**University of Wolverhampton**

**School of Engineering, Computational and Mathematical Sciences**

**5CS020 Human-Computer Interaction**

**Workshop 2 - Introduction to HTML Part 2**

As you will be creating and experimenting with user interface via web pages, it is important that you understand HTML

This workshop continues from the previous workshop in exploring HTML further, as well as JavaScript.

**HTML Comments**

Comment is a piece of code which is ignored by any web browser. It is a good practice to add comments into your HTML code, especially in complex documents, to indicate sections of a document, and any other notes to anyone looking at the code. Comments help you and others understand your code and increases code readability.

HTML comments are placed in between <!-- ... --> tags. So, any content placed with-in <!-- ... --> tags will be treated as comment and will be completely ignored by the browser.

<!DOCTYPE html>

<html>

<head> <!-- Document Header Starts -->

<title>This is document title</title>

</head> <!-- Document Header Ends -->

<body>

<p>Document content goes here.....</p>

</body>

</html>

The comments will not be visible in the web browser display.

**Multiline Comments**

HTML also supports multi-line comments. You can comment multiple lines by the special beginning tag <!-- and ending tag --> placed before the first line and end of the last line as shown in the given example below

<!DOCTYPE html>

<html>

<head>

<title>Multiline Comments</title>

</head>

<body>

<!--

This is a multiline comment and it can

span through as many as lines you like.

-->

<p>Document content goes here.....</p>

</body>

</html>

**HTML Images**

**Insert Image**

You can insert any image in your web page by using <img> tag. Following is the simple syntax to use this tag.

<img src = "Image URL" ... attributes-list/>

The <img> tag is an empty tag, which means that, it can contain only list of attributes and it has no closing tag. Download the image file test.png from Canvas in the same directory as your web page:

<!DOCTYPE html>

<html>

<head>

<title>Using Image in Webpage</title>

</head>

<body>

<p>Simple Image Insert</p>

<img src = "test.png" alt = "Test Image" />

</body>

</html>

You should get:

Graphical user interface

Description automatically generated

**Set Image Width/Height**

You can set image width and height based on your requirement using width and height attributes. You can specify width and height of the image in terms of either pixels or percentage of its actual size.

<!DOCTYPE html>

<html>

<head>

<title>Set Image Width and Height</title>

</head>

<body>

<p>Setting image width and height</p>

<img src = "test.png" alt = "Test Image" width = "150" height = "100"/>

</body>

</html>

You should get:

A picture containing text

Description automatically generated

**Set Image Border**

By default, image will have a border around it, you can specify border thickness in terms of pixels using border attribute. A thickness of 0 means, no border around the picture.

<!DOCTYPE html>

<html>

<head>

<title>Set Image Border</title>

</head>

<body>

<p>Setting image Border</p>

<img src = "test.png" alt = "Test Image" border = "3"/>

</body>

</html>

You should get:

A picture containing text

Description automatically generated

**Set Image Alignment**

By default, image will align at the left side of the page, but you can use align attribute to set it in the centre or right.

<!DOCTYPE html>

<html>

<head>

<title>Set Image Alignment</title>

</head>

<body>

<p>Setting image Alignment</p>

<img src = "test.png" alt = "Test Image" border = "3" align = "right"/>

</body>

</html>

You should get:

Text

Description automatically generated

**HTML Tables**

The HTML tables allow web authors to arrange data like text, images, links, other tables, etc. into rows and columns of cells. The HTML tables are created using the <table> tag in which the <tr> tag is used to create table rows and <td> tag is used to create data cells. The elements under <td> are regular and left aligned by default

<!DOCTYPE html>

<html>

<head>

<title>HTML Tables</title>

</head>

<body>

<table border = "1">

<tr>

<td>Row 1, Column 1</td>

<td>Row 1, Column 2</td>

</tr>

<tr>

<td>Row 2, Column 1</td>

<td>Row 2, Column 2</td>

</tr>

</table>

</body>

</html>

Gives you this:

Text

Description automatically generated with medium confidence

Here, the border is an attribute of <table> tag and it is used to put a border across all the cells. If you do not need a border, then you can use border = "0".

