

# Web Design and Development

ACS-1809

## Chapter 12

# Using Tables

# Using Tables

-  Understand the concept and uses of tables in web pages
-  Create a basic table structure
-  Format tables within web pages
-  Format content within table cells

# Examples of Tables in HTML

| Computer Models   |           |        |
|-------------------|-----------|--------|
| Manufacturer      | Model     | Price  |
| City Computers    | P325+     | \$2500 |
| MidWest CPU       | 586/Ultra | \$2700 |
| CowCity Computers | P133/+    | \$2450 |
| CMF Computers     | P150z     | \$2610 |

|   |   |   |
|---|---|---|
| O | X | O |
| X | O | X |
| X | O | X |

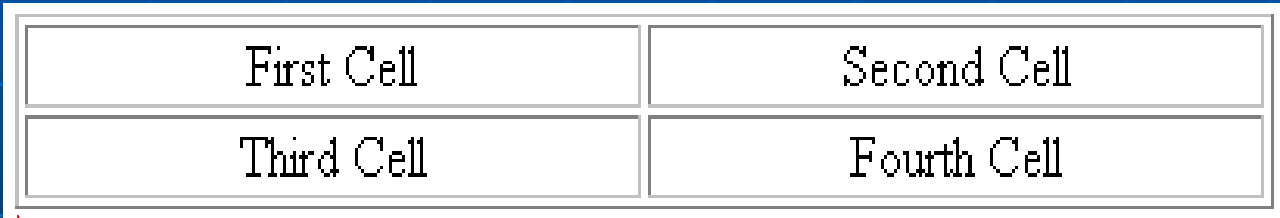
# Basic Table Structure

## Example:

```
<table>
  <tr>
    <td>cell content</td>
    ...
    <td>cell content</td>
  </tr>
  ...
  <tr>
    <td>cell content</td>
    ...
    <td>cell content</td>
  </tr>
</table>
```

# A Simple Table

The layout of a graphical table



The diagram shows a table with two rows and two columns. The cells are labeled 'First Cell', 'Second Cell', 'Third Cell', and 'Fourth Cell'. A red bracket on the left side of the table indicates 'two rows'. A red bracket at the bottom of the table indicates 'two columns'.

|            |             |
|------------|-------------|
| First Cell | Second Cell |
| Third Cell | Fourth Cell |

# A simple table

```
<table>
  <tr>
    <td> First Cell </td>
    <td> Second Cell </td>
  </tr>
  <tr>
    <td> Third Cell </td>
    <td> Fourth Cell </td>
  </tr>
</table>
```

# Table Example

|        |        |        |        |        |
|--------|--------|--------|--------|--------|
| 18,953 | 20,081 | 22,131 | 25,112 | 30,468 |
| 984    | 2,324  | 6,171  | 14,781 | 25,987 |

# Table Headings

| <b>Compression</b> | <b>1</b> | <b>5</b> | <b>10</b> | <b>20</b> | <b>50</b> | <b>80</b> |
|--------------------|----------|----------|-----------|-----------|-----------|-----------|
| <b>Size</b>        | 18,953   | 20,081   | 22,131    | 25,112    | 30,468    | 41,249    |
| <b># of colors</b> | 984      | 2,324    | 6,171     | 14,781    | 25,987    | 28,960    |



# Table Headings

```
<table>
  <tr>
    <th>heading</th>
    ...
    <th>heading</th>
  </tr>
  ...
  <tr>
    <td>cell content</td>
    ...
    <td>cell content</td>
  </tr>
</table>
```

# Adding Table Headings to the Table

Text in cells formatted with the `<th>` tag is bold and centered above each table column

Row of table  
headings

```
<table>
  <tr>
    <th>Group</th>
    <th>Runner</th>
    <th>Time</th>
    <th>Origin</th>
  </tr>
  <tr>
    <td>Men</td>
    <td>1. Peter Teagan</td>
    <td>2:12:34</td>
    <td>San Antonio, Texas</td>
  </tr>
```

# Tables - Summary

- Table:  
`<table>content</table>`
- Table row:  
`<tr>content</tr>`
- Table cell:  
`<td>content</td>`
- Table heading:  
`<th>content</th>`

# Images In Tables

🖥 You can add images to any of the cells

🖱 Just put an img element inside the cell in which you want to display the image

```
<td>  
</td>
```

# Table Borders

- Add attribute in the 'table' tag

**border="value"**

where value is "1" or "0"

1 – turns on all the internal and external borders

0 – turns off all the borders

## Style the borders:

```
{border: border-width, border-style, border-color;}
```

table, th, td

```
{  
  border: 1px solid black;  
}
```

# Border Properties

## Border-collapse

### Value:

-  Collapse – turn off all the space between the cell borders

-  Separate – maintains the space between the cell borders

-  So you can use the border-spacing property to specify the space value

```
table {border-collapse: separate; border-spacing: 10px 5px;}
```

