Forms/Tables

Agenda

1. HTML Forms
   - Form Fields
   - Form Controls
     - Text field
     - Text area
     - Select
     - Radio button
     - Checkbox
     - Button

Agenda

2. HTML Tables

- Defining a Table Structure
- Modifying the Appearance of a Tables
- Nested Tables
- Tables on the Web

Forms

Forms

- The FORM element is used to create a data input form.
- A region using forms is enclosed within the <FORM> </FORM> tags.
- A document can have several forms, but the forms should not be embedded.
- The FORM element has three attributes:
- ACTION, METHOD, and ENCTYPE.

Forms Method

- Specifies the way in which the data from the user are encoded.
- The default METHOD is GET, although the POST method is preferred.
- GET: The CGI program receives the encoded form input in the QUERY_STRING variable, which follows the “?” in the URL that calls the script.
- POST: The CGI script or program receives the encoded form input in its standard input stream. The CONTENT_LENGTH must be used.

Forms Actions

- Specifies the destination URL to which the form should be submitted, once it has been completed by the user.
- If no URL is specified, the URL of the current document containing the form is used.
- MAILTO Action: The data from the form is mailed to the specified E-mail address. Use the POST method.

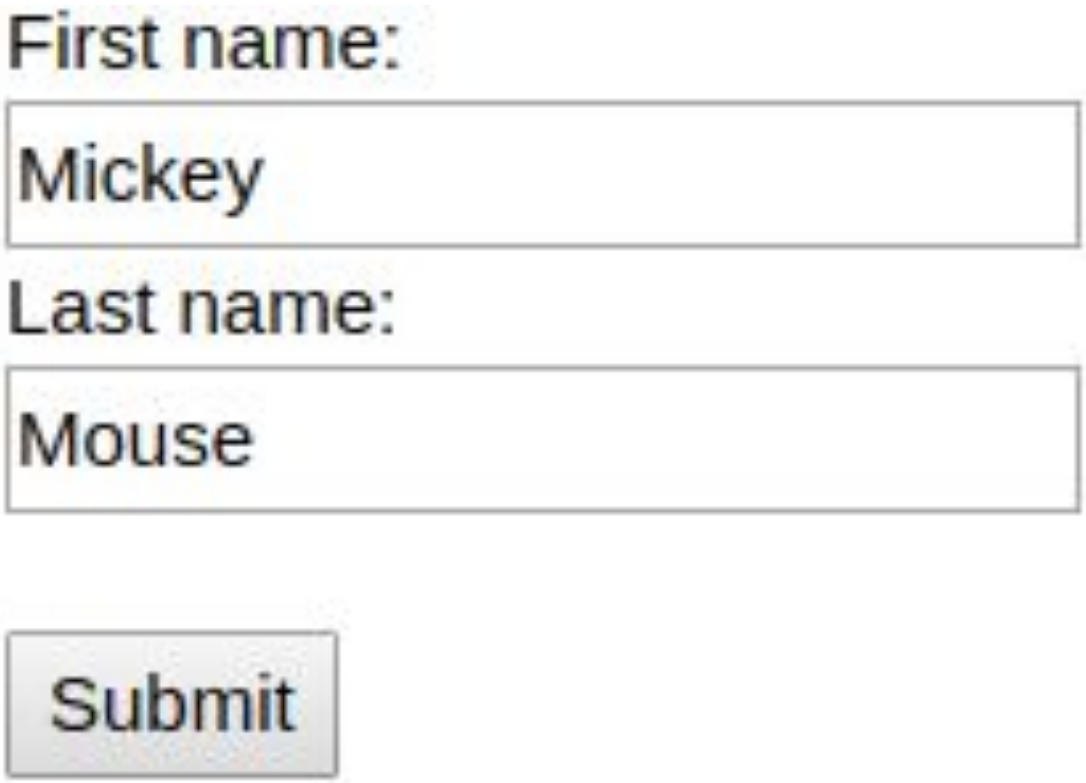
Forms ENCTYPE

- Tell the browser how the data from a form should be encoded when it is returned to the server.
- The default is “application/x-www-form-urlencoded” that converts spaces to “+” and uses “&” to delineated different data fields.

