Cascading Style Sheet (CSS)

Web Technology

Chapter – 1 : HTML and CSS

- CSS

    - CSS stands for cascading style sheets. It was first developed in 1997, as a way for Web developers to define the look and feel of their Web pages. It was intended to allow developers to separate content from design and layout so that HTML could perform more of the function without worry about the design and layout. It is used to separate style from content.

    - The style sheets define the color, size and position of text and other HTML tags, while the HTML files define the content and how it is organized. Separating them allows you to change the color scheme without having to rewrite your entire web site.

    - The cascading means that a style applied to a parent element will also apply to all children elements within the parent. For example, setting the color of body text will mean all headings and paragraphs within the body will also be the same color.

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- Syntax of CSS

Selector {

    Property1: value;

    Property2: value;

}

<u>Example</u>

h2 { color: red; text-align: center; }

<u>Here</u>,

    The selector (h2) points to the HTML element you want to style.

    The declaration block contains one or more declarations (two) separated by semicolons.

    Each declaration includes a CSS property name and a value, separated by a colon.

CSS Selectors

- ## Selectors in CSS
  1. **Element**
     - As seen in previous example, which turns all the h2 element to red and aligns the text to center.
     - Any HTML element can be used as the selector and style defined for that selector will apply to all HTML elements of that type

  2. **Class**
     - Most common selector
     - Created by using period (.) before class name
     - A class is just an attribute that all HTML elements can have and is used for CSS to distinguish elements for specific styling.
     - The class attribute can also have multiple different classes in the same attribute separated by a space.

       <h1 class="c1">Text in H1 element</h1>
       <h1 class="c1 d1 ">Text in H1 element</h1>
       Example:
       .class-name
       {
            property: value;
       }

CSS Selectors

- They can be used for creating reusable components. Example we have different elements of same HTML element we want to apply the same basic styles but have a different color. We can use one base class to share the common styles.

- Example (Defining CSS)

  .btn {padding: 10px; color : white;}

  .btn1 { background-color : green;}

  .btn2 { background-color : blue;}

  .btn3 { background-color : purple;}

- Example (HTML Element)

  <button class="btn btn1">Button 1</button>

  <button class="btn btn2">Button 2</button>

  <button class="btn btn3">Button 3</button>

- **<u>Selectors in CSS</u>**
  ## 3. Id
    - HTML elements can only have one Id selector.
    - Id should be unique in entire web page.
    - We use pound sign (#) to declare an Id -> #id { property: value; }

    - Example (Defining CSS)
      #main-header {color: #001288; text-align: center;}

    - Example (HTML Element)
      <h1 id="main-header">Header Title</h1>

• **Combining Selectors**

• Specify multiple selectors

```css
h1 {
    color: red;
}

h2 {
    color: blue;
}

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

```css
.ancestor .child {
    property: value;
}
```

```html
<div>

    <p>P1</p>
    <p>P2</p>
    <span>
        <p>P3</p>
    </span>
</div>
```

```css
div p {
    color: red;
}
<!-- Selects all p even with
span red -->
```

CSS Selectors

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Selector	Example	Example description
#id	#firstname	Selects the element with id="firstname"
.class	.intro	Selects all elements with class="intro"
element.class	p.intro	Selects only <p> elements with class="intro"
*	*	Selects all elements
element	p	Selects all <p> elements
element,element,..	div, p	Selects all <div> elements and all <p> elements

- There are three main ways of including a style sheet for a web page or site:

  1. Setting the style="?" attribute of a tag, called inline styles

  2. Using the <style> tag within the HTML header tag

  3. Creating and linking to an external CSS file

- Basic style sheets usually modify the appearance of html tags such as <body> and <p>. When using CSS files or style sheets within the header, we can also define classes of styles and apply them to any element using the class="?" attribute, but this is beyond the scope of this simple guide.

Specifying and using styles

- Inline Styles
  - Styles defined inline in HTML will only apply to the tag they are added to. Note: colors can be specified as either a CSS color name or hex color code.

  <p style="color:red;">Some red text</p>

- Internal CSS (Within the HTML header)
  - A style defined in the header will apply to the whole page. The example below will make all h1 tags in your page show the heading in red.

    ```
    <head>
    <style type="text/css">
     h1 {
       color: red;
     }
    </style>
    </head>
    ```

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- External CSS file

  - Like HTML files, CSS files are also plain text, and usually have a .css file extension. An example of a CSS file name **style.css** can be seen below.

    ```
    body {
      background-color: beige;
      color: #000080;
    }
    h1 {
      color: red;
    }
    ```

  - The file can then be included using the <link ... > tag in the HTML header.

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

Cascading Style Sheet (CSS)

Color & Borders	Description
color: red;	Element Color - eg. red | #FF0000
background-color: white;	Background Color of element
background-image: url(image.gif);	
border-color: yellow;	
border: 1px solid blue;	Width, style and color of border defined together

Cascading Style Sheet (CSS)

Text Styles	Description
`text-align: left;`	Horizontal Alignment - left | center | right
`text-decoration: underline;`	Text Decorations - eg. none | underline | line-through
`font-family: fontname;`	Font Face (Typeface) - eg. Verdana, Arial, Helvetica
`font-size: 16pt;`	Font Size or Height - eg. 12pt | 15px
`font-weight: bold;`	Font Weight (Boldness) - eg. bold | normal | 200

Cascading Style Sheet (CSS)

Size and Layout	Description
`width: 400px;`	Width of HTML element - eg. 100px | 50%
`height: 100%;`	Height of HTML element - eg. 20px | 100%
`margin: 5px;`	Margin - space around an element, or distance between two elements [Margins are used to create space around elements, outside of any defined borders.]
`margin-top: 1px;`	Top Margin. Also try -bottom: -left: or -right:
`padding: 5px;`	Padding - distance between an elements contents and its border [Padding is used to create space around an element's content, inside of any defined borders.]

CSS List	Description
`list-style: none;`	Clear existing bullet types set by html list tags