(Lecture (6) ~~17/10/2019 Thursday~~)

Web Development Programming Language
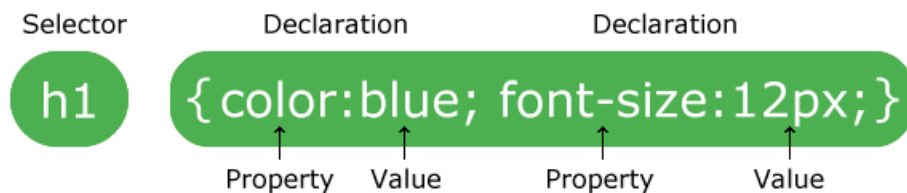
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Cascading Style Sheet

Cascading **S**tyle **S**heets (**CSS**) are used to format the layout of Web pages. They can be used to define text styles, table sizes, Image style and other aspects of Web pages that previously could only be defined in a page's HTML. Conceptually, it is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language. The separation of HTML from CSS makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments.

Syntax

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

The selector points to the HTML element you want to style. The declaration block contains one or more declarations separated by semicolons. Each declaration includes a CSS property name and a value, separated by a colon. A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.

➢ **CSS Properties:** Text, Font, Background color, Background Image, Background repeat/ no repeat.

✓ **CSS Text**

The text-align property is used to set the horizontal alignment of a text. A text can be left or right aligned and centered. The following example shows center aligned, and left and right aligned text (left alignment is default if text direction is left-to-right, and right alignment is default if text direction is right-to-left):

text-align
text-align: center;
text-align: left;
text-align: right;

✓ CSS Font

The CSS font properties define the font family, boldness, size, and the style of a text.

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

Syntax

```
Selector {
  font-family: "Times New Roman", Times, serif; }
```

```
<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 Times New Roman font.</p>
<p class="sansserif">This is Arial font.</p>
</body>
</html>
```

```
1.
<html>
<head>
    <style>
      p { font-family: "Times New Roman"; }
    </style>
</head>
<body>
    <p>This is Times New Roman font.</p>
</body>
</html>
-----------
2.

<html>
  <head>
    <style>
        .font {font-family: Times New Roman;
          text-align:center;}
      </style>
  </head>

  <body>
<h1 class="font">This is Times New Roman font.</h1>
<h2 class="font"> <em>Hello My Friends</em></h2>
</body>
</html>
```

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✓ Font Style

The font-style property is mostly used to specify italic text.

This property has three values:

- **normal** - The text is shown normally
- **italic** - The text is shown in italics
- **oblique** - The text is "leaning" (oblique is very similar to italic, but less supported)

normal	italic	oblique
font-style: normal;	font-style: italic;	font-style: oblique;

✓ Example

```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 in normal style .</p>
<p class="italic" >This is a paragraph in italic style .</p>
<p class="oblique" >This is a paragraph in oblique style.</p>

</body>
</html>
```

```html
<html>
 <head>
 <style>
 .normal {  font-style:normal;  text-align: right  }

 .italic {  font-style:italic;   text-align: center }

 .oblique {  font-style: oblique;  text-align: left  }
 </style>
</head>

<body>
<p class="normal">Dear Student, Hope you are fine.</p>
<p class="italic">Dear Student, Hope you are fine.</p>
<p class="oblique">Dear Student, Hope you are fine.</p>
</body>

</html>
```

➢ CSS Backgrounds

The CSS background properties are used to define the background effects for elements:

- ○ *background-color*
- ○ *background-image*
- ○ *background-repeat*

✓ **The background-color:** It property specifies the background color of an element.

✓ **Example 3**

```html
<html>
    <style>
        p {
            color: red;
        }
        body {
            background-color: lightblue;
        }
    </style>
    <body>
        <p>Hello World!</p>
    </body>
</html>
```

With CSS, a color is most often specified by:

- ○ a color name - like "red"
- ○ a HEX value - like "#ff0000"
- ○ an RGB value - like "rgb (255,0,0)"

Look at CSS Color Values for a complete list of possible color values. Here, the <**h1**>, <**p**>, and <**div**> elements will have different background colors: see table.

h1	p	div

h1 {
  background-color: green;
}
	p {
	  background-color: yellow;
	}
		div {
		  background-color: lightblue;
		}

```
    ✓  Example 4
<html>
  <head>
    <style>
        h1 {
            background-color: green;
            }
        div {
            background-color: lightblue;
            }
        p {
            background-color: yellow;
            }
    </style>
  </head>

 <body>

  <h1>CSS background-color!</h1>
  <div> This is a text inside a div element.
    <p>This paragraph has background color.</p>
     We are still in the div element.
  </div>
 </body>
</html>
```

➢ CSS background-image

The background-image property specifies an image to use as the background of an element. By default, the image is repeated so it covers the entire element. The background-image property sets one or more background images for an element. By default, a background-image is placed at the top-left corner of an element, and repeated both vertically and horizontally.

Tip: The background of an element is the total size of the element, including padding and border (but not the margin).

Tip: Always set a background-color to be used if the image is unavailable.

The table represents CSS for body, see below.

body

body {
    background-image: url("paper.gif");
}

For example, the background image for a page can be set like this.

```
✓  Example 5
<html>
    <head>
       <style>
              body {
                    background-image: url ("paper.gif");
                     }
          </style>
        </head>
        <body>
             <h1>Hello World</h1>
              <p>This page has an image as the background</p>
         </body>
</html>
```

✓ CSS background-repeat

By default, the background-image property repeats an image both horizontally and vertically. Some images should be repeated only horizontally or vertically, or they will look strange. The table represents CSS for body, see below.

body
body {   background-image: url("google.png");}

If the image above is repeated only horizontally (background-repeat: repeat-x;), the background will look better:

horizontally	vertically

body {
  background-image: url("google.png");
  background-repeat: repeat-x;
    }
	body {
	  background-image: url("google.png");
	  background-repeat: repeat-y;
	    }

✓ **Example 6 horizontally**
```
<html>
   <head>
      <style>
           body { background-image: url ("google.png");
                  background-repeat: repeat-x;      }
      </style>
   </head>
   <body>
    <h1>Hello World!</h1>
    <p>background image...</p>
   </body>
</html>
```

Note: The image will be Horizontally if we used background-repeat: repeat-y; the image will be vertically

✓ CSS background no-repeat

Showing the background image only once is also specified by the background-repeat property, Show the background image only once:

body
| ```
body {
    background-image: url("google.png");
    background-repeat: no-repeat;
}
``` |

✓ **Example 7**
```
<html>
    <head>
        <style>
            body {
                background-image: url ("google.png");
                background-repeat: no-repeat;
            }
        </style>
    </head>
    <body>
     <h1>Hello World!</h1>
     <p>Strange background image...</p>
    </body>
</html>
```

```
<html>
<head>
  <style>
    body {
        background-image:url("image.jpeg");
        background-repeat: no-repeat;

        background-size: 100% 100%;

        background-attachment: fixed;
      }
  </style>
</head>

<body>
      <h1>Hello World!</h1>
        <p>Strange background image...</p>
</body>
</html>
```

Q/ What is Cascading Style Sheets (CSS) definition and Syntax CSS?

Q/ What is CSS Properties?