Form Tag(HTML)

```
<Form Action="getemp.asp" Method="post">
    First name:<br>
    <input type="text" name="firstname"
   value="Mickey">
    <br>
    Last name:<br>
    <input type="text" name="lastname"
   value="Mouse">
    <br><br>
    <input type="submit" value="Submit">
</Form>
```

Form Tag(Output)



HTML FORM ELEMENTS

Tag	Description
<form>	Defines an HTML form for user input
<input>	Defines an input control
<textarea>	Defines a multiline input control (text area)
<label>	Defines a label for an <input> element
<fieldset>	Groups related elements in a form
<legend>	Defines a caption for a <fieldset> element
<select>	Defines a drop-down list
<optgroup>	Defines a group of related options in a drop-down list
<option>	Defines an option in a drop-down list
<button>	Defines a clickable button
<datalist>	Specifies a list of pre-defined options for input controls
<output>	Defines the result of a calculation

<INPUT>

Only used within a FORM element and is denoted by <INPUT>.
Attributes:

- NAME: The name of the particular element.
- MAXLENGTH: The maximum number of characters that can be entered by users in a text field.
- SIZE: Specifies the size of the field and depends on its type.
- SRC: Denote URL for an image.
- VALUE: Contain the initial value displayed to users.
- TYPE: Defines the type of data used in the field.
- CHECKED: Indicates that a checkbox or radio button is selected.

<INPUT>

Only used within a FORM element and is denoted by <INPUT>.
Attributes:

- DISABLED: Prevents the field from receiving focus.
- ALIGN: Alignment if image is used.
- READONLY: Prevents modification of the contents of the field.

<INPUT> Types

HTML5 added several new input types:

- color
- date
- datetime-local
- email
- month
- number
- range
- search
- tel
- time
- url
- week

<INPUT> Types

- `<input type="button">`
- `<input type="checkbox">`
- `<input type="color">`
- `<input type="date">`
- `<input type="datetime-local">`
- `<input type="email">`
- `<input type="file">`
- `<input type="hidden">`
- `<input type="image">`
- `<input type="month">`
- `<input type="password">`
- `<input type="radio">`
- `<input type="range">`
- `<input type="reset">`
- `<input type="search">`
- `<input type="submit">`
- `<input type="tel">`
- `<input type="text">`
- `<input type="time">`
- `<input type="url">`
- `<input type="week">`

<INPUT>

CHECKBOX Type:

- An object where several values can be selected at the same time.
- The checkbox is submitted as separate name/value pair for each selected value.
- Checkbox that are grouped together should have
  - a different name.
  - a unique value.

<INPUT>

```
<FORM>
   What pets do you own?
   <P><INPUT TYPE=CHECKBOX name = petdog value="dog"> DOG
   <BR><INPUT TYPE=CHECKBOX name = petcat value="cat"> CAT
   <BR><INPUT TYPE=CHECKBOX name = petbird value="bird">
BIRD
   <BR><INPUT TYPE=CHECKBOX name = petfish value="fish">
FISH
</FORM>
```

<INPUT>

RADIO type

- An object that defines an item where only one value can be selected from a set of possibilities.
- A set is defined as the group of radio boxes with the same NAME attribute.
- Never set more than one radio box at a time with the CHECKED attribute.

```
<P><B>Charge Card:</B>
   <INPUT NAME = "cc" VALUE="visa" TYPE = "radio">VISA
    <INPUT NAME = "cc" VALUE="mc" TYPE = "radio">Master Card
   <INPUT NAME = "cc" VALUE="amex" TYPE = "radio">American Express
```

<INPUT>

HIDDEN Type:

- When this type is chosen, no field is presented to the user.
- Primary use is record keeping for programs that may parse user input from forms.
- May be used for shopping carts.

