



New Perspectives on Creating Web Pages with HTML

Tutorial 4: Designing a Web Page with Tables



A Text Table

This figure shows a text table.

```

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

```



A Graphical Table

This figure shows a graphical table

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



Considerations for Text and Graphical Tables

- Graphical tables are more flexible and attractive, however there are some situations when a text table is needed.
 - the text-based Lynx browser used on many UNIX systems, can display only text characters
- Working with tags for graphical tables can be complicated and time-consuming.
 - for these reasons, you might want to create two versions of a Web page: one that uses only text elements, and another that uses graphical elements



Using Fixed-Width Fonts

- When you create a text table, the font you use is important.
- A text table relies on space and the characters that fill those spaces to create its column boundaries.
- Use a **fixed-width**, or **mono-space**, font so that the columns align properly.
- **Fixed-width fonts** use the same amount of space for each character.



Using Proportional Fonts

- **Proportional fonts** assign a different amount of space for each character depending on the width of that character.
 - for example, since the character “m” is wider than the character “l,” a proportional font assigns it more space
- Proportional fonts are more visually attractive, and typically easier to read, than fixed-width fonts.
- Proportional fonts in a text table can cause errors when the page is rendered in the user’s browser.



Using the <table>, <tr>, and <td> Tags

- Graphical tables are enclosed within a two-sided <table> tag that identifies the start and ending of the table structure.
- Each row of the table is indicated using a two-sided <tr> (for table row).
- Within each table row, a two-sided <td> (for table data) tag indicates the presence of individual table cells.



The Graphical Table Syntax

- The general syntax of a graphical table is:

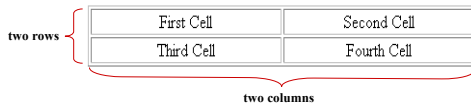

```
<table>
<tr>
  <td> First Cell </td>
  <td> Second Cell </td>
</tr>
<tr>
  <td> Third Cell </td>
  <td> Fourth Cell </td>
</tr>
</table>
```

 - This creates a table with two rows and two columns.



A Simple Table

This figure shows the layout of a graphical table.

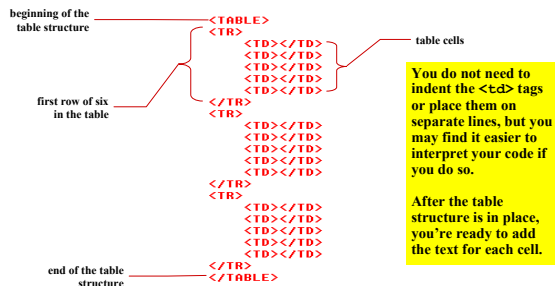


Columns within a Table

- HTML does not provide a tag for table columns.
- In the original HTML specifications, the number of columns is determined by how many cells are inserted within each row.
 - for example, if you have four <td> tags in each table row, that table has four columns
- Later versions of HTML provide increased support for controlling the appearance of table columns.



HTML Structure of a Table



Completed HTML Table Tags

This figure shows the completed text for the body of the table.

With the text for the body of the table entered, the next step is to add the column headings.

```
<TABLE>
<TR>
  <TD>Bacchus</TD>
  <TD>u005c</TD>
  <TD>Wall Hunt</TD>
  <TD>Interior Plaster</TD>
  <TD>$95</TD>
</TR>
<TR>
  <TD>Praying Gargoyle</TD>
  <TD>u005c</TD>
  <TD>Garden Figure</TD>
  <TD>Gothic Stone</TD>
  <TD>$125</TD>
</TR>
<TR>
  <TD>Gargoyle Judge</TD>
  <TD>u0022</TD>
  <TD>Bust</TD>
  <TD>Interior Plaster</TD>
  <TD>$14K</TD>
</TR>
</TABLE>
```



Creating Headings with the <th> Tag

- HTML provides the **<th>** tag for table headings.
- Text formatted with the **<th>** tag is centered within the cell and displayed in a boldface font.
- The **<th>** tag is most often used for column headings, but you can use it for any cell that you want to contain centered boldfaced text.



Adding Table Headings to the Table

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

```

<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>

```

table headings



Result of Table Headings as Displayed in the Browser

table headings appear bold and centered over their columns

Local Woman Wins Marathon

Paul's City native, Laura Blake, won the 27th First Range Marathon over an elite field of the best long distance runners in the country. Laura's time of 2:12:34 for 26.2 miles, 21 years, one week, 2 months off the woman's course record set last year by Sarah Hawke. Blake's father and Lisa Peterson finished second and third respectively. Laura's name on the basis of her performance at the NCAA Track and Field Championships, in which she placed 4th in training for Colorado State.

