**LECTURE 3 - HTML Styles – CSS**

## Styling HTML with CSS

**CSS** stands for **C**ascading **S**tyle **S**heets.

CSS describes **how HTML elements are to be displayed on screen, paper, or in other media**.

CSS **saves a lot of work**. It can control the layout of multiple web pages all at once.

CSS can be added to HTML elements in 3 ways:

* **Inline** - by using the style attribute in HTML elements
* **Internal** - by using a <style> element in the <head> section
* **External** - by using an external CSS file

The most common way to add CSS, is to keep the styles in separate CSS files. However, here we will use inline and internal styling, because this is easier to demonstrate, and easier for you to try it yourself.

## Inline CSS

An inline CSS is used to apply a unique style to a single HTML element.

An inline CSS uses the style attribute of an HTML element.

This example sets the text color of the <h1> element to blue:

### Example

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

## Internal CSS

An internal CSS is used to define a style for a single HTML page.

An internal CSS is defined in the <head> section of an HTML page, within a <style> element:

### Example

<!DOCTYPE html>  
<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>

## External CSS

An external style sheet is used to define the style for many HTML pages.

**With an external style sheet, you can change the look of an entire web site, by changing one file!**

To use an external style sheet, add a link to it in the <head> section of the HTML page:

### Example

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

An external style sheet can be written in any text editor. The file must not contain any HTML code, and must be saved with a .css extension.

Here is how the "styles.css" looks:

body {  
    background-color: powderblue;  
}  
h1 {  
    color: blue;  
}  
p {  
    color: red;  
}

## CSS Fonts

The CSS color property defines the text color to be used.

The CSS font-family property defines the font to be used.

The CSS font-size property defines the text size to be used.

### Example

<!DOCTYPE html>  
<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>

## CSS Border

The CSS border property defines a border around an HTML element:

### Example

p {  
    border: 1px solid powderblue;  
}

## CSS Padding

The CSS padding property defines a padding (space) between the text and the border:

### Example

p {  
    border: 1px solid powderblue;  
    padding: 30px;  
}

## CSS Margin

The CSS margin property defines a margin (space) outside the border:

### Example

p {  
    border: 1px solid powderblue;  
    margin: 50px;  
}

## The id Attribute

To define a specific style for one special element, add an id attribute to the element:

<p id="p01">I am different</p>

then define a style for the element with the specific id:

### Example

#p01 {  
    color: blue;  
}

## The class Attribute

To define a style for special types of elements, add a class attribute to the element:

<p class="error">I am different</p>

then define a style for the elements with the specific class:

### Example

p.error {  
    color: red;  
}

# HTML Tables

### HTML Table Example

|  |  |  |
| --- | --- | --- |
| **Company** | **Contact** | **Country** |
| Alfreds Futterkiste | Maria Anders | Germany |
| Centro comercial Moctezuma | Francisco Chang | Mexico |
| Ernst Handel | Roland Mendel | Austria |
| Island Trading | Helen Bennett | UK |
| Laughing Bacchus Winecellars | Yoshi Tannamuri | Canada |
| Magazzini Alimentari Riuniti | Giovanni Rovelli | Italy |

## Defining an HTML Table

An HTML table is defined with the <table> tag.

Each table row is defined with the <tr> tag. A table header is defined with the <th> tag. By default, table headings are bold and centered. A table data/cell is defined with the <td> tag.

### Example

<table style="width:100%">  
  <tr>  
    <th>Firstname</th>  
    <th>Lastname</th>   
    <th>Age</th>  
  </tr>  
  <tr>  
    <td>Jill</td>  
    <td>Smith</td>   
    <td>50</td>  
  </tr>  
  <tr>  
    <td>Eve</td>  
    <td>Jackson</td>   
    <td>94</td>  
  </tr>  
</table>

**Note:** The <td> elements are the data containers of the table.  
They can contain all sorts of HTML elements; text, images, lists, other tables, etc.

HTML Table - Adding a Border

If you do not specify a border for the table, it will be displayed without borders.

A border is set using the CSS border property:

### Example

table, th, td {  
    border: 1px solid black;  
}

## HTML Table - Collapsed Borders

If you want the borders to collapse into one border, add the CSS border-collapse property:

### Example

table, th, td {  
    border: 1px solid black;  
    border-collapse: collapse;  
}

## HTML Table - Adding Cell Padding

Cell padding specifies the space between the cell content and its borders.

If you do not specify a padding, the table cells will be displayed without padding.

To set the padding, use the CSS padding property:

### Example

th, td {   
    padding: 15px;  
}

## HTML Table - Left-align Headings

By default, table headings are bold and centered.

To left-align the table headings, use the CSS text-align property:

### Example

th {  
    text-align: left;  
}

## HTML Table - Adding Border Spacing

Border spacing specifies the space between the cells.

To set the border spacing for a table, use the CSS border-spacing property:

### Example

table {  
    border-spacing: 5px;  
}

**Note:** If the table has collapsed borders, border-spacing has no effect.

## HTML Table - Cells that Span Many Columns

To make a cell span more than one column, use the colspan attribute:

### Example

<table style="width:100%">  
  <tr>  
    <th>Name</th>  
    <th colspan="2">Telephone</th>  
  </tr>  
  <tr>  
    <td>Bill Gates</td>  
    <td>55577854</td>  
    <td>55577855</td>  
  </tr>  
</table>

## HTML Table - Cells that Span Many Rows

To make a cell span more than one row, use the rowspan attribute:

### Example

<table style="width:100%">  
  <tr>  
    <th>Name:</th>  
    <td>Bill Gates</td>  
  </tr>  
  <tr>  
    <th rowspan="2">Telephone:</th>  
    <td>55577854</td>  
  </tr>  
  <tr>  
    <td>55577855</td>  
  </tr>  
</table>

## HTML Table - Adding a Caption

To add a caption to a table, use the <caption> tag:

### Example

<table style="width:100%">  
  <caption>Monthly savings</caption>  
  <tr>  
    <th>Month</th>  
    <th>Savings</th>  
  </tr>  
  <tr>  
    <td>January</td>  
    <td>$100</td>  
  </tr>  
  <tr>  
    <td>February</td>  
    <td>$50</td>  
  </tr>  
</table>

## A Special Style for One Table

To define a special style for a special table, add an id attribute to the table:

### Example

<table id="t01">  
  <tr>  
    <th>Firstname</th>  
    <th>Lastname</th>   
    <th>Age</th>  
  </tr>  
  <tr>  
    <td>Eve</td>  
    <td>Jackson</td>   
    <td>94</td>  
  </tr>  
</table>

### Now you can define a special style for this table:

table#t01 {  
    width: 100%;   
    background-color: #f1f1c1;  
}

### And add more styles:

table#t01 tr:nth-child(even) {  
    background-color: #eee;  
}  
table#t01 tr:nth-child(odd) {  
    background-color: #fff;  
}  
table#t01 th {  
    color: white;  
    background-color: black;  
}