<Input>

TEXT type:

- Specifies a single line text entry field.
- Can be used with the MAXLENGTH and SIZE attributes (MAXLENGTH >= SIZE)

```
<P><B> First Name:</B> <INPUT NAME="fname" TYPE = text MAXLENGTH=30 SIZE
=30></P>
   <P><B> Last Name:</B> <INPUT NAME="lname" TYPE = text MAXLENGTH=30 SIZE
=30></P>
```

<INPUT>

PASSWORD Type:

Same as text except the text entered by the user is obscured.
Use the MAXLENGTH and SIZE attributes.

```
<P><B> Enter Your Password:</B>
   <INPUT NAME="password" TYPE = password MAXLENGTH=30
SIZE =30></P>
```

<INPUT>

SUBMIT and RESET Types:

- SUBMIT: Used to submit the form's content, as specified by the ACTION attribute.
- RESET: Set all fields in the form to their initial values.

```
<P><INPUT TYPE=SUBMIT>
        <INPUT TYPE=RESET>


        <P><INPUT TYPE=SUBMIT VALUE = "Place Your Order">
        <INPUT TYPE=RESET VALUE = "Start over">
```

<Button>

BUTTON Input Type:

- Creates a button whose use can be defined through scripting and onClick event.
- Use to create a back button.
- Only useful to browsers that support scripting.

```
<FORM><P><INPUT TYPE="button" VALUE="Back to Last
Document" onClick="history.back( )"></P></FORM>
```

<Textarea>

- Let users enter more than one line of text.
- Uses attributes ROWS and COLS to size.

WRAP Attribute:
OFF: No wrapping
VIRTUAL: Display wraps but long lines are sent as one line.
PHYSICAL: Word wraps and text is sent with wrap points.

<Select>

Use SELECT and OPTION to create pulldown menu.
SELECT:

- Allows the user to choose one (or possibly more) items from a list.
- Attributes: MULTIPLE, SIZE, and NAME.

OPTION:

- Specifies the list items.
- Attributes: SELECTED, VALUE, and LABEL

<Select>

Example:

```
<P><B>Pick your favorite baseball team:</B>
   <BR><SELECT NAME="team">
   <OPTION>Dodgers
   <OPTION>Braves
   <OPTION>Cardinals
   <OPTION>Yankees
   </SELECT>
```

Tables

Defining a Table Structure

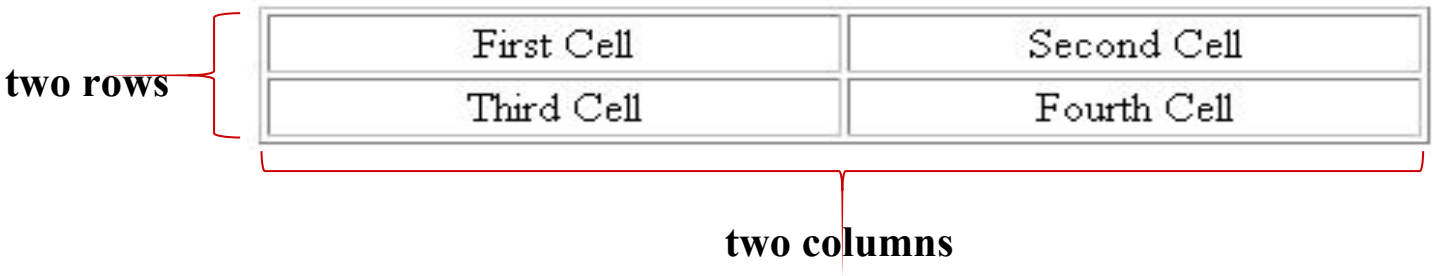
- The first step to creating a table is to specify the table structure:
  - the number of rows and columns
  - the location of column headings
  - the placement of a table caption
- Once the table structure is in place, you can start entering data into the table.

Using the <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 General Table Syntax