Group	Runner	Time	Origin
Men	1. Peter Teagan	2:12:34	San Antonio, Texas
Men	2. Kyle Wade	2:13:09	Edging, Missouri
Men	3. James Wu	2:14:28	Orlando, Colorado
Women	1. Laura Blake	2:02:21	Park City, Colorado
Women	2. Katelyn Leiker	2:30:11	Chicago, Illinois
Women	3. Lisa Peterson	2:31:14	Seattle, Washington



Identifying the Table Heading, Body, and Footer

- HTML allows you to identify the different parts of your table using the **<thead>**, **<tbody>**, and **<tfoot>** tags.
 - **<thead>** is used for the table heading
 - **<tbody>** is used for the table body
 - **<tfoot>** is used for the table footer
- These tags do not format the table, but they do contain collections of rows called **row groups**.



The Table Heading, Body, and Footer Syntax

- The table heading, body, and footer syntax is:

```

<table>
  <thead>
    <tr> heading information ...
  </thead>
  <tfoot>
    <tr> footer information ...
  </tfoot>
  <tbody>
    <tr> first group of table rows ...
  </tbody>
  <tbody>
    <tr> second group of table rows ...
  </tbody>
</table>

```



Table Heading, Body, and Footer

- A single table can contain several **<tbody>** tags to identify different parts of the table.
- The **<thead>** and **<tfoot>** sections must appear before any **<tbody>** sections in the table structure.
- These tags are most often used in a table that draws its data from an external data source, or tables that span several Web pages.
- The browser will repeat those sections across multiple pages.
- Not all browsers support this capability.



Creating a Table Caption

- HTML allows you to specify a caption for a table.
- The syntax for creating a caption is: `<caption align="alignment">caption text</caption>`
 - *alignment* indicates the caption placement
 - a value of *“bottom”* centers the caption below the table
 - a value of *“top”* or *“center”* centers the caption above the table
 - a value of *“left”* or *“right”* place the caption above the table to the left or right



Table Captions

- Only **Internet Explorer** supports all caption values.
- **Netscape** supports only the *“top”* and *“bottom”* values.
- The `<caption>` tag works only with tables, the tag must be placed within the table structure.
- Captions are shown as normal text without special formatting.
- Captions can be formatted by embedding the caption text within other HTML tags.
 - for example, place the caption text within a pair of `` and `<i>` tags causes the caption to display as bold and italic



Inserting a Table Caption

Placing the caption text within a pair of `` tags causes the caption to display as bold.

```
<table>
  <<caption align="top"><b>Race Results</b></caption>
  <tr>
    <th>Group</th>
    <th>Runner</th>
    <th>Time</th>
    <th>Origin</th>
  </tr>
```

caption text

caption will be centered above the table



Result of a Table Caption

This figure shows a table with a caption.

table caption

Race Results			
Group	Runner	Time	Origin
Men 1	Peter Teagan	2:12:34	San Antonio, Texas
Men 2	Kyle Wilds	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



Modifying the Appearance of a Table

- You can modify the appearance of a table by adding:
 - gridlines
 - borders
 - background color
- HTML also provides tags and attributes to control the placement and size of a table.



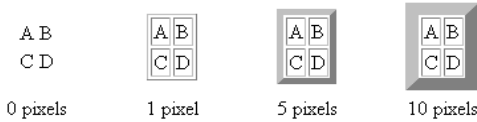
Adding a Table Border

- By default, browsers display tables without table borders.
- A table border can be added using the border attribute to the `<table>` tag.
- The syntax for creating a table border is: `<table border="value">`
 - *value* is the width of the border in pixels
- The `size` attribute is optional; if you don't specify a size, the browser creates a table border 1 pixel wide.



Tables with Different Borders Values

This figure shows the effect on a table's border when the border size is varied.

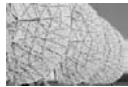


Adding a 5-Pixel Border to a Table

```
<table border="5">
  <caption align="top"><b>Race Results</b></caption>
  <tr>
    <th>Group</th>
    <th>Runner</th>
    <th>Time</th>
    <th>Origin</th>
  </tr>
```

Only the outside border is affected by the border attribute; the internal gridlines are not affected.

Group	Runner	Time	Origin
Men	1 Peter Teagan	2:12:34	San Antonio, Texas
Men	2 Kyle Walls	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



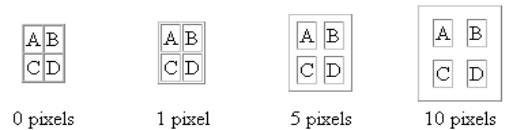
Controlling Cell Spacing

- The **cellspacing** attribute controls the amount of space inserted between table cells.
- The syntax for specifying the cell space is: **<table cellspacing="value">**
 - value** is the width of the interior borders in pixels
 - the default cell spacing is 2 pixels
- Cell spacing refers to the space between the cells.



