CS355 Web Technologies

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Lecture 5

Cascading Style Sheets

- Cascading Style sheets CSS determines how the elements in HTML documents are displayed and formatted.

- CSS allows to separate the content of a web page from the presentation (format and styling) of that content

- CSS code can be added to HTML elements of the web page in any combination of the following ways:

  Inline: using the style attribute within the <body> section

  Internal: using <style> section within the <head>section

  External: using an external CSS file

Inline Cascading Style Sheets

- CSS code is placed directly into an HTML element within the <body> section of a web page.

- CSS code is used to apply a unique style to a single HTML element.

- Example: Set the text color of the <h1> element to blue

```
<body>
        <h1 style="color:blue;">This is a Blue Heading</h1>
</body>
```

This is a Blue Heading

Internal Cascading Style Sheets

- Used to define a style for a single HTML page.

- Add a <style> section within the <head> section of the page.

- All required declarations go within this <style> section

```
<html>
  <head>
  <style>
      body {background-color: powderblue;}
      h1 {color: blue;}
      p {color:red;}
  </style>
  </head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

This is a heading

This is a paragraph.

Internal Cascading Style Sheets- Notes

- Styles declared in the internal style sheet affect all matching elements on the page.

- In the previous example, all page elements in the body, header1, and paragraphs are formatted according to the declared styles.

External Cascading Style Sheets

- Used to define the style for many HTML pages.
  - Create a new file (with a .css extension) and write your style declarations into this file.
  - Add a \<link> element into HTML file within the \<head> section.

    \<link rel="stylesheet" href="style.css">

- The \<link> element instructs the browser to load the external file specified by the href attribute and to apply the CSS style declarations contained in the .CSS file.

- The rel attribute defines the relationship between a linked resource and the current document.

External Cascading Style Sheets - Example

```
<html>
  <head>
   <link rel="stylesheet" href="style.css">
  </head>
  <body>
      <h1>This is a heading</h1>
      <p>This is a paragraph.</p>
  </body>
</html>
```

External Cascading Style Sheets - Notes

- An external style sheet file can be written in any text editor.

- The file must be saved with a .css extension.

- The .css file must not contain any HTML code

- The syntax of a CSS declaration:

  selector {property:value;}

- The description of the "style.css" file in the previous example:

  body   {   background-color: powderblue;   }

  h1   {   color:blue;   }

  p   {   color:red;   }

External Cascading Style Sheets - Notes

- Styles declared in an external style sheet will affect all matching elements on all web pages that link to the style sheet.

- By editing the external style sheet, we can make site-wide changes (even to large number of pages) instantly.

CSS Text Attributes

- The CSS color attribute defines the text color to be used, blue, green, yellow, …etc.

- The CSS font-family attribute defines the font name, Arial, Verdana, Times New Roman, …etc.

- The CSS font-size attribute defines the text font size.

- The CSS font-style attribute defines the text font style such as *italic*.

- The CSS text-align attribute defines the text alignment, center, left, right, justify, …etc.

- The CSS text-decoration attribute defines the text decoration, underline, line-through, blink, …etc.

CSS Text Attributes – Internal Cascading Example

```
<html>
<head>
<style>
    h1 {
            color: blue;
            font-family: verdana;
            font-size: 300%;
        }
    P  {
            color: red;
            font-family: courier;
            font-size: 160%;
        }
</style>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

This is a heading

This is a paragraph.

Cascading Style Sheets - Borders and Spacing

- CSS Border attribute defines a border around an HTML element.

- CSS Padding attribute defines a space between the text and the border.

- CSS Margin attribute defines a margin (space) outside the border.

- Example:

```
<html><head>
<style>
    h1 { color: blue; font-family: verdana; font-size: 300%; }
    p {color: red; font-size: 160%; border: 2px solid
    powderblue; padding: 30px; margin: 50px; }
</style>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

This is a heading

This is a paragraph.

How Browsers Process CSS

- A web browser processes all CSS code from inline, internal, or external methods.

- Example: all the following CSS methods would be applied on the web page elements

  ➢ An inline style sheet could make the heading *italic*.

  ➢ An internal style sheet could specify the font size of the heading.

  ➢ An external style sheet could define the font name of a heading.

Question?

- Browser may receive conflicting instructions from the CSS code. Problem !

- Example:

  What if each of the CSS style methods (inline, internal, and external) specified a different color for the heading text?

  ➢ Describe how the browser will solve this problem.