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

Modifying the Appearance of a Table

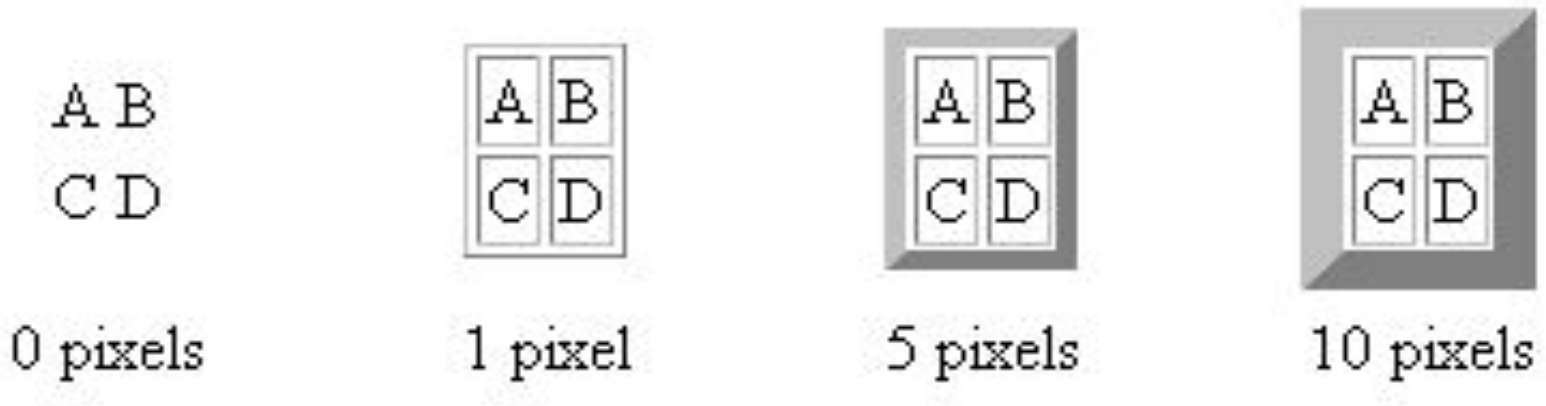
- You can modify the appearance of a table by adding:
  - gridlines
  - borders
  - background color
- HTML also provides tags and attributes to control the placement and size of a table.

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.



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.

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:

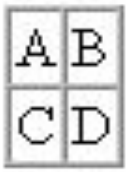
```
<table cellpadding="value">
```

  - ***value*** is the distance from the table text to the cell border, as measured in pixels
  - the default cell padding value is 1 pixel

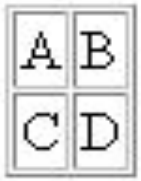
- Cell padding refers to the space within the cells.

Tables with Different Cell Spacing Values

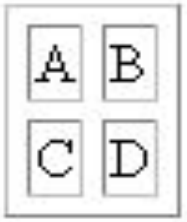
different cell spacing values



0 pixels



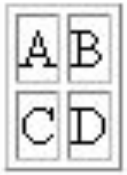
1 pixel



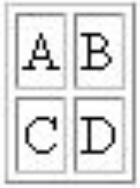
5 pixels

10 pixels

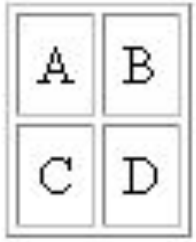
different cell padding values



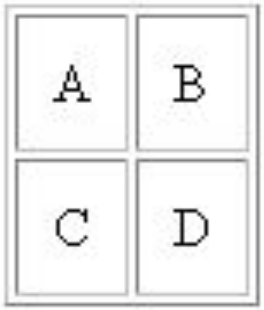
0 pixels



1 pixel



5 pixels



10 pixels

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.