Tables with Different Cell Spacing Values

This figure shows how different cell spacing values affect a table's appearance.



Setting the Cell Spacing to 0 Pixels

Setting the cellspacing to 0 reduces the width of the borders between individual table cells.

This will not remove the border between the cells.

```
<table border="5" cellspacing="0">
  <caption align="top"><b>Race Results</b></caption>
  <tr>
    <th>Group</th>
    <th>Runner</th>
    <th>Time</th>
    <th>Origin</th>
  </tr>
```

Group	Runner	Time	Origin
Men	1 Peter Teagan	2:12:34	San Antonio, Texas
Men	2 Kyle Walls	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 Cell Padding

- To control the space between the table text and the cell borders, add the **cellpadding** attribute to the table tag.
- The syntax for this attribute is: **<table cellpadding="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
- Cell padding refers to the space within the cells.



Tables with Different Cell Padding Values

This figure shows 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

This figure shows the table with the increased amount of cell padding.

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

```
<table border="5" cellspacing="0" cellpadding="4">
<caption align="top"><b>Race Results</b></caption>
<tr>
<th>Group</th>
<th>Runner</th>
<th>Time</th>
<th>Origin</th>
</tr>
```

Group	Runner	Time	Origin
Men	1. Peter Teagan	2:12:34	San Antonio, Texas
Men	2. Kyle Wells	2:13:05	Billings, Montana
Men	3. Jason Wu	2:14:28	Outter, 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



Table Frames and Rules

- Two additional table attributes introduced in HTML 4.0 are the **frames** and **rules** attributes.
- With the frame and rule attributes you can control how borders and gridlines are applied to the table.
- The **frames** attribute allows you to determine which sides of the table will have borders.
- The frame attribute syntax is: `<table frame="type">`
 - type** is either "box" (the default), "above", "below", "hsides", "vsides", "lhs", "rhs", or "void"



Values of the Frame Attribute

This figure describes each of the values of the frame attribute.

FRAME VALUE	DESCRIPTION
BOX	Draws borders around all four sides
ABOVE	Draws only the top border
BELOW	Draws only the bottom border
HSIDES	Draws both the top and bottom borders (the horizontal sides)
LHS	Draws only the left-hand side
RHS	Draws only the right-hand side
VSIDES	Draws both the left and right borders (the vertical sides)
VOID	Does not draw borders on any of the four sides



Effect of Different Frame Values

This figure shows the effect of each of the frame values on the table grid.

A	B	C
D	E	F
G	H	I

frame="box"

A	B	C
D	E	F
G	H	I

frame="above"

A	B	C
D	E	F
G	H	I

frame="below"

A	B	C
D	E	F
G	H	I

frame="hsides"

A	B	C
D	E	F
G	H	I

frame="lhs"

A	B	C
D	E	F
G	H	I

frame="rhs"

A	B	C
D	E	F
G	H	I

frame="vsides"

A	B	C
D	E	F
G	H	I

frame="void"



The Frames Attribute

- The frames attribute is:
 - supported by Internet Explorer version 4.0 and above
 - supported by Netscape version 6.2, but not by earlier versions of Netscape



Creating Frames and Rules Continued

- The **rules** attribute lets you control how the table gridlines are drawn.
- The syntax of the rules attribute is: `<table rules="type">`
 - *type* is either “all”, “rows”, “cols”, or “none”



Effect of Different Rules Values

This figure shows the effect of each of the rules attribute values on a table.

A	B	C
D	E	F
G	H	I

rules="all"

A	B	C
D	E	F
G	H	I

rules="rows"

A	B	C
D	E	F
G	H	I

rules="cols"

A	B	C
D	E	F
G	H	I

rules="none"



The Rules Attribute

- The rules attribute is:
 - supported by Internet Explorer version 4.0 and above
 - it is not supported by any versions of Netscape



Working with Table and Cell Size

- The size of a table is determined by the text it contains in its cells.
- By default, HTML places text on a single line.
- As you add text in a cell, the width of the column and table expands to the edge of the page.
 - once the page edge is reached, the browser reduces the size of the remaining columns to keep the text to a single line
- You can insert a line break, paragraph or heading tag within a cell.



Working with Table and Cell Size Continued

- When the browser can no longer increase or decrease the size of the column and table it wraps the text to a second line.
- As more text is added, the height of the table expands to accommodate the additional text.
- It is important to manually define the size of the table cells and the table as a whole.



An Example of Changing a Table and Cell Size

This figure shows a table where you may want to change the table and cell size to evenly lay the table out on a Web page.

