Using HTML Tables

Defining a Table Structure

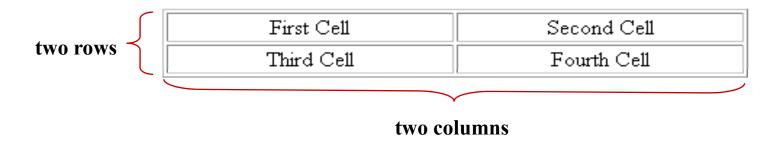
- The first step to creating a table is to specify the table structure:
 - the number of rows and columns
 - the location of column headings
 - the placement of a table caption
- Once the table structure is in place, you can start entering data into the table.

Using the , , and Tags

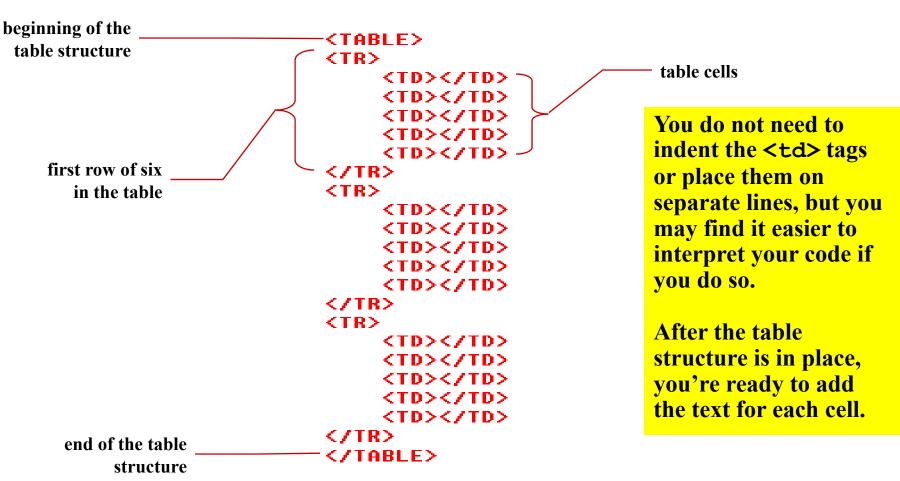
- Graphical tables are enclosed within a two-sided
 tag that identifies the start and ending of the table structure.
- Each row of the table is indicated using a two-sided
 > (for table row).
- Within each table row, a two-sided (for table data) tag indicates the presence of individual table cells.

The General Table Syntax

First Cell First Cell Second Cell Third Cell



HTML Structure of a Table



Creating Headings with the Tag

- HTML provides the tag for table headings.
- Text formatted with the tag is centered within the cell and displayed in a boldface font.
- The 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 tag is bold and centered above each table column.

· · · · · · · · · · · · · · · · · · ·	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
<pre></pre>	Women	3. Lisa Peterson	2:31:14	Seattle, Washington
table		ł>		7

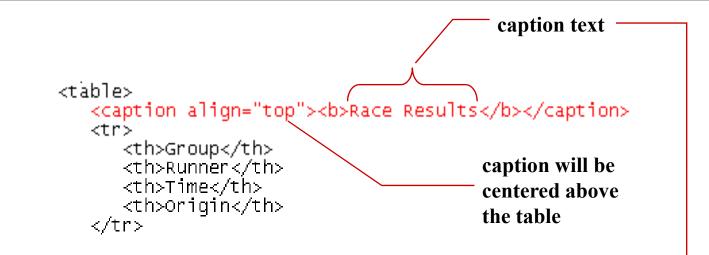
Creating a Table Caption

- 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

Result of a Table Caption



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	

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 tag.
- The syntax for creating a table border is: <table
 border="value">

– *value* is the width of the border in pixels

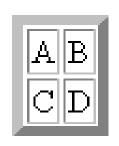
• The **size** attribute is optional; if you don't specify a size, the browser creates a table border 1 pixel wide.

Tables with Different Borders Values

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



A B C D



A B C D

0 pixels

1 pixel

5 pixels

10 pixels

Adding a 5-Pixel Border to a Table

```
    <caption align="top"><b>Race Results</b></caption>

            Group
            Caption
        </caption>

            Athorigin
        </caption>
        </caption>
```

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 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

Controlling Cell Spacing

- The **cellspacing** attribute controls the amount of space inserted between table cells.
- The syntax for specifying the cell space is:

- *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.

