Web Basics – HTML5

Lesson 3. Tables

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Lesson Objectives

➢ **After completing this module, you will be able to:**
  – Understand the structure of an HTML table.
  – Controlling table format

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Tables

Tables are defined with the <table> tag. A table is divided into rows
(using <tr>), and each row is divided into data cells (using <td>). Letters
td stand for "table data," which is the content of a data cell. A data cell
can contain text, images, lists, paragraphs, forms, horizontal rules,
tables, etc.

3.1:Tables
Creating Tables

➢ **An HTML table can be created using <table> elements**
  – <table>
    • Define an HTML table
    • Other elements like <tr>, <caption>,.. can be nested inside <table> element

➢ **An HTML table has two kinds of cells**
  – Header Cells
    • <th>
      – Defines a table header
  – Standard Cells
    • <tr>
      – Defines a table row
      – A row can have one or more <td> or <th> elements
    • <td>
      – Defines a table cell data

Employee Name	Salary
Lathika	55000
Sandeep	32000
Ajay	99322

Header Cells

Standard Cells

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An HTML table has two kinds of cells:

- Header Cells: Contain header information (created with the element).
- Standard Cells: Contain data (created with the td element).
- The text in a th element is bold and centered.
- The text in a td element is regular and left-aligned.

<tr> stands for Table row

<td> stands for table data

<th> stands for table header

3.1:Tables
Creating Tables

➢ **Syntax**

```
<table>
      <tr> <th>Column1 Header</th> <th>Column2 Header</th></tr>
      <tr> <td>Cell 1,1</td> <td>Cell 1,2</td> </tr>
      <tr> <td>Cell 2,1</td> <td>Cell 2,2</td> </tr>
</table>
```

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The table also has a few more tags to layout your data.

The <thead> tag is used to group the header content in an HTML table.The <thead> element should be used in conjunction with the <tbody> and <tfoot> elements.

The <tbody> element is used to group the body content in an HTML table and the <tfoot> element is used to group the footer content in an HTML table.

<tfoot> must appear before <tbody> within a table, so that a browser can render the foot before receiving all the rows of data.

Note that the <thead>,<tbody> and <tfoot> elements are seldom used, because of bad browser support. Expect this to change in future versions.

3.1:Tables
Creating Tables

➢ **Syntax**

Table column headings:
```
<table>
        <caption>This is table caption</caption>
<tr>
<th>COLUMN 1</th>
<th>COLUMN 2</th>
<th>COLUMN 3</th>
</tr>
</table>
```

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Table Caption:
- The <caption> tag defines a table caption.
- The <caption> tag must be inserted immediately after the <table> tag.
- You can specify only one caption per table. Usually the caption will be centered above the table.

Table Headers:
The <th> tag defines a header cell in an HTML table.

3.1:Tables
Creating Tables

➢ **Syntax**

```
<table>
<thead>
<tr><td>.....</td></tr>
</thead>
<tfoot>
<tr><td>.....</td></tr>
</tfoot>
<tbody>
<tr><td>....</td></tr>
<tbody>
</table>
```

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3.1:Tables
Blank Data Cell (Code)

➢ **Inserting Blank Data Cell :**
 – <td></td>
 – <td>
</td>

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Blank Data Cell:

You can avoid missing a border around empty cells. Add a non-breaking space ( ) to empty data cells, to make the borders visible.

3.1:Tables
Creating Tables

➢ **Tableheading.html**

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3.1:Tables
Nested Tables (Code)

➢ **A cell can contain another table within it.**

```
<table>
<tr> <th>Zone</th> <th> State </th> </tr>
<tr> <td>South</td>
<td><table>
<tr> <th>Name</th> <th>Capital City</th> </tr>
<tr> <td>Karnataka</td> <td>Bangalore</td> </tr>
<tr> <td>Tamilnadu</td> <td>Chennai</td> </tr>
<tr> <td>Andhra Pradesh</td> <td>Hyderabad</td>
 </tr>
</table></td></tr>
</table>
```

Zone	State	
South	Name	Capital City
	Karnataka	Bangalore
	Tamilnadu	Chennai
	Andhra Pradesh	Hyderabad

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Nested Tables:
Nesting tables within tables lets you create some complex effects from just basic HTML table tags. Nesting tables places one table inside of another. To nest a table, start the table as you normally would. When you come to the cell into which you want to place the nested table, enter the table data tag. Then, instead of typing the contents of the cell as you normally would, start the nested table. The table becomes that cell's content. After you end the nested table, be sure to end the table cell it is in with the </td> tag.