Here is a sample of our products

Name	Item #	Type	Finish	Price
Bacchus	48059	Wall Mount	Interior Plaster	\$95
Praying Gargoyle	48159	Garden Figure	Gothic Stone	\$125
Gargoyle Judge	48222	Bust	Interior Plaster	\$140

Here is a sample of our products

Name	Item #	Type	Finish	Price
Bacchus	48059	Wall Mount	Interior Plaster	\$95
Praying Gargoyle	48159	Garden Figure	Gothic Stone	\$125
Gargoyle Judge	48222	Bust	Interior Plaster	\$140



Defining the Table Size

- The syntax for specifying the table size is: `<table width="size" height="size">`
 - `size` is the width and height of the table as measured in pixels or as a percentage of the display area
- 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.
- Remember that some monitors display Web pages at a resolution of 640 by 480 pixels.



Setting the Width of the Table to 500 Pixels

This figure shows the revised page with the table width increased to 500 pixels.

```
<table border="1" cellpadding="0" cellspacing="4" width="500">
<caption align="top">Space Results</caption>
<tr>
<th>Group</th>
<th>Runner</th>
<th>Time</th>
<th>Origin</th>
</tr>
```

Once the width is set for the table, the width of individual cells and columns can be set.

Park City native, Laura Blake, won the 27th First Stage Marathon over an elite field of the best long distance runners in the country. Laura's time of 2:28:20 was only 2 minutes off the women's course record set last year by Carol Bantigo. Kathy Larkin and Lisa Peterson finished second and third, respectively. Laura's victory came on the heels of her performance at the ICAA Track and Field Championships, in which she placed second in racing for Colorado State.

Group	Runner	Time	Origin
Men	1. Peter Pagan	2:02:34	San Antonio, Texas
Men	2. Kyle Hill	2:13:07	St. Louis, Missouri
Men	3. James Wu	2:14:20	Calder, Colorado
Women	1. Laura Blake	2:28:20	Park City, Colorado
Women	2. Kathy Larkin	2:30:11	Chicago, Illinois
Women	3. Lisa Peterson	2:33:14	Seattle, Washington



Defining Cell and Column Sizes

- To set the width of an individual cell, add the **width** attribute to either the `<td>` or `<th>` tags.
- The syntax is: `width="value"`
 - `value` can be expressed either in pixels or as a percentage of the table width
 - a width value of 30% displays a cell that is 30% of the total width of the table



Defining Cell and Column Sizes Continued

- A pixel value or a percentage entered depends on whether a table will be a **specific size** or **fill a relative space**.
- Specifying a width for an individual cell does not guarantee that the cell will be that width when displayed in the browser.
 - the reason for this is that the cell is part of a column containing other cells.
- Set the width of all the cells in the column to the same value to ensure that the cells do not change in size.



Defining Cell and Column Sizes Continued

- The **height** attribute can be used in the `<td>` or `<th>` tags to set the height of individual cells.
- The height attribute is expressed either in pixels or as a percentage of the height of the table.
- If you include more text than can be displayed within that height value you specify, the cell expands to display the additional text.



Aligning a Table and its Contents

- By default, a browser places a table on the left margin of a Web page, with surrounding text placed above and below the table.



Aligning a Table on the Web Page

- To align a table with the surrounding text, use the **align** attribute as follows: **align="alignment"**
 - alignment** equals **"left"**, **"right"**, or **"center"**
 - left** or **right** alignment places the table on the margin of the Web page and wraps surrounding text to the side
 - center** alignment places the table in the horizontal center of the page, but does not allow text to wrap around it
- The align attribute is similar to the align attribute used with the `` tag.
- The align attribute is available only with browsers that support HTML 3.2 or later.



Results of a Right-Aligned Table

This figure shows a right-aligned table.

```
<table border="1" cellspacing="0" cellpadding="4" width="500" align="right">
  <caption align="top">Rare Results</caption>
  <tr>
    <th align="left" colspan="2">Group</th>
    <th align="left">Runner</th>
    <th align="left">Time</th>
    <th align="left">Origin</th>
  </tr>
```

Local Woman Wins Marathon

Local City woman, Laura Blake, won the 27th Four Four Marathon over the field of the best long distance runners in the country. Laura took 2:31:14 to finish the race. She was the only woman to finish the race. She was the only woman to finish the race. She was the only woman to finish the race.

Group	Runner	Time	Origin
Men	1. Peter Teague	2:12:34	San Antonio, Texas
Men	2. Kyle Williams	2:13:05	Butte, Montana
Men	3. Jason Wu	2:14:28	Custer, 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



Aligning the Contents of a Table

- By default, cell text is placed in the middle of the cell, aligned with the cell's left edge.
- By using the **align** and **valign** attributes, you can specify the text's horizontal and vertical placement.
- To align the text for a single column, you must apply the align attribute to every cell in that column.



