HTML Tables

Organizing Page Layout and Displaying Page Data

HTML Tables

- Table are a way of organizing your pages and for displaying page data
- Are simple in the fact there are only a few html tags to know:
  - \<table\>
  - \<tr\>
  - \<td\>
  - \<th\>
  - \<caption\>
- Some other tags more for grouping and styling(not required in this course):
  - \<colgroup\> and \<col\>
  - \<thead\>, \<tbody\>, \<tfoot\>
  - If curious check out:
    - http://www.w3schools.com/tags/tag_colgroup.asp
    - http://www.w3schools.com/tags/tag_tbody.asp

Why Use Tables for Page Layout?

- Advantages
  - Fairly simple to layout pages
  - Pre-dates Cascading Style Sheets (but will support them)
  - Works across all browsers from the Web's inception (not really an issue anymore)

- Disadvantages
  - For page layout, designer must edit every page to alter site (does not cascade)
  - Some effects not possible
  - "dated" appearance (looks like the 1990s)
  - HTML can become fairly complex

Table Tag - <table>

- Denotes the start of a table
- Supported attributes:
  - width : defines how wide you want the table to be on the page
    - encouraged use % instead (better scaling) of pixels (though they will work too)
  - align (left, center or right) defines alignment for whole table (NOT the content of the table)
  - bgcolor : describes the background colour for the table
  - border : takes a number which is the number of pixels wide you want the border to be
  - cellpadding : Specifies the space between the cell walls and contents
  - cellspacing : Specifies the space between cells
- Note: height attribute is not supported
  - though was originally
  - table content will dictate its height

Table Row Tags <tr>

- Defines the start of a row in a table
- Must exist inside <table> tags
- Supports attributes:
  - align : horizontal alignment: left, center, right, or justify
  - valign: vertical alignment: top, middle or bottom
  - bgcolor : will define a background color for the whole row

Table Data Tags <td>

- Defines the a cell in a table
- Must exist inside <tr> tags
  - (i.e. <td> exist inside <tr> exist in <table>)
- Supports attributes:
  - align : same a <tr>
  - width:column width sized to fit (pixels) or can specify size relative to parent element
  - valign: vertical alignment to top, middle or bottom of the cell
  - bgcolor : will define a background color for a single cell
  - colspan : takes a number representing the number of columns you want the cell to "span"
  - rowspan : takes a number representing the number of rows you want the cell to "span"

Table Header Tags <th>

- Defines the a "header"cell in a table
  - Similar to the <td> tag, except by default the header cell is bold'ed and center'ed
- Still Must exist inside <tr> tags
  - (i.e. <th> exist inside <tr> exist in <table>)

Table Caption Tag <caption>

- Give a caption for a table
- Must occur the next line after the <table> tag

```
<table>
  <caption>IT Courses</caption>
  <tr>
    <th>Course Code</th>
    <th>Course Title</th>
  </tr>
  <tr>
    <td>WEBD2201</td>
    <td>Web Development - Fundamentals</td>
  </tr>
  <tr>
    <td>MATH1100</td>
    <td>Mathematics for I.T.</td>
  </tr>
</table>
```

<caption>

IT Courses

Course Code	Course Title
WEBD2201	Web Development - Fundamentals
MATH1100	Mathematics for I.T.

HTML Table Making Strategies

- Be sure to draw the table you are creating by hand, and number each cell
  - It is tough to know what you are working towards if you do not do this
- Be sure to turn your table borders on
  - This makes it easier to see if something is broken, and more importantly where is it broken
  - Turn them off (i.e. set them to "0") when your table is set up correctly

Simple Table Example

```
<table border="1">
    <tr>
        <td>row 1, cell 1</td>
        <td>row 1, cell 2</td>
    </tr>
    <tr>
        <td>row 2, cell 1</td>
        <td>row 2, cell 2</td>
    </tr>
</table>
```