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:

- *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 Spacing Values

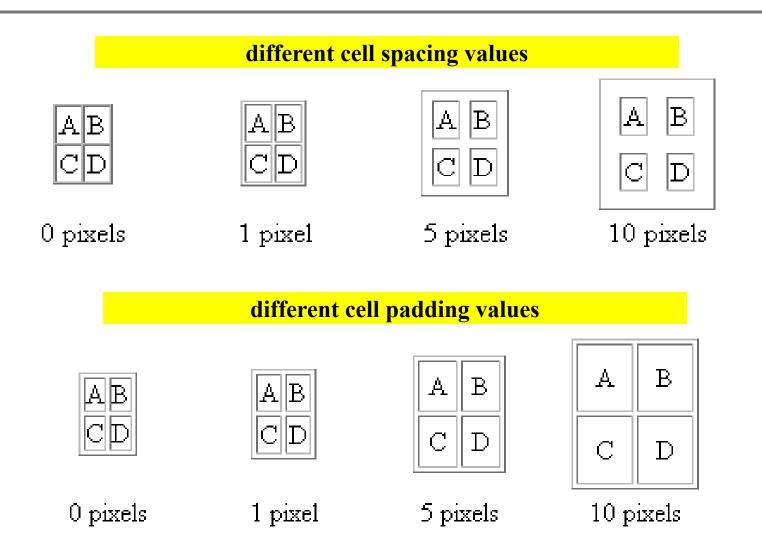


Table Frames and Rules

- 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

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	В	C
D	E	F
G	H	I

А	В	C
D	E	F
G	H	I

Α	В	C
D	E	F
G	H	I

А	В	C
D	E	F
G	H	I

frame="box"

В

Е

Η

С

F

Ι

Α

D

G

frame="above"

В

Е

Η

A

D

G

С

F

Ι

frame="below"

А	В	С
D	E	F
G	H	I

frame="hsides"

Α	В	С
D	E	F
G	H	I

frame="lhs"

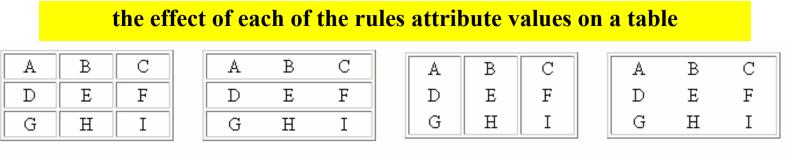
frame="rhs"

frame="vsides"

Creating Frames and Rules Continued

- The **rules** attribute lets you control how the table gridlines are drawn (not supported by Netscape)
- The syntax of the rules attribute is:

- *type* is either "all", "rows", "cols", or "none"



rules="rows"

rules="cols"

Working with Table and Cell Size

- The size of a table is determined by 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 line break, paragraph, or other tags within a cell.
- 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.
- But, you can manually define the size of the table and its cells.

Defining the Table Size

• The syntax for specifying the table size is:

- *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

```
<caption align="top"><b>Race Results</b></caption>
Group
Second Component (Component)
 Component)
 Component (Component)
 Component)
 Component (Component)
 Component)
 Component (Component)
 Component (Compo
```



Park City native, Laura Blake, won the 27th 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 Cell and Column Sizes

- To set the width of an individual cell, add the width attribute to either the or tags.
- The syntax is: width="value"
 - *value* can be expressed in pixels or as a percentage of the table width
 - width value of 30% displays a cell that is 30% of the total width of table.
- The **height** attribute can also be used in the or 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 on the Web Page

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

Results of a Right-Aligned Table

Local Woman Wins Marathon



Park City native, **Laura Blake**, won the 27th 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.

In an exciting race, **Peter Teagan** of San Antonio, Texas, used a finishing kick to win the men's marathon for the second straight year, in a time of 2 hr. 12 min. 34 sec. Ahead for much of the race, Kyle Wills of Billings, Montana, finished second, when he could not match Teagan's finishing pace. Jason Wu of Cutler, Colorado, placed third in a very competitive field.

This year's race through downtown Boulder boasted the largest field in the

Group	Runner	Time	Origin
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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