# Spacing Properties

- ▣ You can use padding and margin properties in style sheet on tables
  - ⌘ Padding and margin for table
  - ⌘ Only padding for table cells and rows

# Defining the Table Size

- It's a good practice to specify the size of your table

The size here is the width and height of the table as measured in pixels or as a percentage of the display area

```
table {width: "size"; height: "size";>
```

- To create a table whose height is equal to the entire height of the display area, enter the attribute height="100%"
- If you specify an absolute size for a table in pixels, its size remains constant, regardless of the browser or monitor settings used
- What if you have multiple tables to style in a single page?



# Setting the Width of the Table to 70% of the page width

## Local Woman Wins Marathon



Park City native, **Laura Blake**, won the 27<sup>th</sup> Front Range Marathon over an elite field of the best long distance runners in the country. Laura's time of 2 hr. 28 min. 21 sec. was only 2 minutes off the women's course record set last year by Sarah Rawlings. Kathy Lasker and Lisa Peterson finished second and third, respectively. Laura's victory came on the heels of her performance at the NCAA Track and Field Championships, in which she placed second running for Colorado State.

### Race Results

| Group | Runner           | Time    | Origin              |
|-------|------------------|---------|---------------------|
| Men   | 1. Peter Teagan  | 2:12:34 | San Antonio, Texas  |
| Men   | 2. Kyle Wills    | 2:13:05 | Billings, Montana   |
| Men   | 3. Jason Wu      | 2:14:28 | Cutler, Colorado    |
| Women | 1. Laura Blake   | 2:28:21 | Park City, Colorado |
| Women | 2. Kathy Lasker  | 2:30:11 | Chicago, Illinois   |
| Women | 3. Lisa Peterson | 2:31:14 | Seattle, Washington |

# Defining the Table Size

- ☞ Remember that some monitors may display Web pages at a resolution of 640 by 480 pixels – that can be considered as the lowest resolution of today
- ☞ Make sure the page's height is a 100% of the browser window when you set the table height to 100%

# More Of Table Properties

- Like to an image, you can use the float property to be aligned to the right or left of any surrounding text.

```
table {float: right; }
```

- You can also style a table with background color

```
table {background-color: #090; }
```

- You can even use an image as the background for the table

```
table {background-image: url("star.gif"); }
```

# Caption

- Add the following tag directly after the <table> tag and before the first <tr> tag

`<caption>Table Caption</caption>`

Style the caption in CSS:

caption-side : top, bottom, left, right

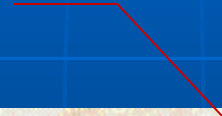
text-align : right, left, center

```
caption { text-align: right; caption-side: bottom; }
```

# Result of a Table Caption

A table with caption

table caption



| <b>Group</b> | <b>Runner</b>    | <b>Time</b> | <b>Origin</b>       |
|--------------|------------------|-------------|---------------------|
| Men          | 1. Peter Teagan  | 2:12:34     | San Antonio, Texas  |
| Men          | 2. Kyle Wills    | 2:13:05     | Billings, Montana   |
| Men          | 3. Jason Wu      | 2:14:28     | Cutler, Colorado    |
| Women        | 1. Laura Blake   | 2:28:21     | Park City, Colorado |
| Women        | 2. Kathy Lasker  | 2:30:11     | Chicago, Illinois   |
| Women        | 3. Lisa Peterson | 2:31:14     | Seattle, Washington |

# Format Content Within Table Cells

 **YOU** can also format the individual table cells

 You can change vertical and horizontal alignment to the table rows and table cells.

 tr, td, and th – different coverages

 Text-align: left, right, center, or string (like “.” – for monetary values)

td {text-align: center;}

 Vertical-align: middle, baseline, sub, super, top, bottom, ....

 **Width and height**

 You can define the width and height of each cell just like what we did to the entire table

 This is very useful if you want to have same-size columns

 Usually just specify the width of the first column is good enough, with the help from “table-layout: fixed;”

 Example: table {table-layout: fixed;} th {width: 33%;}



# Cell Padding

- ❏ To control the space between the table text and the cell borders, you can use the **padding** property to style the table cell.
- ❏ The syntax for this attribute is:

```
td {padding: value;
```

- ☞ *value* is the distance from the table text to the cell border, as measured in pixels
- ☞ the default cell padding value is 1 pixel
- ☞ To define different padding space on different sides you can use

```
td {padding: 10px 5px;}
```

# Tables with Different Cell Padding Values

The effect of changing the cell padding value for a table

|   |   |
|---|---|
| A | B |
| C | D |

0 pixels

|   |   |
|---|---|
| A | B |
| C | D |

1 pixel

|   |   |
|---|---|
| A | B |
| C | D |

5 pixels

|   |   |
|---|---|
| A | B |
| C | D |

10 pixels



# Setting the Cell Padding to 4 Pixels

A table with an increased amount of cell padding.