Rendered in the browser as:

row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

Uneven Number of cells

```
<table border="1">
    <tr>
        <td>row 1, cell 1</td>
        <td>row 1, cell 2</td>
        <td>row 1, cell 3</td>
    </tr>
    <tr>
        <td>row 2, cell 1</td>
        <td>row 2, cell 2</td>
    </tr>
    <tr>
        <td>row 3, cell 1</td>
    </tr>
</table>
```
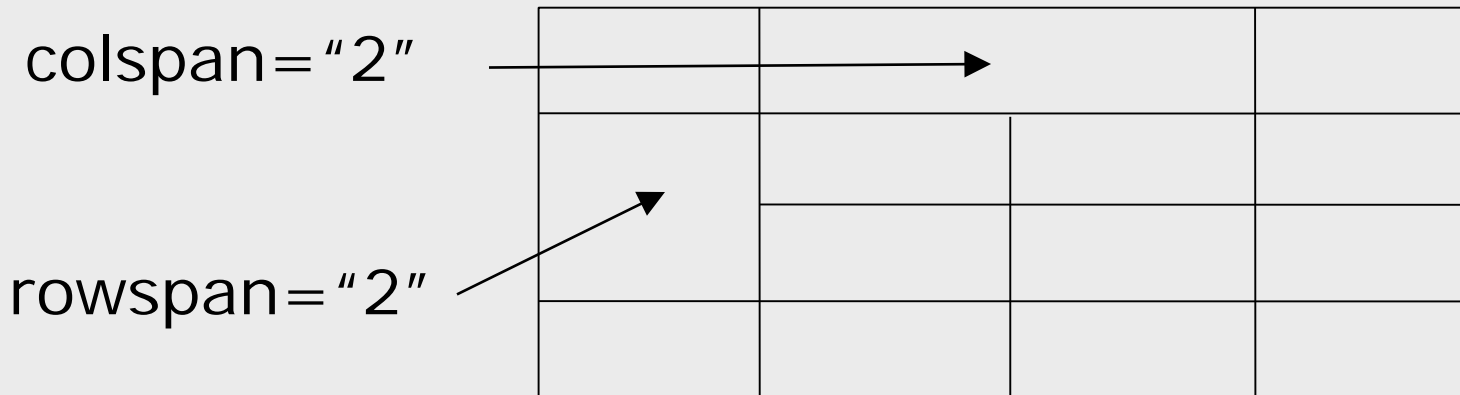
Rendered in the browser as:

row 1, cell 1	row 1, cell 2	row 1, cell 3
row 2, cell 1	row 2, cell 2	
row 3, cell 1		

Spanning Cells

- To fix the uneven number of cells you can span cells
- Across columns
  - **colspan="n"**, where n is the number of columns
  - Reduce number of cells in row accordingly
- Across rows
  - **rowspan="n"**, where n is the number of rows

colspan="2"

rowspan="2"

Colspan and Rowspan

- When you "span" multiple rows and columns with the rowspan and colspan attributes on a cell(ie. the<td> tags)

```
<table border="1" width="100%">
    <tr>
        <td width="20%">r1c1</td>
        <td width= "70%">r1c2</td>
        <td width="10%">r1c3</td>
    </tr>
    <tr>
        <td>r2c1</td>
        <td colspan="2" rowspan="2">row 2, cell 2</td>
    </tr>
    <tr>
        <td>r3c1</td>
    </tr>
</table>
```

r1c1	row 1, cell 2	r1c3
r2c1	row 2, cell 2	
r3c1		

Width Attributes

- The browser will give equal shares to each column in the table unless you specify something else

- You can use width attribute to set column widths using:

  1. Percentages (recommended for scalability)or
  2. Pixels (not recommended)

- Try to have your percentages add up to 100%

Colspan and Rowspan

- You can "span" multiple rows and columns with the row and colspan attributes on a cell (<td> tags)

```
<table border="1">
    <tr>
            <td width="20%">row 1, cell 1</td>
            <td width= "70%">row 1, cell 2</td>
            <td width="10%">row 1, cell 3</td>
    </tr>
    <tr>
            <td>row 2, cell 1</td>

            <td colspan="2" rowspan="2">row 2, cell 2</td>
    </tr>
    <tr>
            <td>row 3, cell 1</td>
    </tr>
</table>
```

row 1, cell 1	row 1, cell 2	row 1, cell 3
row 2, cell 1	row 2, cell 2	
row 3, cell 1		

Layout

- Create a paper design
  - "Master plan"
  - Divide page into rectangular cells
  - Subdivide cells with nested tables
- Create table HTML code as a shell
  - Indent table, tr and td elements for clarity
  - Add content later
  - Use validator to check for missing closing tags

Nesting Tables

- Entire table may appear inside a an existing table `<td>` element

- NOTE: the code can get messy
  - Use indentation to structure HTML code
  - Make sure all elements have closing tags