3.1:Tables
Demo

➢ **tabnest4.htm**

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```
<html>
<head><title>Nested Tables</title></head>
<table  width=100% height=100%>
<tr><th bgcolor="red">col1<th bgcolor="green">col2
<tr align=center><td bgcolor="aqua">data1
<td bgcolor="black"><font color="yellow">data2</font>
<table  width=100% height=100%>
<tr><th bgcolor="pink">col1<th bgcolor="blue">col2
<tr align=center><td bgcolor="orange">data1<td bgcolor="purple">
<font color="yellow">data2</font>
</table>
</table>
</html>
```

3.2: Table Formatting
Table Formatting

➢ **Cell Spanning**
  – Table cells can span across more than one column or row.
  – Types of cell spanning
    • Row spanning
    • Column spanning

➢ **Example of Colspan**   ➢ **Example of Rowspan**

Employee Name	Salary
HR	
Lathika	55000
Sandeep	32000
SALES	
Sonia	43000
Raju	30022
Ajay	99932

Department Name	Employee Name	Salary
HR	Lathika	55000
	Sandeep	32000
Sales	Sonia	43000
	Raju	30022
	Ajay	99932

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Cell Spanning:

  There are two types of cell spanning. Row and column spanning.

Cell Spanning (Code)

➢ **Row spanning/Column spanning:**

– Use rowspan and colspan attribute either in <td> or <th> element.

```
<table>
   <tr>
       <th rowspan=m>Multiple Column Header</th>
       <th colspan=n>Multiple Row Header</th>
   </tr>
</table>
```

➢ **m & n are integers specifying number of rows and columns respectively.**

colspan="number of columns" ~

By default, the number of columns in a table is defined by the number of table data cells appearing in the table row that contains the most data. You would, typically place the same number of data cells in each table row. If a table row does not contain the requisite number of table cells, then it will essentially be in 'error' and will be displayed with a missing cell.

rowspan="number of rows" ~

Rowspan attribute works just like the colspan attribute except that you may find the situation a little more difficult to visualize when working with the source code. But once again the principle is the same. By using the rowspan attribute, you can force a table cell to span the number of rows specified by the respective value.

3.2: Table Formatting
Cell Spanning Demo

➢ **Table-span.html**

Deptno	Name	Salary
10	Sita	34000
	Ram	24000
20	Laksman	45000
	Lava	32000
	Kusha	42000
Total Salary		1222

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3.2: Table Formatting
Grouping of Columns

➢ **\<colgroup\> tag specifies a group of one or more columns in a table for formatting**

➢ **The \<col\> tag specifies column properties for each column within a \<colgroup\> element.**

➢ **Use \<colgroup\> and \<col\> tags to group columns with common properties like**
  – Span attribute :
    • Identifies number of columns in the current group.
    • Default value is 1
    • Provide span attribute and omit \<col\> tag

➢ **Example for grouping 3 columns and applying background color as green**

```
<table>
        <colgroup span="3" style="background-color:green"> </colgroup>
        <col>
        <col>
        <tr>
                table contents……
        </tr>
</table>
```

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\<COLGROUP\> and \<COL\> are another attempt to help define parts of a table more easily. Before these tags were defined, you had to keep track of how many \<td\> cells were in each row to know how many columns were in your table, which cells were in the same column, and how to format the cells in a given column.

Span: Defines the number of columns the \<colgroup\> should span

If you wish to put the first three columns in a group and format them the same way you need to write the following HTML code:

```
<table>
        <colgroup span="3"> </colgroup>
        <col>
        <col>
        <tr>
                table contents……
        </tr>
</table>
```

\<COL\> tag defines attribute values for one or more columns in a table. You can only use this element inside a *colgroup*. Use this element when you specify different attribute values to a column inside a *colgroup*. Without a *col* element a column will inherit all its attribute values from the column group.

3.2: Table Formatting
Demo

➢ **tabcol3.htm**

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<html><head><title>Table with Colgroup</title></head>

<body>

<table width="100%" frame="void">

<tr><th colspan="3">Ecommerce Stream</th>

<th colspan="4">Mainframe Stream</th>

<colgroup span="3" width="20%" bgcolor="orange">

<colgroup span="4" width="10%" bgcolor="lightgreen">

<tr><td>Internet/HTML<td>Javscript<td>Java

<td>CICS<td>COBOL<td>JCL<td>IMS

<tr><td>JSP<td>Servlet<td>Struts

<td>ADS/O<td>VSAM<td>IDMS<td>MVS

</table>

</html>

Lab

> **Lab 2**

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Lesson Summary

➢ **After completing this module you know:**
- Structure of an HTML table
- Control table format such as cell spanning
- Use tables to format contents of an HTML Page.

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Review - Questions

➢ **Question 1: Cell spanning is used to joining cells together to make a larger cell.**
  – True/False

➢ **Question 2: The <col> tag defines the attribute values for one or more columns in a table.**
  – True/ False

➢ **Question 3: In which tag usage of rowspan/colspan attribute is valid?**
  – <th>
  – <tr>
  – <td>
  – None of the above

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