**Table Heading**

Table heading can be defined using <th> tag. This tag will be put to replace <td> tag, which is used to represent actual data cell. Normally you will put your top row as table heading as shown below, otherwise you can use <th> element in any row. Headings, which are defined in <th> tag are centred and bold by default.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table Header</title>

</head>

<body>

<table border = "1">

<tr>

<th>Name</th>

<th>Salary</th>

</tr>

<tr>

<td>Jeffrey Ting</td>

<td>123</td>

</tr>

<tr>

<td>Adrian Priest</td>

<td>456</td>

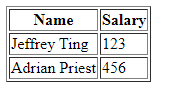
</tr>

</table>

</body>

</html>

Will give you this:



**Cellpadding and Cellspacing Attributes**

There are two attributes called cellpadding and cellspacing which you will use to adjust the white space in your table cells. The cellspacing attribute defines space between table cells, while cellpadding represents the distance between cell borders and the content within a cell.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table Cellpadding</title>

</head>

<body>

<table border = "1" cellpadding = "5" cellspacing = "5">

<tr>

<th>Name</th>

<th>Salary</th>

</tr>

<tr>

<td>Jeffrey Ting</td>

<td>123</td>

</tr>

<tr>

<td>Adrian Priest</td>

<td>456</td>

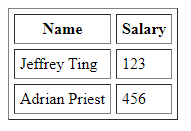
</tr>

</table>

</body>

</html>

Will give you:



**Colspan and Rowspan Attributes**

You will use colspan attribute if you want to merge two or more columns into a single column. Similar way you will use rowspan if you want to merge two or more rows.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table Colspan/Rowspan</title>

</head>

<body>

<table border = "1">

<tr>

<th>Column 1</th>

<th>Column 2</th>

<th>Column 3</th>

</tr>

<tr>

<td rowspan = "2">Row 1 Cell 1</td>

<td>Row 1 Cell 2</td>

<td>Row 1 Cell 3</td>

</tr>

<tr>

<td>Row 2 Cell 2</td>

<td>Row 2 Cell 3</td>

</tr>

<tr>

<td colspan = "3">Row 3 Cell 1</td>

</tr>

</table>

</body>

</html>

Gives the following:

Text, table

Description automatically generated

**Tables Backgrounds**

You can set table background using one of the following two ways −

* bgcolor attribute − You can set background color for whole table or just for one cell.
* background attribute − You can set background image for whole table or just for one cell.

You can also set border colour also using bordercolor attribute.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table Background</title>

</head>

<body>

<table border = "1" bordercolor = "green" bgcolor = "yellow">

<tr>

<th>Column 1</th>

<th>Column 2</th>

<th>Column 3</th>

</tr>

<tr>

<td rowspan = "2">Row 1 Cell 1</td>

<td>Row 1 Cell 2</td>

<td>Row 1 Cell 3</td>

</tr>

<tr>

<td>Row 2 Cell 2</td>

<td>Row 2 Cell 3</td>

</tr>

<tr>

<td colspan = "3">Row 3 Cell 1</td>

</tr>

</table>

</body>

</html>

Will produce:

Table

Description automatically generated

Here is an example of using background attribute with an image available in same directory as the html file.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table Background</title>

</head>

<body>

<table border = "1" bordercolor = "green" background = "test.png">

<tr>

<th>Column 1</th>

<th>Column 2</th>

<th>Column 3</th>

</tr>

<tr>

<td rowspan = "2">Row 1 Cell 1</td>

<td>Row 1 Cell 2</td><td>Row 1 Cell 3</td>

</tr>

<tr>

<td>Row 2 Cell 2</td>

<td>Row 2 Cell 3</td>

</tr>

<tr>

<td colspan = "3">Row 3 Cell 1</td>

</tr>

</table>

</body>

</html>

This will produce the following

A picture containing text

Description automatically generated

**Table Height and Width**

You can set a table width and height using width and height attributes. You can specify table width or height in terms of pixels or in terms of percentage of available screen area.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table Width/Height</title>

</head>

<body>

<table border = "1" width = "400" height = "150">

<tr>

<td>Row 1, Column 1</td>

<td>Row 1, Column 2</td>

</tr>

<tr>

<td>Row 2, Column 1</td>

<td>Row 2, Column 2</td>

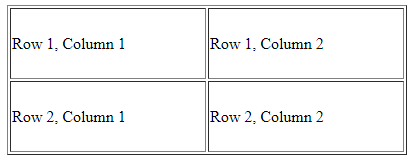
</tr>

</table>

</body>

</html>

Produces the following:



**Table Caption**

The caption tag will serve as a title or explanation for the table, and it shows up at the top of the table.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table Caption</title>