Values of the Align and Valign Attributes

This figure shows how the combination of the align and valign attributes can affect the position of the cell text in relation to the cell borders.

align="left" valign="top"	align="left" valign="middle"	align="left" valign="bottom"
align="center" valign="top"	align="center" valign="middle"	align="center" valign="bottom"
align="right" valign="top"	align="right" valign="middle"	align="right" valign="bottom"



Right-Aligning the Values in a Column

```
<table border="1" cellspacing="0" cellpadding="4" width="500" align="right">
  <caption align="top">Rare Results</caption>
  <tr>
    <th align="left" colspan="2">Group</th>
    <th align="left">Runner</th>
    <th align="left">Time</th>
    <th align="left">Origin</th>
  </tr>
  <tr>
    <td align="left">Men</td>
    <td align="left">1. Peter Teague</td>
    <td align="left">2:12:34</td>
    <td align="left">San Antonio, Texas</td>
  </tr>
  <tr>
    <td align="left">Men</td>
    <td align="left">2. Kyle Williams</td>
    <td align="left">2:13:05</td>
    <td align="left">Butte, Montana</td>
  </tr>
  <tr>
    <td align="left">Men</td>
    <td align="left">3. Jason Wu</td>
    <td align="left">2:14:28</td>
    <td align="left">Custer, Colorado</td>
  </tr>
  <tr>
    <td align="left">Women</td>
    <td align="left">1. Laura Blake</td>
    <td align="left">2:28:21</td>
    <td align="left">Park City, Colorado</td>
  </tr>
  <tr>
    <td align="left">Women</td>
    <td align="left">2. Kathy Lasker</td>
    <td align="left">2:30:11</td>
    <td align="left">Chicago, Illinois</td>
  </tr>
  <tr>
    <td align="left">Women</td>
    <td align="left">3. Lisa Peterson</td>
    <td align="left">2:31:14</td>
    <td align="left">Seattle, Washington</td>
  </tr>
</table>
```

Group	Runner	Time	Origin
Men	1. Peter Teague	2:12:34	San Antonio, Texas
Men	2. Kyle Williams	2:13:05	Butte, Montana
Men	3. Jason Wu	2:14:28	Custer, 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

right-aligned column



Spanning Rows and Columns

- To merge several cells into one, you need to create a **spanning cell**.
- A spanning cell is a cell that occupies more than one row or column in a table.
- Spanning cells are created by inserting the **rowspan** and **colspan** attribute in a `<td>` or `<th>` tag.
- The syntax for these attributes is: **rowspan="value"** and **colspan="value"**
 - value** is the number of rows or columns that the cell spans in the table



Spanning Rows and Columns Continued

- When a cell spans several rows or columns, it is important to adjust the number of cell tags used in the table row.
- When a cell spans several rows, the rows below the spanning cell must also be adjusted.



Example of Spanning Cells

This figure shows a table of opinion poll data in which some of the cells span several rows and/or columns.

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%



A Table Structure with a Row-Spanning Cell

This figure shows spanning cells.

four table cells in the first row
only three table cells are required for the second and third rows

```

<table border="1">
  <tr>
    <td colspan="3">1: This cell spans three rows</td>
    <td>2</td>
    <td>3</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



Adding Spanning Cells to a Table

this cell spans two columns

these cells span three rows

```

<table border="1" cellpadding="0" cellspacing="0" width="100" align="right">
  <tr>
    <td colspan="2">John Coltrane</td>
    <td colspan="2">Number of CDs</td>
  </tr>
  <tr>
    <td rowspan="3">John Coltrane</td>
    <td colspan="2">1950-1959</td>
    <td colspan="2">1960-1969</td>
  </tr>
  <tr>
    <td colspan="2">1970-1979</td>
    <td colspan="2">1980-1989</td>
  </tr>
  <tr>
    <td colspan="2">1990-1999</td>
    <td colspan="2">2000-2009</td>
  </tr>
  <tr>
    <td colspan="2">John Coltrane</td>
    <td colspan="2">Number of CDs</td>
  </tr>
  <tr>
    <td rowspan="3">John Coltrane</td>
    <td colspan="2">1950-1959</td>
    <td colspan="2">1960-1969</td>
  </tr>
  <tr>
    <td colspan="2">1970-1979</td>
    <td colspan="2">1980-1989</td>
  </tr>
  <tr>
    <td colspan="2">1990-1999</td>
    <td colspan="2">2000-2009</td>
  </tr>
</table>

```



Results of a Table with Spanning Cells

This figure shows a table with spanning cells.

spanning cells

Race Results			
	Runner	Time	Origin
Men	1. Peter Teagan	2:12:34	San Antonio, Texas
	2. Kyle Wallr	2:13:05	Billings, Montana
	3. Jason Wu	2:14:28	Outer, Colorado
Women	1. Laura Blake	2:29:21	Park City, Colorado
	2. Kathy Lasker	2:30:11	Chicago, Illinois
	3. Lisa Peterson	2:31:14	Seattle, Washington



An Example of Spanning Cells

This figure shows an example of spanning cells.