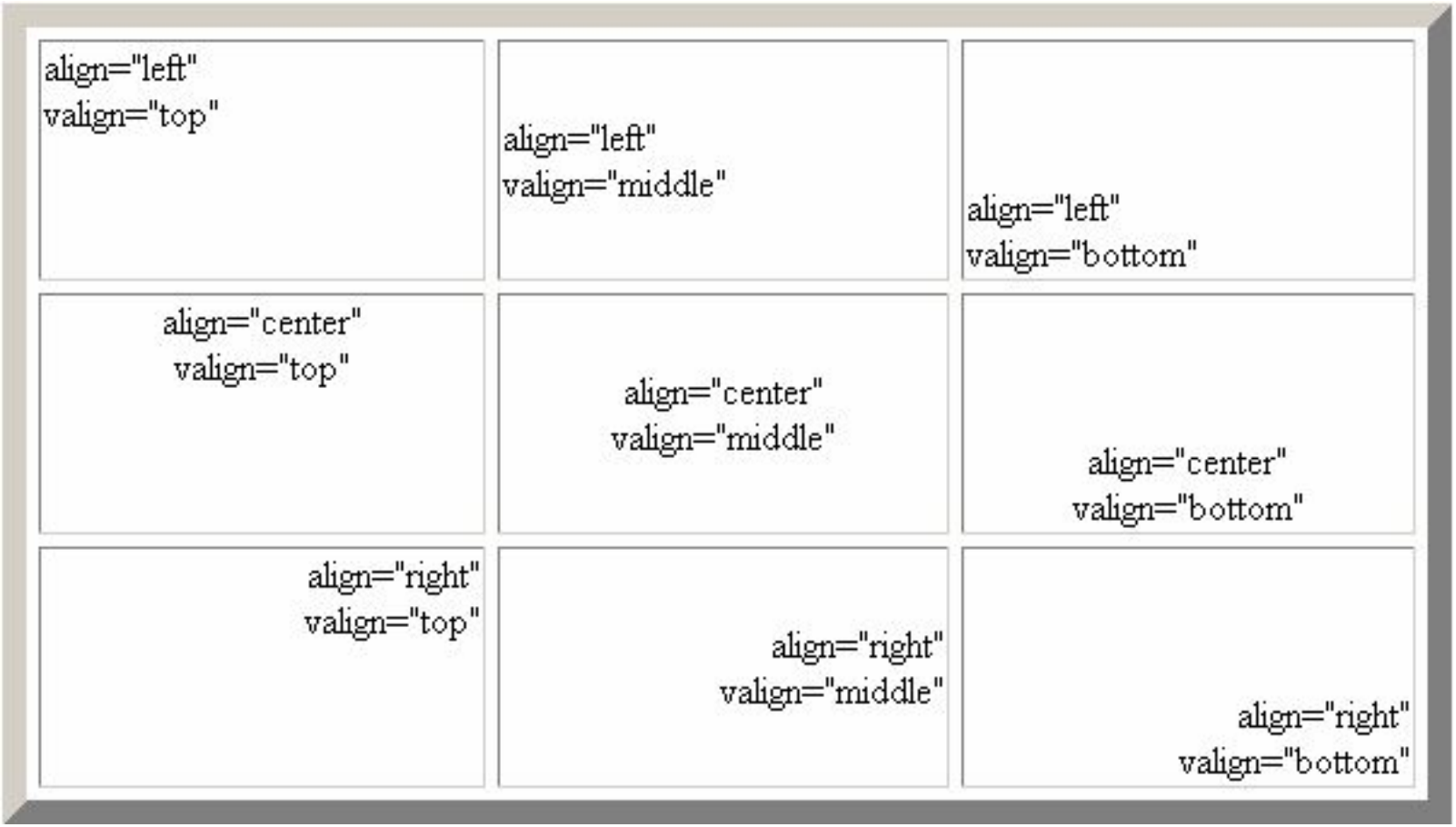
Aligning a Table on the Web Page

- 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 **`<img>`** tag.

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 **<td>** or **<th>** 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

This cell spans two columns and two rows

this cell spans three columns

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%

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

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 **<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

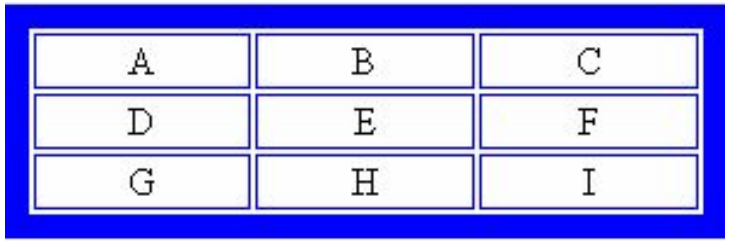
The bordercolor Attribute

- 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">
```

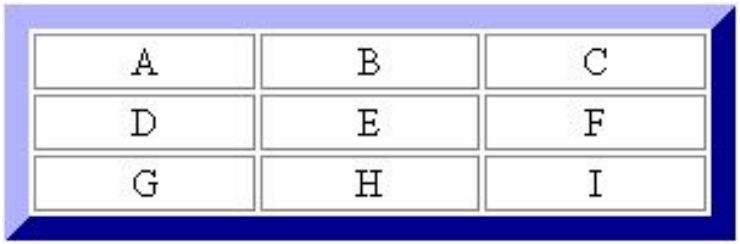
  - ***color*** is an HTML color name or hexadecimal color value
- Internet Explorer and Netscape apply this attribute differently.