Nested Tables

```
<td>

  <table border="0" cellpadding=0
    cellspacing=0>

    <tr>

       <td><img src="parrot.png"
          height="244" width="97"
          alt="Picture of parrot"</td>

    </tr>

    <tr>

      <td align="center">Norwegian Blue
         (lovely plumage)</td>

    </tr>

  </table>

</td>
```

td tags
for outer
table

Layout with tables

➢ Create page layout using nested tables

LOGO	Headline

Here is some content, it really doesn't matter what goes in here. It may be formatted with formatting styles.

body

outer table 2 rows, 1 col

inner table 1 row, 2 cols
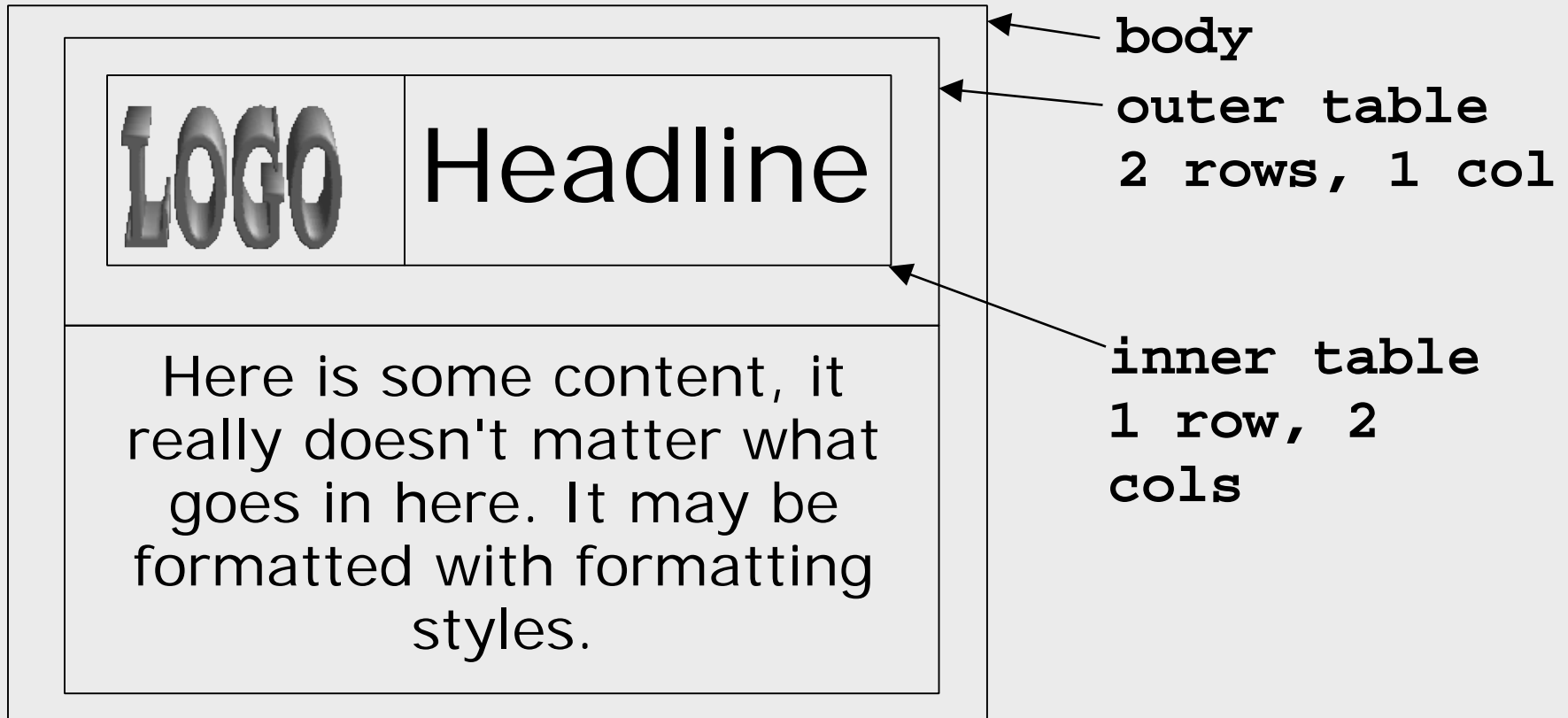
Check out w3schools

- W3schools.com is an excellent resource for tables as well
- Check out:
  - http://www.w3schools.com/tags/tag_table.asp
  - See the examples section at the bottom of the page