Web Technologies (ICDT6004) – Lecture 6

CSS3

Aims of lecture

- At the end of today's lecture students should be able to
  - Use css3 to format web pages
  - Use inline, embedded and external styles to format a web page

Formatting a document

- The appearance of a web page can be controlled either by:
  - Using attributes and elements (not recommended - deprecated)
  - Or by using style sheets (recommended)
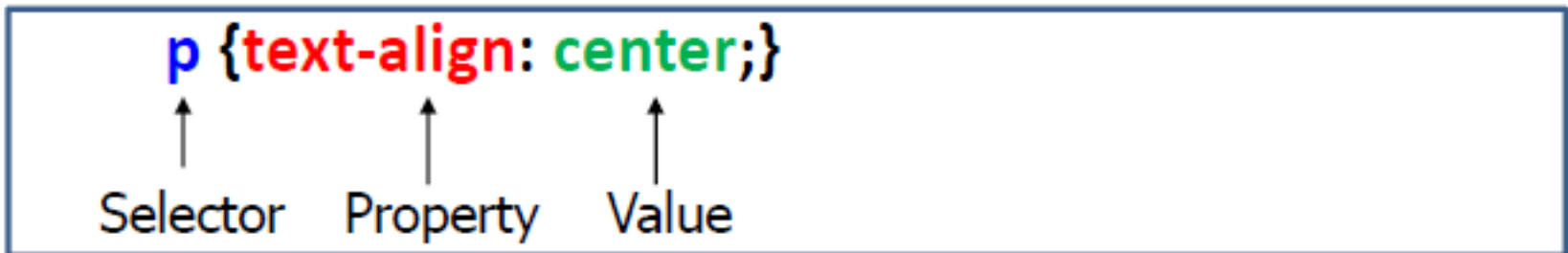
Formatting a document (2)

- A web document contains both **structural** and **presentation** information
- It is recommended that these are separated:
  - Structure – using HTML tags
  - Presentation – using CSS (**C**ascading **S**tyle **S**heet)
- Style sheets are used to control the style and layout of multiple web pages at once
- If a change needs to be made to all the web pages of a website – the style sheet is modified and the change is reflected automatically in all the webpages that are linked to the style sheet.

Structure vs Presentation

- HTML:
  - Structure: divisions, paragraphs, tables, etc…
  - Presentation: fonts, color, indentation, spacing, etc… can also be used to create animations

CSS Syntax

- The CSS syntax is made up of three parts:
  1. Selector
  2. Property
  3. Value


```
p {text-align: center;}
```
Selector   Property   Value

- Specifying more than 1 property:
  – p{text-align:center; color:red;}

Types of Style Sheets

- There are three main types of CSS styles:
    1. Inline style (inside an HTML element)
    2. Internal style (inside the <head> tag)
    3. External style (External file)

- Note: An inline style (inside an HTML element) has the highest priority

Inline Styles

- An inline style loses many of the advantages of style sheets by mixing content with presentation
- This method should be used rarely, such as when a style is to be applied to a single occurrence of an element
- To use inline styles you use the *style* attribute in the relevant tag
- Inline styles:
  - Attributes of an element.
  - Entered as attribute = value in element tag

Inline Styles - Example

```
<p style="color: red;  text-align: right">
        This is a paragraph
</p>
```

Internal Style

- An internal style sheet should be used when a single document has a unique style

- You define internal styles in the <head> section by using the <style> tag

- The browser will read the style definitions, and format the document according to it

- Style tags embedded in the <head> section of a document

Internal Style - Example

```
<head>
<style>
p{
text-align:right;
}

h1{
color:yellow;
}
```

```
input
{
text-transform:uppercase;
color:red;
text-decoration:underline;
}

textarea
{
text-transform:uppercase;
color:red;
}
</style>
</head>
```

Inline Style - Explanation

- In this example, all <p>, <h1>, <input> and <textarea> tags will be formatted according to the styles defined.

- The above codes will apply to all the above tags on the page, if some of the above tags need to be formatted differently, inline styles should be used.

```
Password<input style="color:blue; "
type="password" name="txt_pwd"/><br/>
```

Classwork 1

- Modify the above codes such that the text typed in the password field it not underlined anymore.

External Style Sheet

- An external style sheet is ideal when the style is applied to many pages

- With an external style sheet, the look of an entire website can be changed by changing one file

- Each page must link to the style sheet using the<link> tag

- The <link> tag goes inside the <head> section

External Style Sheet (2)

- Using a **<link>** tag in the **<head>** section of a document

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

```
body{
background-color:green;
}
```

Mystyle.css

Multiple Style Sheets

- There are many ways to apply a style to an element:
  - Inline Style
  - Internal Style
  - External style
- There is a possibility that multiple styles can apply to the same element in a document
- CSS has a set of rules for resolving conflict:
  - Specific style rules override general style rules
  - Inline style has precedence over Internal style which has precedence over External style

Selectors

- In addition to setting a style for a HTML element, CSS allows you to specify your own selectors:
  - Id selector
  - Class selector
- Id and Class selectors can be applied to:
  - Internal styles
  - External styles

Id Selector

- The id selector is used to specify a style for a single, unique element.

