external.css" type="text/css" />
  ```

Sources of Styles(contd.)

- **User Style sheets**

  This file contains the user created styles .

  `[firefox profile folder]/ chrome/userContent-example.css`
  `is the current user's style sheet file for the firefox.`

- **Browser default style sheet**

  This file contains default styles for all users of a browser

  `[firefox folder]/res/html.css is the default style sheet`
  `file for the firefox.`

CSS Selectors

- ID based (#)

HTML   **CSS**

```
<div id="content">        #content {
    Text                         width: 200px;
</div>                    }
```

ID selectors should be used with single elements.

Class based selector

- ## Class (.)

HTML	**CSS**

```
<div class="big">          .big{
   Text                        width: 200px;
</div>                     }
<div>
   <span class="big">some text </span>
</div>
```

Class based styles can be used by **multiple** HTML elements.

Tag based selectors

- Tag (Tag name)

HTML

```
<div>
  Text
</div>
<div>
  <span>some text </span>
</div>
<span>some other text </span>
```

CSS

```
DIV {
        width: 200px;
}
SPAN {
        font-size:130%;
}
```

Grouping

- Multiple selectors can be grouped in a single style declaration by using , .

```
H1, P , .main {
  font-weight:bold;
}
```

Descendant selectors

Descendant selectors are used to select elements that are descendants (**not necessarily children**) of another element in the document tree.

HTML

```
<div class="abc">
  <div>
    <P>
      Hello there!
    </p>
  </div>
</div>
```

CSS

```
DIV.abc P {
    font-weight:bold;
}
```

Child selectors

A child selector is used to select an element that is a direct child of another element (parent). Child selectors will not select all descendants, only direct children.

HTML

```
<div >
  <div class="abc">
    <P>
      Hello there!
    </p>
  </div>
</div>
```

CSS

```
DIV.abc > P {
    font-weight:bold;
}
```

Universal selectors

Universal selectors are used to select any element.

```
*  {

    color: blue;

  }
```

Adjacent sibling selectors

Adjacent sibling selectors will select the sibling immediately following an element.

```
DIV.abc + P {
    font-weight: bold;
}
```
will work for
```
<div>
  <div class="abc">Message</div>
  <P>Hello there!</p>
</div>
```

Attribute selectors

Attribute selectors selects elements based upon the attributes present in the HTML Tags and their value.

```
IMG[src="small.gif"] {
  border: 1px solid #000;

}
```

will work for

`<img src="small.gif" />`

CSS Pseudo-classes

selector:pseudo-class { property: value }

:link

:visited   } Link (A tag) related pseudo classes
:hover
:active

:after

:before

:first-child

:focus

:first-letter

:first-line

:lang

CSS Values

- **Words:** text-align:center;.

- **Numerical values:** Numerical values are usually followed by a unit type.

  font-size:12**px**;

  12 is the numerical value and px is the unit type pixels.
  - **Absolute Values – in, pc, px, cm, mm, pt**
  - **Relative Values – em, ex, %**

- **Color values:** color:**#336699** or color#369 or rgb(255, 255, 255).

Categories of CSS properties

- Positioning and layout handling related.
- Background related properties.
- Font and text related
- Links related.
- Lists related.
- Table related.

Cascade

The CSS cascade assigns a weight to each style rule. When several rules apply, the one with the greatest weight takes precedence.
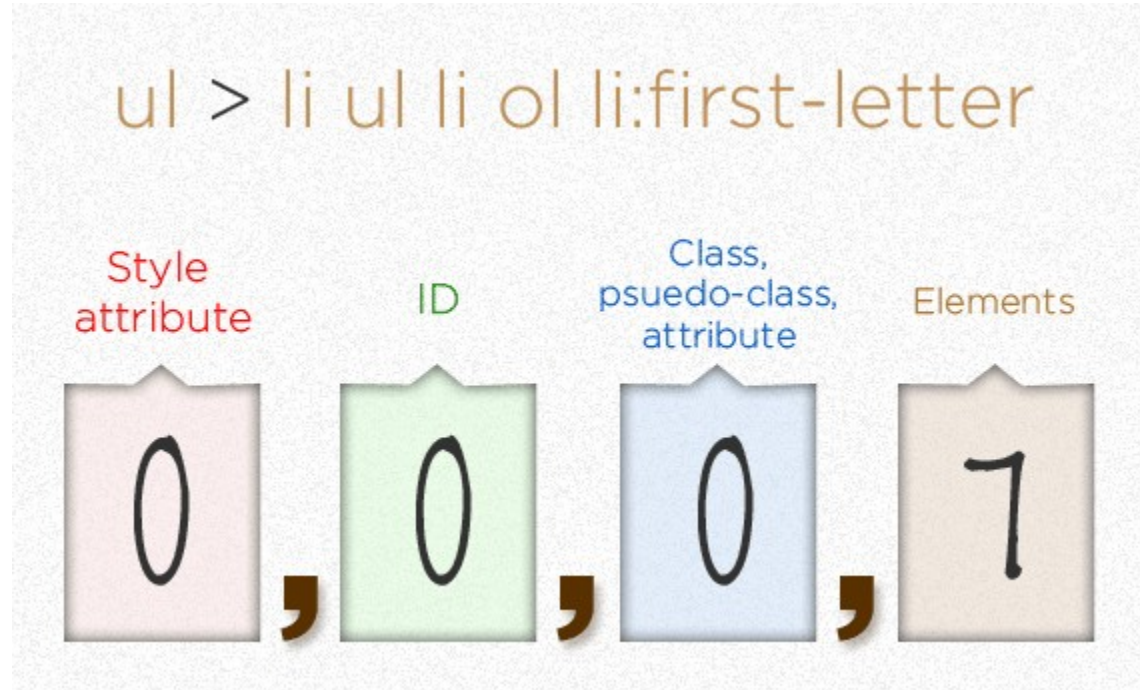
Order of preference for various styles:

- – Default browser style sheet (weakest)
- – User style sheet
- – Author style sheet
- – Author embedded styles
- – Author inline styles (strongest)

CSS Specificity

Rule 1. CSS File >> Embedded >> Inline

Rule 2. TAG >> class >> ID

ul > li ul li ol li:first-letter

Style attribute	ID	Class, psuedo-class, attribute	Elements
0,	0,	0,	1

Inheritance

- Styles that relate to text and appearance are **inherited** by the descendant elements.

- Styles that relate to the appearance of boxes created by styling DIVs, paragraphs, and other elements, such as borders, padding, margins are **not inherited**.

Refrences

- *www.w3schools.com*
- *www.w3.org*
- *World wide web*