By increasing the cell padding, you added needed space to the table.

| Race Results |                  |         |                     |
|--------------|------------------|---------|---------------------|
| Group        | Runner           | Time    | Origin              |
| Men          | 1. Peter Teagan  | 2:12:34 | San Antonio, Texas  |
| Men          | 2. Kyle Wills    | 2:13:05 | Billings, Montana   |
| Men          | 3. Jason Wu      | 2:14:28 | Cutler, Colorado    |
| Women        | 1. Laura Blake   | 2:28:21 | Park City, Colorado |
| Women        | 2. Kathy Lasker  | 2:30:11 | Chicago, Illinois   |
| Women        | 3. Lisa Peterson | 2:31:14 | Seattle, Washington |

# Background Color For A Cell

- Just like to a table you can set the background color to individual table cells
    - Background color can be used to “tr”, “td”, and “th” as well
    - It can be very helpful to make your table more readable
- ```
th {background-color: yellow;}
```

# A Table with a Colored Background

| Race Results |                  |         |                     |
|--------------|------------------|---------|---------------------|
|              | Runner           | Time    | Origin              |
| Men          | 1. Peter Teagan  | 2:12:34 | San Antonio, Texas  |
|              | 2. Kyle Wills    | 2:13:05 | Billings, Montana   |
|              | 3. Jason Wu      | 2:14:28 | Cutler, Colorado    |
| Women        | 1. Laura Blake   | 2:28:21 | Park City, Colorado |
|              | 2. Kathy Lasker  | 2:30:11 | Chicago, Illinois   |
|              | 3. Lisa Peterson | 2:31:14 | Seattle, Washington |

# Prohibit Line Breaks

- 🖥 In case you have content in a table cell that you want to keep in a single line

```
td.nowrap {white-space: nowrap;}
```

```
<td class="nowrap"> This is a long line that  
won't be wrap</td>
```

# Spanning Cells

This cell spans  
two columns  
and two rows

This cell spans  
three rows

| Today's Opinion Poll Question                         |        | Political Party |            |             |
|-------------------------------------------------------|--------|-----------------|------------|-------------|
|                                                       |        | Democrat        | Republican | Independent |
| "Do you favor or oppose increasing the minimum wage?" | Favor  | 70%             | 35%        | 55%         |
|                                                       | Oppose | 25%             | 60%        | 30%         |
|                                                       | Unsure | 5%              | 5%         | 15%         |

This cell  
spans three  
columns

# Spanning Rows & Columns

- 🖥 In 'th' or 'td' tag  
rowspan="*rvalue*" colspan="*cvalue*"

| 1 |   |   | 2 |   |
|---|---|---|---|---|
| 3 | 4 | 5 | 6 | 7 |
| 8 |   |   | 9 | 0 |
| a |   |   | b | c |

# A Table Structure with a Row-Spanning Cell

four table  
cells in the  
first row

only three table  
cells are required  
for the second  
and third rows

```
<table>
  <tr>
    <td rowspan="3">1: This cell spans three rows</td>
    <td>2</td>
    <td>3</td>
    <td>4</td>
  </tr>
  <tr>
    <td>5</td>
    <td>6</td>
    <td>7</td>
  </tr>
  <tr>
    <td>8</td>
    <td>9</td>
    <td>10</td>
  </tr>
</table>
```

HTML code

|                               |   |   |    |
|-------------------------------|---|---|----|
| 1: This cell spans three rows | 2 | 3 | 4  |
|                               | 5 | 6 | 7  |
|                               | 8 | 9 | 10 |

resulting table

# HTML Structure of a Table

beginning of the  
table structure

first row of five in  
the table

end of the table  
structure

```
<TABLE>
<TR>
  <TD></TD>
  <TD></TD>
  <TD></TD>
  <TD></TD>
  <TD></TD>
</TR>
<TR>
  <TD></TD>
  <TD></TD>
  <TD></TD>
  <TD></TD>
  <TD></TD>
</TR>
<TR>
  <TD></TD>
  <TD></TD>
  <TD></TD>
  <TD></TD>
  <TD></TD>
</TR>
</TABLE>
```

table cells

You do not need to indent the `<td>` tags or place them on separate lines, but you may find it easier to interpret your code if you do so.

After the table structure is in place, you're ready to add the text for each cell.



# Group Rows

🖥️ Three tags are used to group rows

🖱️ `thead`

🖱️ `tfoot`

🖱️ `tbody`

🖱️ That will make it easier to style each section