```
<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

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

A	B	C
D	E	F
G	H	I

```
<table
background="parch.jpg">
```

A	B	C
D	E	F
G	H	I

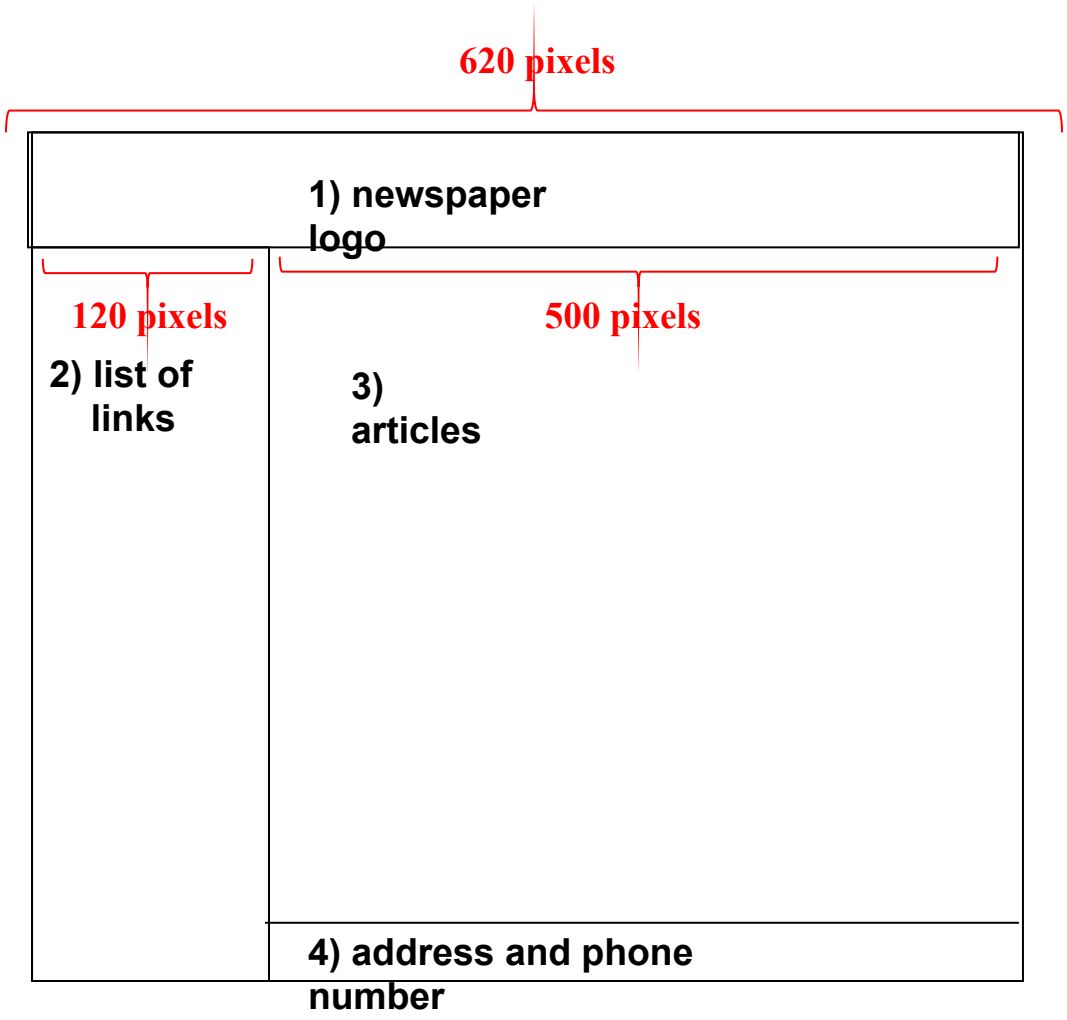
```
<td
background="parch.jpg">
```

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

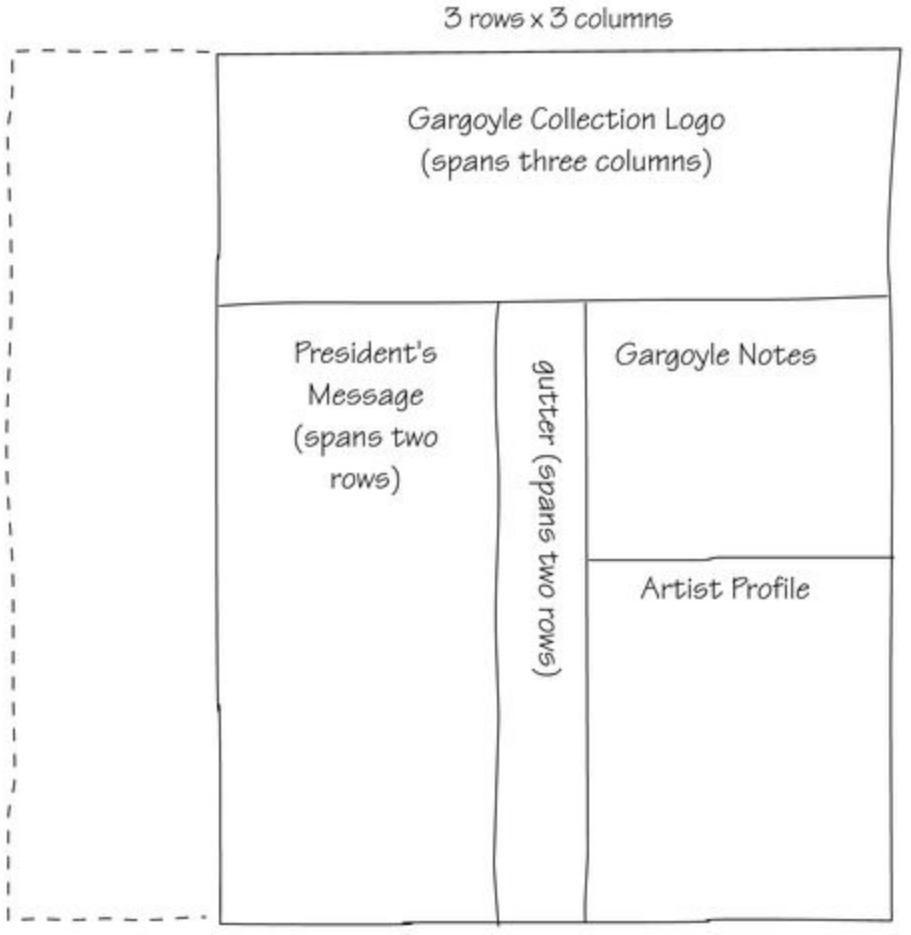
a sample table layout of a Web page.



Using Nested Table

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