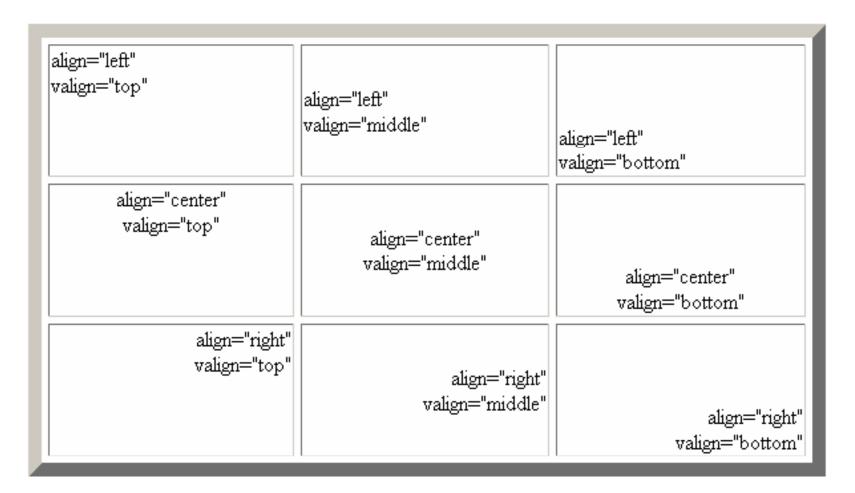
Race Results

marathon's history, with over 9500 men and 6700 women competing. Race conditions were perfect with low humidity and temperatures that never exceeded 85°.

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.

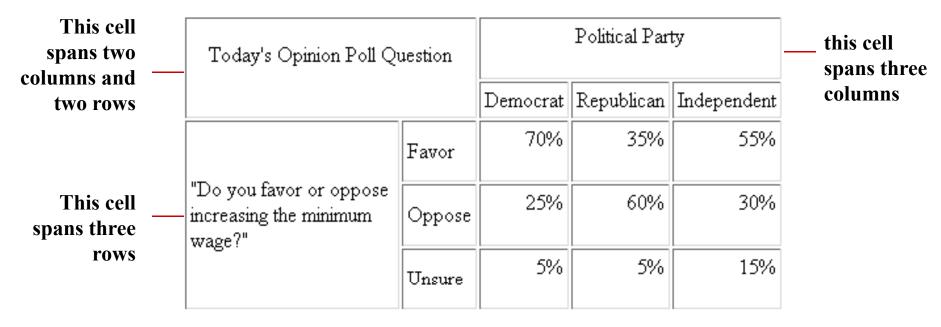
Values of the Align and Valign Attributes



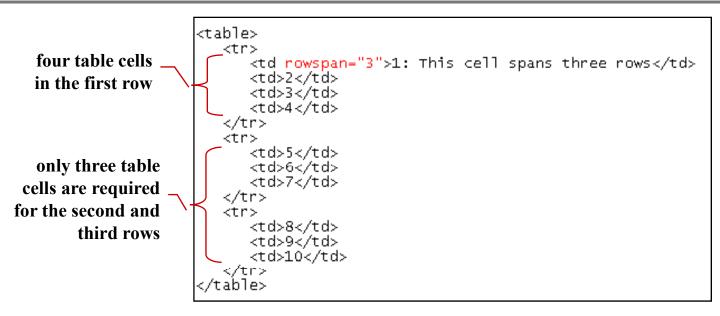
Spanning Rows and Columns

- 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 or tag.
- The syntax for these attributes is: rowspan="value" colspan="value"
 - *value* is the number of rows or columns that the cell spans in the table

Example of Spanning Cells



A Table Structure with a Row-Spanning Cell



HTML code

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

Adding Spanning Cells to a Table

<caption align="top">Race Results</caption> > Runner Time origin Men **Race Results** 1. Peter Teagan 2:12:34 San Antonio, Texas Runner Time 1. Peter Teagan 2:12:34 2. Kyle Wills 2:13:05 Billings, Montana 2. Kyle Wills 2:13:05 Men 3. Jason Wu 2:14:28 3. Jason Wu 2:14:28 1 Laura Blake 2:28:21 Cutler, Colorado Women 2:30:11 2. Kathy Lasker Women 1. Laura Blake 3. Lisa Peterson 2:31:14 Seattle, Washington 2:28:21 Park City, Colorado 2. Kathy Lasker 2:30:11 Chičago, Illinois 3. Lisa Peterson 2:31:14 Seaftle, Washington

Origin

San Antonio, Texas

Billings, Montana

Cutler, Colorado

Chicago, Illinois

Park City, Colorado

Another Example of Spanning Cells



Another Example of Spanning Cells

```
<TABLE BORDER=10 CELLSPACING=0 CELLPADDING=4 ALIGN=CENTER WIDTH=550
 BGCOLOR=WHITE>
<CAPTION ALIGN=TOP>Here is a sample of our products</CAPTION>
<TR BGCOLOR="#33CC66">
    <TH>Name</TH>
    <TH WIDTH=60>Item #</TH>
    <TH COLSPAN=2>Type and Finish</TH>
    <TH WIDTH=50>Price</TH>
</TR>
                        Here is a sample of our products
                                         Type and Finish
                                                                   Price
         Name
                        Item #
   Bacchus
                      48059
                                Wall Mount
                                                 Interior Plaster
                                                                      $95
                                                 Gothic Stone
                                                                     $125
   Praying Gargoyle
                      48159
                                Garden Figure
   Gargoyle Judge
                      48222
                                                 Interior Plaster
                                                                     $140
                                Bust
                                                 Gothic Stone
                                                                     $155
                      48223
                                Bust
```