```

<TR>
  <TD WIDTH=88%><B>Garçoyle Judge</B></TD>
</TR>
<TR>
  <TD colspan="2"><B>Interior Plaster</B></TD>
</TR>
<TR>
  <TD align="right" width="50%><B>Garçoyle Judge</B></TD>
</TR>
<TR>
  <TD colspan="2"><B>Interior Plaster</B></TD>
</TR>
<TR>
  <TD align="right" width="50%><B>Garçoyle Judge</B></TD>
</TR>
</TABLE>

```

Here is a sample of our products

Name	Item #	Type	Finish	Price
Bacchus	48059	Wall Mount	Interior Plaster	\$95
Praying Garçoyle	48159	Garden Figure	Gothic Stone	\$125
Garçoyle Judge	48222	Butst	Interior Plaster	\$140
Garçoyle Judge	48223	Butst	Gothic Stone	\$155



An Example of Spanning Cells

This figure shows an example of spanning cells.

```
<TABLE BORDER="1" CELSPACING="0" CELLSPACING="4" ALIGN="CENTER" WIDTH="550"
BGCOLOR="WHITE">
<CAPTION ALIGN="TOP">Here is a sample of our products</CAPTION>
<TR
BGCOLOR="#E3C666">
<TDName</TD>
<TR WIDTH="60">Item #</TR>
<TR
COLSPAN="2">Type and Finish</TR>
<TR
WIDTH="50">Price</TR>
</TR>
```

Here is a sample of our products

Name	Item #	Type and Finish	Price	
Bacchar	48059	Wall Mount	Interior Plaster	\$95
Praying Chagoyale	48159	Garden Figure	Gothic Stone	\$125
Chagoyale Judge	48222	Bust	Interior Plaster	\$140
	48223	Bust	Gothic Stone	\$155



Applying a Background Color

- Table elements support the bgcolor attribute.
- To specify a background color for all of the cells in a row, or for individual cells, by adding the bgcolor attribute to either the <table>, <tr>, <td>, or <th> tags as follows:
 - <table bgcolor="color">
 - <tr bgcolor="color">
 - <td bgcolor="color">
 - <th bgcolor="color">
- color is either a color name or hexadecimal color value



Specifying Table, Row, and Cell Colors

You cannot set a background color for a column with a single attribute; to set the background color for an entire column, you must define the background color for each cell in that column.

The color defined for a cell overrides the color defined for a row, and the color defined for a row overrides the color defined for a table.

```
<table border="1" style="width: 100%; text-align: center; border-collapse: collapse; background-color: #E3C666;">
<caption>Race Results</caption>
<thead>
<tr style="background-color: #E3C666;">
<th style="width: 10%;>Men</th>
<th style="width: 40%;>Runner</th>
<th style="width: 15%;>Time</th>
<th style="width: 35%;>Origin</th>
</tr>
</thead>
<tbody>
<tr style="background-color: #ADD8E6;">
<td style="width: 10%;>1</td>
<td style="width: 40%;>Peter Teagan</td>
<td style="width: 15%;>2:12.34</td>
<td style="width: 35%;>San Antonio, Texas</td>
</tr>
<tr style="background-color: #ADD8E6;">
<td style="width: 10%;>2</td>
<td style="width: 40%;>Kyle Wils</td>
<td style="width: 15%;>2:13.05</td>
<td style="width: 35%;>Billings, Montana</td>
</tr>
<tr style="background-color: #ADD8E6;">
<td style="width: 10%;>3</td>
<td style="width: 40%;>Jason Wu</td>
<td style="width: 15%;>2:14.28</td>
<td style="width: 35%;>Cutter, Colorado</td>
</tr>
<tr style="background-color: #90EE90;">
<td style="width: 10%;>1</td>
<td style="width: 40%;>Laura Blake</td>
<td style="width: 15%;>2:28.21</td>
<td style="width: 35%;>Park City, Colorado</td>
</tr>
<tr style="background-color: #90EE90;">
<td style="width: 10%;>2</td>
<td style="width: 40%;>Kathy Lacker</td>
<td style="width: 15%;>2:30.11</td>
<td style="width: 35%;>Chicago, Illinois</td>
</tr>
<tr style="background-color: #90EE90;">
<td style="width: 10%;>3</td>
<td style="width: 40%;>Lisa Peterson</td>
<td style="width: 15%;>2:31.14</td>
<td style="width: 35%;>Seattle, Washington</td>
</tr>
</tbody>
</table>
```



Results of a Table with a Colored Background

This figure shows a table with a colored background.

Race Results			
	Runner	Time	Origin
Men	1. Peter Teagan	2:12.34	San Antonio, Texas
	2. Kyle Wils	2:13.05	Billings, Montana
	3. Jason Wu	2:14.28	Cutter, Colorado
Women	1. Laura Blake	2:28.21	Park City, Colorado
	2. Kathy Lacker	2:30.11	Chicago, Illinois
	3. Lisa Peterson	2:31.14	Seattle, Washington



The bordercolor Attribute

- By default, table borders are displayed in two shades of gray that create a three-dimensional effect.
- The syntax for the bordercolor attribute is: <table bordercolor="color">
 - color is an HTML color name or hexadecimal color value
- Internet Explorer and Netscape apply this attribute differently.



Using the bordercolor Attribute

This figure shows that Internet Explorer applies the same color to all parts of the border, thus removing the 3-D effect; Netscape does not.