</head>

<body>

<table border = "1" width = "100%">

<caption>This is the caption</caption>

<tr>

<td>row 1, column 1</td><td>row 1, columnn 2</td>

</tr>

<tr>

<td>row 2, column 1</td><td>row 2, columnn 2</td>

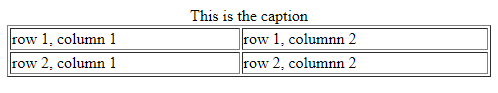
</tr>

</table>

</body>

</html>

Produces the following. Though it is not used often these days



**Table Header, Body, and Footer**

Tables can be divided into three portions − a header, a body, and a foot. The head and foot are rather similar to headers and footers in a word-processed document that remain the same for every page, while the body is the main content holder of the table.

The three elements for separating the head, body, and foot of a table are

* <thead> − to create a separate table header.
* <tbody> − to indicate the main body of the table.
* <tfoot> − to create a separate table footer.

A table may contain several <tbody> elements to indicate different pages or groups of data. But it is notable that <thead> and <tfoot> tags should appear before <tbody>

<!DOCTYPE html>

<html>

<head>

<title>HTML Table</title>

</head>

<body>

<table border = "1" width = "100%">

<thead>

<tr>

<td colspan = "4">This is the head of the table</td>

</tr>

</thead>

<tfoot>

<tr>

<td colspan = "4">This is the foot of the table</td>

</tr>

</tfoot>

<tbody>

<tr>

<td>Cell 1</td>

<td>Cell 2</td>

<td>Cell 3</td>

<td>Cell 4</td>

</tr>

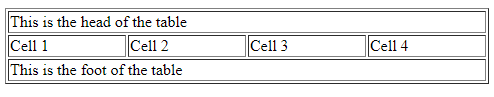
</tbody>

</table>

</body>

</html>

Produces:



**Nested Tables**

You can use one table inside another table. Not only tables you can use almost all the tags inside table data tag <td>.

<!DOCTYPE html>

<html>

<head>

<title>HTML Table</title>

</head>

<body>

<table border = "1" width = "100%">

<tr>

<td>

<table border = "1" width = "100%">

<tr>

<th>Name</th>

<th>Salary</th>

</tr>

<tr>

<td>Jeffrey Ting</td>

<td>123</td>

</tr>

<tr>

<td>Adrian Priest</td>

<td>456</td>

</tr>

</table>

</td>

</tr>

</table>

</body>

</html>

Will give you :

Application

Description automatically generated

**Hyperlinks**

A webpage can contain various links that take you directly to other pages and even specific parts of a given page. These links are known as hyperlinks. Hyperlinks allow visitors to navigate between Web sites by clicking on words, phrases, and images. Thus, you can create hyperlinks using text or images available on a webpage.

**Linking Documents**

A link is specified using HTML tag <a>. This tag is called anchor tag and anything between the opening <a> tag and the closing </a> tag becomes part of the link and a user can click that part to reach to the linked document. The syntax to use <a> tag is

<a href = "Document URL" ... attributes-list>Link Text</a>

The following example links to the university's website home page

<!DOCTYPE html>

<html>

<head>

<title>Hyperlink Example</title>

</head>

<body>

<p>Click following link</p>

<a href = "https://www.wlv.ac.uk/" target = "\_self">

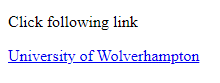
University of Wolverhampton

</a>

</body>

</html>

Produces :



**The target Attribute**

We have used target attribute in our previous example. This attribute is used to specify the location where linked document is opened.

* \_blank - Opens the linked document in a new window or tab.
* \_self - Opens the linked document in the same frame.
* \_parent - Opens the linked document in the parent frame.
* \_top - Opens the linked document in the full body of the window.
* Targetframe - Opens the linked document in a named targetframe.

<!DOCTYPE html>

<html>

<head>

<title>Hyperlink Example</title>

<base href = "https://www.wlv.ac.uk/">

</head>

<body>

<p>Click any of the following links</p>

<a href = "https://www.wlv.ac.uk/" target = "\_blank">Opens in New</a> |

<a href = "https://www.wlv.ac.uk/" target = "\_self">Opens in Self</a> |

<a href = "https://www.wlv.ac.uk/" target = "\_parent">Opens in Parent</a> |

<a href = "https://www.wlv.ac.uk/" target = "\_top">Opens in Body</a>

</body>

</html>

Try out the different links



That's it for today.