Applying a Background Color

- Table elements support the **bgcolor** attribute.
- To specify a background color for all of the cells in a table, all of the cells in a row, or for individual cells, by adding the bgcolor attribute to either the , , , or tags as follows:

```
- color is either a color name or hexadecimal color value
```

Specifying Table, Row, and Cell Colors

```
<caption align="top"><b>Race Results</b></caption>
 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
```

Specifying Table, Row, and Cell Colors

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				

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:

- *color* is an HTML color name or hexadecimal color value
- Internet Explorer and Netscape apply this attribute differently.

<table border="10"

```
bordercolor="blue">
```

A	В	C
D	E	F
G	H	I

Internet Explorer

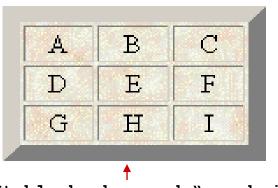
A	В	C			
D	E	F			
G	H	I			

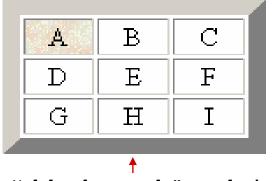
Applying a Table Background

- Add a background image to your tables using the **background** attribute.
- A background can be applied to the entire table or to a cell.



parch.jpg

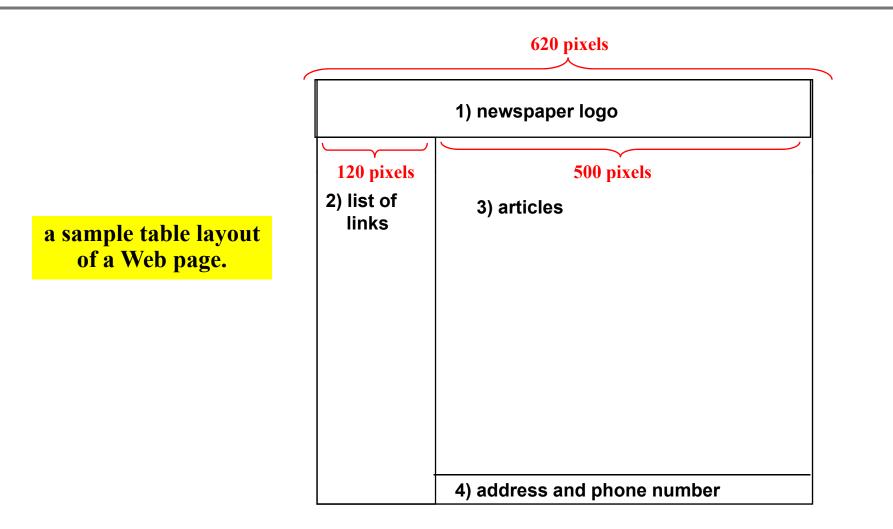




Designing a Page Layout with Tables

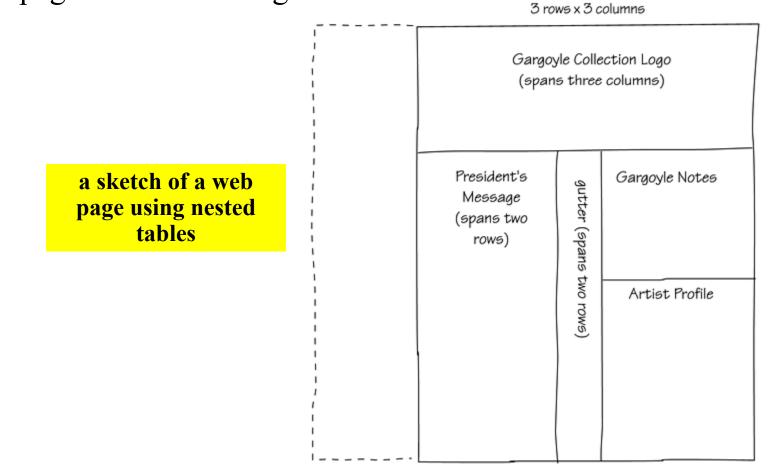
- HTML tables are most often used to define the layout of an entire Web page.
- If you want to design a page that displays text in newspaper style columns, or separates the page into distinct sections, you'll find tables an essential and useful tool.

