CSS

Week VI

Static Web Programming
Semester 1

Introduction

What is CSS?

- **CSS** = **C**ascading **S**tyle **S**heets
- Styles defines **how to display** HTML elements
- Styles are integrated with HTML **to solve the problem of style**

Styles Overcome Big Problem

- HTML is specifically not used to format the document.
- HTML is only to define the content of a document, e.g:

```
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
```

Styles Overcome Big Problem

- When a tag such as <font>, and attribute color are added in HTML 3.2, will be difficult for web developers.

- Large web development, when font and color are written in each page, the process will take longer time and more expensive.

- To solve this issue, World Wide Web Consortium (W3C) created CSS.

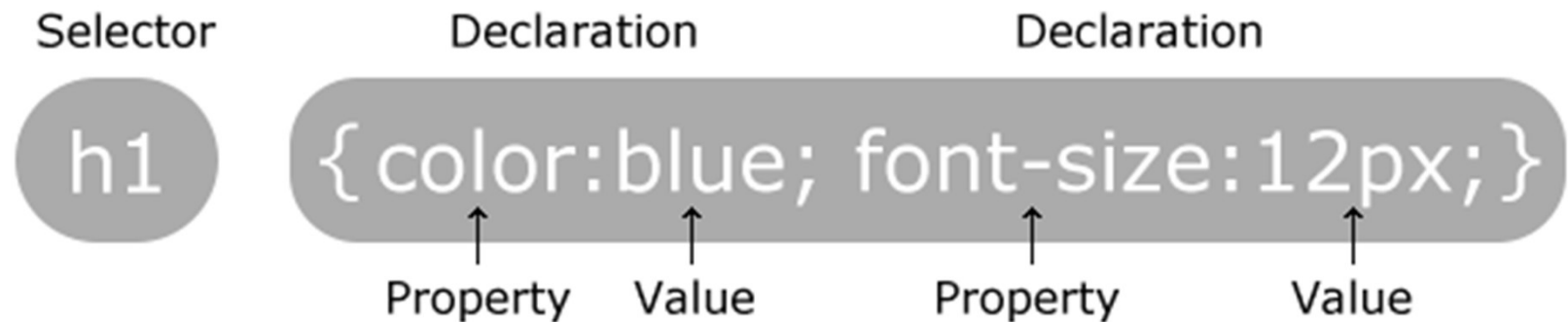- In HTML 4.0, all formatting are removed from HTML documents, and stored in separated CSS files.

CSS Saves a Lot of Work!

- Today, all browsers support CSS.
- CSS defines HOW HTML element will be displayed.
- Generally, style is saved in external .css file.
- External style sheet make easier to change the design and the layout all pages in a Web site, only by changing the file!

CSS Syntax

- A set of CSS contains of a selector and a declaration block.

- Selector defines the HTML element to format the style.

- One declaration block contains one or more declaration separated by semicolon.

- Each declaration contains of a property and value respectively, separated by a colon.

CSS Example

- CSS declaration is ended by semicolon, and the declaration block is written in a curly braces:

```
p {color:red;text-align:center;}
```

- To be more understandable, each declaration is put in different line:

```
p {
    color: red;
    text-align: center;
}
```

CSS Comments

- Comments are used to give related information about the codes, and help the developer to edit the source code.
- Comments are ignored by browsers.
- Comment in CSS is started by /* and ended by */.
- Comment may contains more line of code.

Example of CSS

```
p {
  color: red;
  /* this is a comment */
  text-align: center;
}

/* this is also a comment
may contains of
few lines of code */
```

CSS Selectors

- CSS selectors make us to select and manipulate the HTML elements.

- CSS selectors are used to "find" (or select) the HTML elements based on the id, class, type, attribute, value of attribute and many more.

Element Selector

- Element selector is used to select the element based on the element's name.
- We can select all elements of <p> in a page as follows: (the alignment of all elements of <p> will be center, and the color of text will be red).

```
p {
    text-align: center;
    color: red;
}
```

id Selector

- id selector uses the attribute of id in an HTML tag to find a specific element.
- id should be unique in a page.
- To make an element using special id, add a hash symbol (#), followed by the element id.

```
#para1 {
          text-align: center;
          color: red;
        }
```

id Selector

- The style is applied on HTML element with id="para1"

```
<body>
    <p id="para1">Hello
    World!</p>
    <p>this paragraf does not
    using style.</p>
</body>
```

Class Selector

- Class selector defines element with particular class.

- Class selector uses attribute class.

- To define the element with particular class, write the code started by a dot (full stop), followed by the class name.

Class Selector

- In the example below, all HTML elements with class="center" will be center-aligned

```
.center {
    text-align: center;
    color: red;
}
```

Example of HTML

```
<body>
    <h1 class="center">This is
    heading with red color and
    center-aligned</h1>
    <p class="center">This is a
    paragraph with red color and
    center-aligned.</p>
</body>
```

Class Selector

- We can also apply the style to a specific HTML element using class.
- Example below, all elements of p with class="center" will be center-aligned:

```
p.center {
    text-align: center;
    color: red;
}
```

Example of HTML

```
<body>
    <h1 class="center">This
    heading is not influenced by
    the class</h1>
    <p class="center">This
    paragraf is red and will be
    center-aligned.</p>
</body>
```

Group of Selector

- Sometimes, style sheets may contain some elements with same style :

```
h1 {
      text-align: center;
      color: red;
   }
h2 {
      text-align: center;
      color: red;
   }
p {
      text-align: center;
      color: red;
   }
```

Group of Selector

- To shorten the code, we can group the selectors.
- Each selector is separated by comma.
- The example below shows the group of selector from previous examples:

```
h1, h2, p {
      text-align: center;
      color: red;
}
```

Type of Style

- 3 types of style sheet:
1. Inline styles
2. Internal style sheet
3. External style sheet

Inline Styles

- Inline style can be used if a style is applied in each component of an element.

- To apply the inline style, use attribute style in the start tag.

- The example below shows how to give color on the text and left-margin for a paragraph:

```
<p style="color:blue;margin-
left:20px;">This is a paragraph.</p>
```

Internal Style Sheet

- Internal style sheet can be applied if an HTML document contains of only one style.

- Internal style is defined in <head> element in HTML document using <style> tag.

HTML Example

```
<head>
 <style type="text/css">
    body {background-
    color:yellow;}
    p {color:blue;}
 </style>
</head>
```

External Style Sheet

- External style sheet is the most ideal style to apply on website with many pages.
- With external style sheet, we are allowed to change the whole pages of a website by only changing the css file.
- Each page must related to the style sheet using <link> tag in the element of <head>.

HTML Example

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

A few Styles in One Document

- When some properties are set by the same selector but with different style and style sheet, the value applied is from the most specific style sheet.

- Cascading priority:
  - Inline style (in the HTML element)
  - Internal style sheet (in the Head element)
  - External style sheet
  - Browser default

Example of Multiple Style

- Suppose in external style sheet has a property for selector of heading h1 :

```
h1 {
      color: navy;
      margin-left: 20px;
   }
```

Example of Multiple Style

- Then, suppose in the internal style sheet also has a property for selector of heading h1 :

```
h1 {
    color: orange;
}
```

Example of Multiple Style

- If the page has internal style sheet and related to the external style sheet, the property of heading h1 becomes:
```
color: orange;
margin-left: 20px;
```
- The left-margin is applied from the external style sheet and the color is applied from the internal style sheet.