- The id selector uses the id attribute of the HTML element, and is defined with a "#".

- Example:

- – The style rule below will be applied to the element with id="para1"

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

```
<html>
<head><head>
<body>
        <div id="para1"> </div>
</body>
```

Class Selector

- The class selector is used to specify a style for a group of elements

- Unlike the id selector, the class selector is most often used on several elements

- The class selector uses the HTML class attribute, and is defined with a "."

- Useful when we have similar tags e.g. <input> that require different formatting within the same page or web site

Class Selector (2)

```
input.transform1{
        text-transform:uppercase;
        color:red;
        text-decoration:underline;
}

input.transform2{
        text-transform:lowercase;
        color:blue;
}
```

Style

```
<input type=text
name="txt_Username"
class="transform1">

<input type=text
name="txt_email"
class="transform2">
```

Applying the style

- Here, the class transform1, transform2 applies only to **<input>** tag. It cannot be applied to **<textarea>** tag or any other HTML tags.

Class Selector (3)

- A general class can be defined to apply to different types of HTML tags

- Here the same class is being used with both input and textarea.

```
.transform{
        text-transform:uppercase;
        color:red;
        text-decoration:underline;
}
```

Style

```
<input type=text
name="txt_Username"
class="transform">

<textarea rows=4
cols=50
class="transform">
```
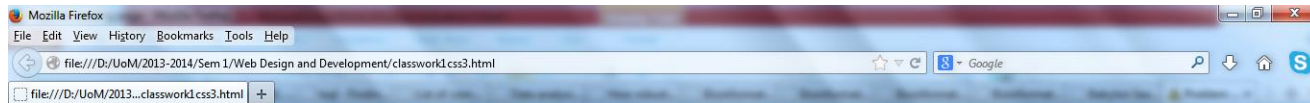
Applying the style

Using the id and class selectors together

```css
#top {
        background-color: #ccc;
        padding: 1em
}

.intro {
        color: red;
        font-weight: bold;
}
```

```html
<div id="top">

<h1>Chocolate curry</h1>

<p class="intro">This is my recipe for making curry purely with chocolate</p>

<p class="intro">Mmm mm mmmmm</p>

</div>
```

Classwork 2

- Reproduce the following page given that embedded style is being used. All the text is justified, the first paragraph occupies only 40% of the screen and the heading is red in colour.

Background properties

- CSS background properties are used to define the background effects for elements and are:
  - background-color
  - background-image

    ```
    body {
            background-image:url("banner.jpg");
    }
    ```

  - background-repeat
  - background-attachment
  - background-position

Borders

- The CSS border properties can be used to specify the style, width, and color of an element's border.
- border-style, border-width, border-color
- p {
    border: 5px solid blue;
}
- p {
    border-left: 6px solid blue;
    background-color: lightgrey;
}

More Borders

- p {
     border-top-style: dotted;
     border-right-style: solid;
     border-bottom-style: dotted;
     border-left-style: solid;
  }
- p {
     border: 2px dotted blue;
     border-radius: 5px;
  }

Links

- The following css code can be used to change the colour of a link

```css
/* unvisited link */
a:link {
    color: #FF0000;
}

/* visited link */
a:visited {
    color: #00FF00;
}

/* mouse over link */
a:hover {
    color: #FF00FF;
}

/* selected link */
a:active {
    color: #0000FF;
}
```

Forms

- CSS can be applied to all elements:
  - input {
        width: 100%;
    }
- CSS can also be applied to specific input types
  - input[type=text] - will only select text fields
  - input[type=password] - will only select password fields
  - input[type=number] - will only select number fields

Forms(2)

- Rounded borders can be added to text boxes:
  - input[type=text] {
    border: 2px solid red;
    border-radius: 4px;
    }
- The background color and text color can also be changed:
  - input[type=text] {
    background-color: #3CBC8D;
    color: white;
    }

Forms(3)

- By default, some browsers will add a blue outline around the input when it gets focus (clicked on).

- This can be removed by adding outline: none; to the input.

- The :focus selector can be used to add some effect with an input field when it gets focus:

- input[type=text]:focus {
    border: 3px solid #555;
}

References

- http://www.html5tutorial4u.com
- Http://www.w3schools.com
- http://www.html5rocks.com

Questions?