Introduction to CSS

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Content, Style, Functionality

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.
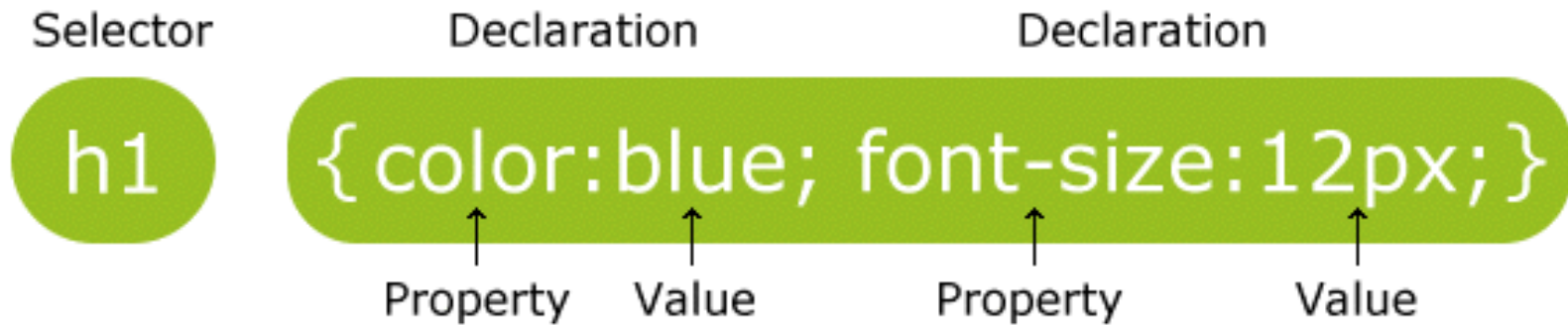
Sources of Styles

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" />
  ```

CSS Syntax

- A CSS rule set consists of a selector and a declaration block:

- **Example** - A CSS declaration always ends with a semicolon, and declaration groups are surrounded by curly brackets:
  `p {color:red;text-align:center;}`

CSS Selectors

- ID based (#)

HTML

```
<div id="content">
  Text
</div>
```

CSS

```
#content {
      width: 200px;
}
```

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   CSS

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

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 , 7

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**.

TEXT FORMATTING

Text Color

```
<!DOCTYPE html>
<html>
<head>
<style>

body {color:red;}

h1 {color:#00ff00;}

p.ex {color:rgb(0,0,255);}

</style>
</head>

<body>

<h1>This is heading 1</h1>

<p>This is an ordinary paragraph. Notice that this
text is red. The default text-color for a page is
defined in the body selector.</p>

<p class="ex">This is a paragraph with class="ex".
This text is blue.</p>

</body>
</html>
```

This is heading 1

This is an ordinary paragraph. Notice that this text is red. The default text-color for a page is defined in the body selector.

This is a paragraph with class="ex". This text is blue.

Text Alignment

```
<!DOCTYPE html>
<html>
<head>
<style>

h1 {text-align:center;}
p.date {text-align:right;}

</style>
</head>

<body>

<h1>CSS text-align Example</h1>
<p class="date">May, 2009</p>
<p class="main">In my younger and more vulnerable
years my father gave me some advice that I've been
turning over in my mind ever since. 'Whenever you
feel like criticizing anyone,' he told me,
'just remember that all the people in this world
haven't had the advantages that you've had.'</p>

</body>
</html>
```

CSS text-align Example

May, 2009

In my younger and more vulnerable years my father gave me some advice that I've been turning over in my mind ever since. 'Whenever you feel like criticizing anyone,' he told me, 'just remember that all the people in this world haven't had the advantages that you've had.'

Text Decoration

```
<!DOCTYPE html>
<html>
<head>
<style>

a {text-decoration:none;}
a.underline {text-decoration:underline;}

</style>
</head>

<body>


<p>Link to: <a
href="http://www.w3schools.com">W3Schools.com</a></p>

<p>Link to: <a href="http://www.google.com"
class="underline">google.com</a></p>

</body>

</html>
```

Link to: W3Schools.com

Link to: google.com

Text Transformation

```
<!DOCTYPE html>
<html>
<head>
<style>
p.uppercase {text-transform:uppercase;}
p.lowercase {text-transform:lowercase;}
p.capitalize {text-transform:capitalize;}
</style>
</head>