Table Layout of a Web Page



Using Nested Table

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



The Result of the Web Page using Nested Tables

a sample web page using nested tables

💮 Middle Age Arts

Middle Age Arts

Home Page View the catalog Place an order

About Gargoyles

Gargovie Products Gargoyle Products (text version)

Other Collections

The Vatican Collection The Rodin Collection Renaissance Masters

This month Middle Age Arts introduces the Gargoyle Collection. I'm really excited about this new set of classical figures.

The collection contains faithful reproductions of gargoyles from some of the famous cathedrals of Europe, including Notre Dame, Rheims and Warwick Castle, All reproductions are done to exacting and loving detail.



What do I do with a gargoyle?

Don't think you need a gargoyle? Think again. Gargoyles are useful as:

- Bird haths.
- Wind chimes.
- Pen holders
- Pap-erweights
- Bookends

An Example of the Contents

<tr></tr>	🕅 Middle Age Arts	
List of Hypertext Links		
<td valign="TOP" width="165"></td> <td>7. 7. 1 11 A A A</td>		7. 7 . 1 11 A A A
	Middle Age Arts	
<pre><h4>Middle Age Arts</h4></pre>		
<pre> </pre>	<u>Home Page</u>	
Home Page View the catalog 	View the catalog	
<pre>Place an order </pre>	Place an order	
<h4>About Gargoyles</h4>	About Gargoyles	
	About Gargoyles	
<pre>Gargoyle Products </pre>		
Gargoyle Products (text version) 	<u>Gargoyle Products</u>	
	Gargoyle Products	
<h4>Other Collections</h4> 	(text version)	
<pre>The Vatican Collection </pre>		
<pre>The Rodin Collection </pre>	Other Collections	
<pre>Renaissance Masters </pre>	Calci Concontra	
	The Vatican Collection	
	<u>The Rodin Collection</u>	
	Renaissance Masters	

An Example of the Gargoyle Notes

```
<!--The table gutter-->
   <TD ROWSPAN=2 WIDTH=5>&nbsp;</TD>
   <!--Notes about gargoyles-->
   <TD WIDTH=220 VALIGN=TOP BGCOLOR=YELLOW>
      <FONT COLOR="#800000">
      <H4 ALIGN=CENTER>What do I do with a gargoyle?</H4>
      Don't think you need a gargoyle? Think again. Gargoyles are
      useful as:
      XIII >
        <LI>Bird baths
        <LI>Wind chimes
        <LI>Pen holders
        <LI>Paperweights
                                                                 What do I do with a gargoyle?
        <LI>Bookends
      </UL>
      </FONT>
                                     Don't think you need a gargoyle? Think again. Gargoyles are useful as:
   </TD>
</TR>

    Bird baths

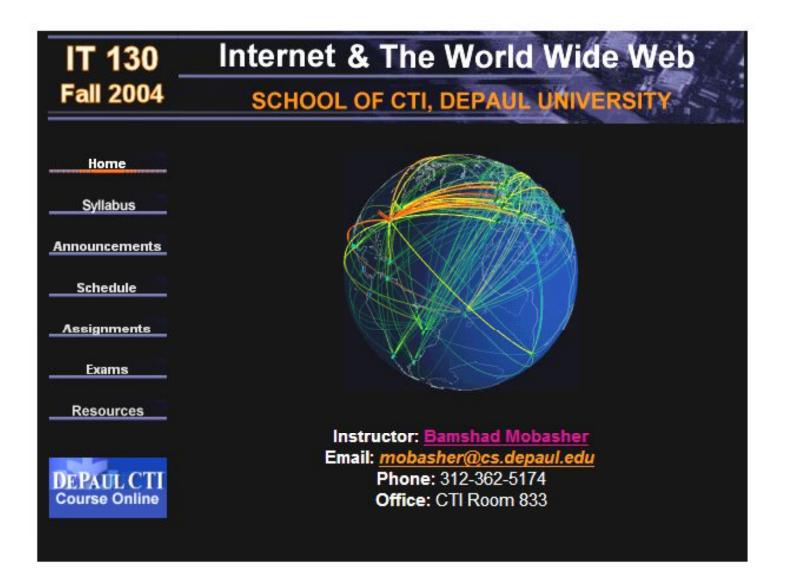
    Wind chimes

    Pen holders

    Paperweights

    Bookends
```

Example from Class Web Site



Sample Template based on Class Web Page