a sketch of a web page using nested tables



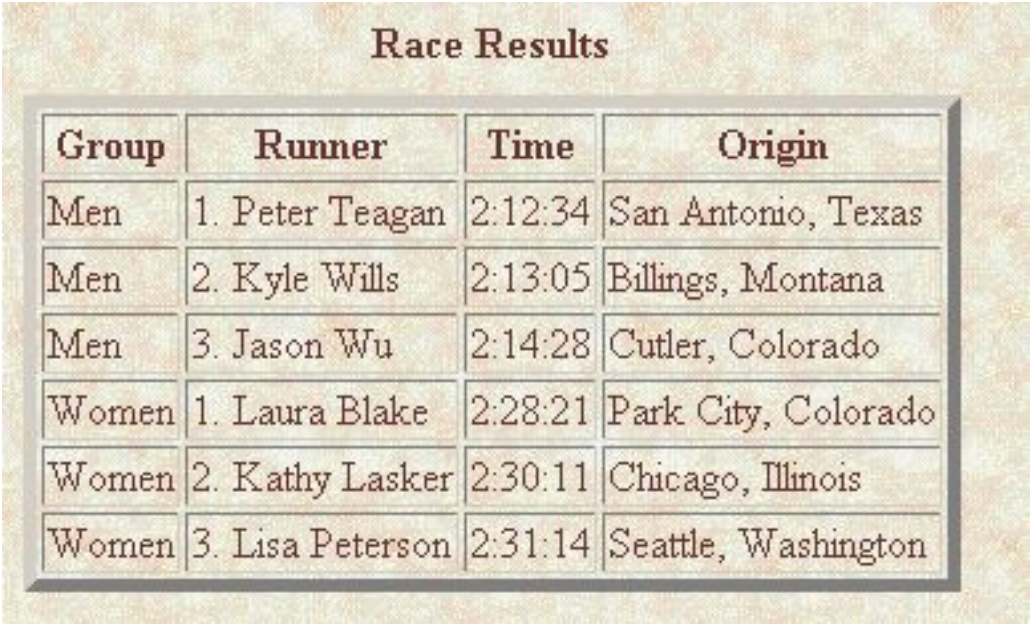
Assignments

1. Create a table referring to the image

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

Assignments

2. Create a table referring to the image



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

Assignments

3. Create a table and set the width to 500px . Also, keep cellspacing and cellpadding 0

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.