<body>
<p class="uppercase">This is some text.</p>
<p class="lowercase">This is some text.</p>
<p class="capitalize">This is some text.</p>
</body>
</html>
```

THIS IS SOME TEXT.

this is some text.

This Is Some Text.

and more…

http://www.w3schools.com/css/css_text.asp

All CSS Text Properties

Property	Description
color	Sets the color of text
direction	Specifies the text direction/writing direction
letter-spacing	Increases or decreases the space between characters in a text
line-height	Sets the line height
text-align	Specifies the horizontal alignment of text
text-decoration	Specifies the decoration added to text
text-indent	Specifies the indentation of the first line in a text-block
text-shadow	Specifies the shadow effect added to text
text-transform	Controls the capitalization of text
unicode-bidi	Used together with the direction property to set or return whether the text should be overridden to support multiple languages in the same document
vertical-align	Sets the vertical alignment of an element
white-space	Specifies how white-space inside an element is handled
word-spacing	Increases or decreases the space between words in a text

CSS **Fonts**

Font Family

Difference Between Serif and Sans-serif Fonts

Sans-serif   Serif   Serif (red serifs)

CSS Font Families

In CSS, there are two types of font family names:

- **generic family** - a group of font families with a similar look (like "Serif" or "Monospace")
- **font family** - a specific font family (like "Times New Roman" or "Arial")

Generic family	Font family	Description
Serif	Times New Roman Georgia	Serif fonts have small lines at the ends on some characters
Sans-serif	Arial Verdana	"Sans" means without - these fonts do not have the lines at the ends of characters
Monospace	Courier New Lucida Console	All monospace characters have the same width

Note: On computer screens, sans-serif fonts are considered easier to read than serif fonts.

Font Family

```
<!DOCTYPE html>
<html>
<head>
<style>
p.serif{font-family:"Times New Roman",Times,serif;}
p.sansserif{font-family:Arial,Helvetica,sans-serif;}
</style>
</head>

<body>
<h1>CSS font-family</h1>
<p class="serif">This is a paragraph, shown in the Times
New Roman font.</p>
<p class="sansserif">This is a paragraph, shown in the
Arial font.</p>

</body>
</html>
```

CSS font-family

This is a paragraph, shown in the Times New Roman font.

This is a paragraph, shown in the Arial font.

Font Style

```
<!DOCTYPE html>
<html>
<head>
<style>
p.normal {font-style:normal;}
p.italic {font-style:italic;}
p.oblique {font-style:oblique;}
</style>
</head>

<body>
<p class="normal">This is a paragraph, normal.</p>
<p class="italic">This is a paragraph, italic.</p>
<p class="oblique">This is a paragraph, oblique.</p>
</body>

</html>
```

This is a paragraph, normal.

This is a paragraph, italic.

This is a paragraph, oblique.

Font Size

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {font-size:40px;}
h2 {font-size:small;}
p {font-size:12px;}
</style>
</head>
<body>

<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<p>This is a paragraph.</p>
<p>Specifying the font-size in px allows Internet Explorer
9, Firefox, Chrome, Opera, and Safari to resize the text.
</p>
<p><b>Note:</b> This example does not work in IE, prior
version 9.</p>

</body>
</html>
```

This is heading 1

This is heading 2

This is a paragraph.

Specifying the font-size in px allows Internet Explorer 9, Firefox, Chrome, Opera, and Safari to resize the text.

Note: This example does not work in IE, prior version 9.

and more…

http://www.w3schools.com/css/css_font.asp

All CSS Font Properties

Property	Description
font	Sets all the font properties in one declaration
font-family	Specifies the font family for text
font-size	Specifies the font size of text
font-style	Specifies the font style for text
font-variant	Specifies whether or not a text should be displayed in a small-caps font
font-weight	Specifies the weight of a font

References

- *www.w3schools.com*
- *www.w3.org*
- *World wide web*
- *Amit Tyagi – Introduction to CSS*

Exercise