```
<table border="10" bordercolor="blue">
```

A	B	C
D	E	F
G	H	I

Internet Explorer

A	B	C
D	E	F
G	H	I

Netscape



The bordercolorlight and bordercolordark Attributes

- The **bordercolorlight** and **bordercolordark** attributes allow you specify light and dark colors of a 3-D border.



Using the bordercolorlight Attribute

This figure shows an example of the use of the **bordercolor** and **bordercolorlight** attributes to create a 3-D colored border in Internet Explorer. Netscape does not support these attributes.

```
<table border="10" bordercolor="blue" bordercolorlight="#b2b2ff">
```

A	B	C
D	E	F
G	H	I

Internet Explorer



Applying a Table Background

- Add a background image to your tables using the **background** attribute.
- A background can be applied to the entire table, to a single row (Netscape 6.2 only), or to an individual cell.



Applying a Background Image to a Table, Row, and Cell

This figure shows examples of the background attribute applied to three sample tables.

The diagram shows three examples of background application. On the left, a table with a background image is shown with the code `<table background="parch.jpg">`. In the middle, a row with a background image is shown with the code `<tr background="parch.jpg">`. On the right, a cell with a background image is shown with the code `<td background="parch.jpg">`. Arrows point from the code to the corresponding part of the table.



Working with Column Groups

- HTML 4.0 supports tags that allow you to manipulate the features of entire columns and groups of columns.
 - this feature is currently only supported by Internet Explorer 4.0 or above, and not at all by Netscape.
 - this feature shouldn't be used if your page is to be viewed by multiple browsers and browser versions
- To define a column, add the following tag to the top of the table structure: `<col span="value">`
 - value** is the number of columns in the group
- The `<col>` tag supports the align, bgcolor, valign, and width attributes.



Using the <col> Tag

This figure shows an example of the `<col>` tag used to format the appearance of entire table columns.

```
<table width="200" border="10" cellspacing="1" cellpadding="1">
  <col span="2" align="left" bgcolor="lightblue">
  <col align="right" bgcolor="lightgreen">
  <tr>
    <td width="50">A</td>
    <td width="50">B</td>
    <td width="50">C</td>
  </tr>
  <tr>
    <td width="50">D</td>
    <td width="50">E</td>
    <td width="50">F</td>
  </tr>
  <tr>
    <td width="50">G</td>
    <td width="50">H</td>
    <td width="50">I</td>
  </tr>
</table>
```

HTML code

A	B	C
D	E	F
G	H	I

resulting table



The <colgroup> Tag

- Another way of grouping columns is by using the <colgroup> tag.
- The syntax of the <colgroup> tag is:

```
<colgroup span="value"
  columns
</colgroup>
```

 - *value* is the number of columns in the group, and columns are definitions for individual columns within the group (defined using the <col> tag.)
- In the event of a conflict between the attributes in the <col> and <colgroup> tags, the <col> tag attributes take precedence.



Using the <colgroup> Tag

This figure shows an example of a column group used to center the text of all columns in the table.

```
<table width="200" border="1" cellspacing="5" cellpadding="5">
  <colgroup span="3" align="center">
    <col style="background-color: #lightblue">
  </colgroup>
  <tr>
    <td width="50">A</td>
    <td width="50">B</td>
    <td width="50">C</td>
  </tr>
  <tr>
    <td width="50">D</td>
    <td width="50">E</td>
    <td width="50">F</td>
  </tr>
  <tr>
    <td width="50">G</td>
    <td width="50">H</td>
    <td width="50">I</td>
  </tr>
</table>
```

A	B	C
D	E	F
G	H	I

HTML code

resulting table



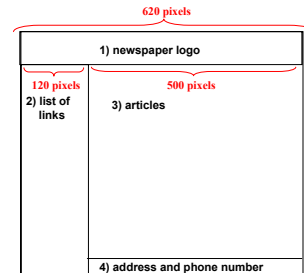
Designing a Page Layout with Tables

- HTML tables are most often used to define the layout of an entire Web page.
- If you want to design a page that displays text in newspaper style columns, or separates the page into distinct sections, you'll find tables an essential and useful tool.



Table Layout of a Web Page

This figure shows a sample table layout of a Web page.



A Web Page with Tables

This figure shows a sample web page using tables.



Comment Tags

- **Comment tags** can aid in viewing your HTML file by describing the different sections of the code.
- The syntax for creating a comment tag is:

```
<!-- Comment text -->
```

 - *comment text* is the text that you want to insert into the comment
- Any text appearing within the comment tag is ignored by the browser and not displayed in the page.



Using Nested Table

- Tables can be created within another table making the Web page easier to manage.

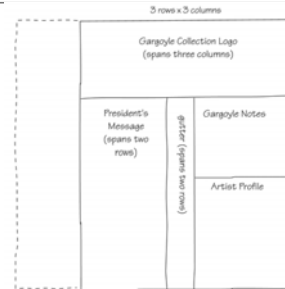
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A Sketch of a Web Page using Nested Tables

This figure shows a sketch of a web page using nested tables.



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The Result of the Web Page using Nested Tables

This figure shows a sample web page using nested tables.

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An Example of the Contents

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An Example of the Gargoyle Notes

```

<!--The table gutter-->
<TD BGCOLOR="#228B22" WIDTH="500px">
<!--Notes about gargoyles-->
<TD BGCOLOR="#228B22" WIDTH="228" BGCOLOR="#FFD700">
<FONT COLOR="#800000">
<A HREF="#">What do I do with a gargoyle?</A>
Don't think you need a gargoyle? Think again. Gargoyles are
useful as:
<UL style="list-style-type: none;">
<LI>Bird baths
<LI>Wind chimes
<LI>Pen holders
<LI>Paperweights
<LI>Bookends
</UL>
</TD>
</TD>
</TR>

```

What do I do with a gargoyle?
Don't think you need a gargoyle? Think again. Gargoyles are useful as

- Bird baths
- Wind chimes
- Pen holders
- Paperweights
- Bookends

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The Result of the Web Page using Nested Tables

This figure shows a sample web page using nested tables.

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Changing the Size of the Table Text

- In order to change the size of the table text, you need to insert a `` tag into each cell.
- The `` tag can not be applied to all of the text in a table.



Changing the Font Size in a Table

It is important to make sure that each `` tag is placed inside the `<td>`, `<th>`, or `<caption>` tags and to include the closing `` tag within each cell.

Another possible source of error is to neglect to include a closing double quotation mark around the attribute values.

```
<table border="1" cellpadding="0" cellspacing="4" width="100" align="right" bgcolor="white">
<caption align="top" font-size="2" subtitle results/bsu/fans/><caption>
or bgcolor="yellow"
<tr cellpadding="2" font-size="2" bgcolor="pink">
<th font-size="2" style="font-size: 2em;">
</tr>
<tr>
<td rowspan="3" align="top" bgcolor="lightblue" font-size="2" menu/fans/>
<td font-size="2" align="right" colspan="2" style="font-size: 2em;">
</td>
<td align="right" font-size="2" style="font-size: 2em;">
</td>
</tr>
<tr>
<td rowspan="2" align="right" colspan="2" style="font-size: 2em;">
</td>
<td align="right" font-size="2" style="font-size: 2em;">
</td>
</tr>
<tr>
<td align="right" colspan="2" style="font-size: 2em;">
</td>
<td align="right" font-size="2" style="font-size: 2em;">
</td>
</tr>
<tr>
<td rowspan="3" align="top" bgcolor="lightgreen" font-size="2" women/fans/>
<td align="right" colspan="2" style="font-size: 2em;">
</td>
<td align="right" font-size="2" style="font-size: 2em;">
</td>
</tr>
<tr>
<td align="right" colspan="2" style="font-size: 2em;">
</td>
<td align="right" font-size="2" style="font-size: 2em;">
</td>
</tr>
<tr>
<td align="right" colspan="2" style="font-size: 2em;">
</td>
<td align="right" font-size="2" style="font-size: 2em;">
</td>
</tr>
</table>
```



Summary

- Learned how to create and use tables.
- Created a simple text table using the `<pre>` tag to display unformatted text.
- Created a graphical table using the `<table>`, `<tr>`, `<th>` and `<td>` tags.
- Worked with basic properties of tables.
- Learned how to control the placement of the table on a Web page.



Summary

- Learned how to specify the size and alignment of the various table elements.
- Worked with row-spanning and column-spanning cells.
- Discussed the principle uses of tables.
- Discussed extensions to the standard table tags that are supported by some browsers.