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

This year's race through downtown Boulder boasted the largest field in the marathon's history, with over 9500 men and 6700 women competing. Race conditions were perfect with low humidity and temperatures that never exceeded 85°.

Assignments

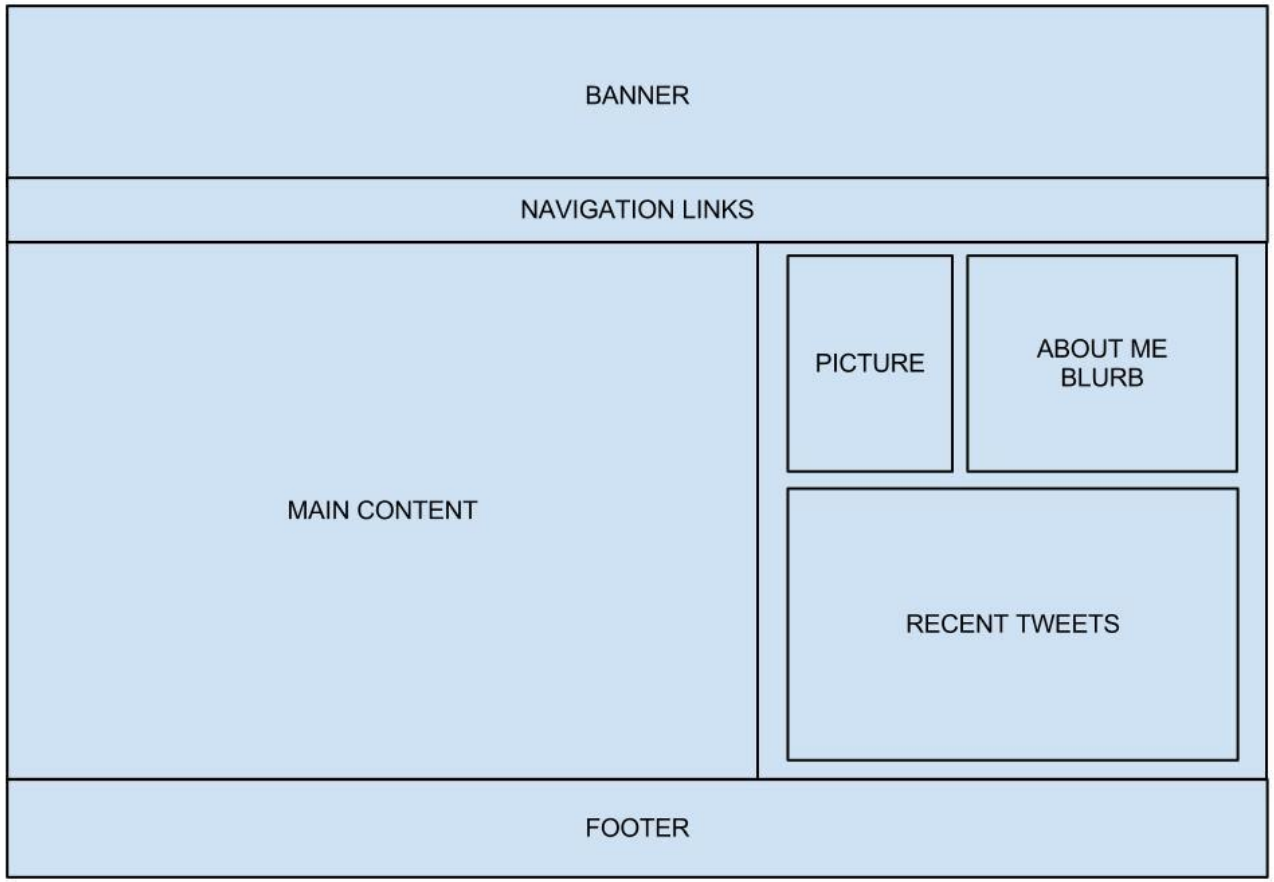
4. Create a table referring to the image.

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

Assignments

5. Create a webpage using nested tables.



Assignments

5. Create a form like this.