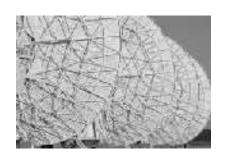


New Perspectives on Creating Web Pages with HTML

Creating Web Page Forms



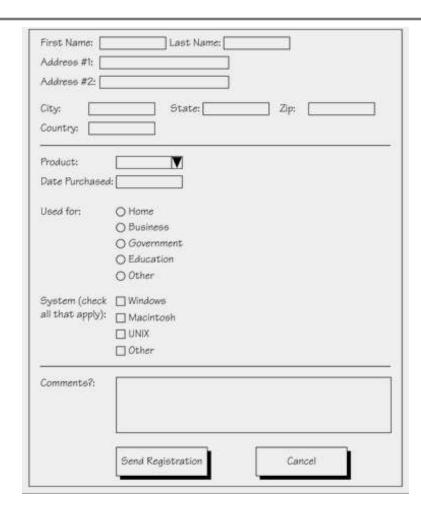
Tutorial Objectives

- Review the various parts of an online form
- Create form elements
- Create a hidden field on a form
- Work with form attributes



An Example of a Form

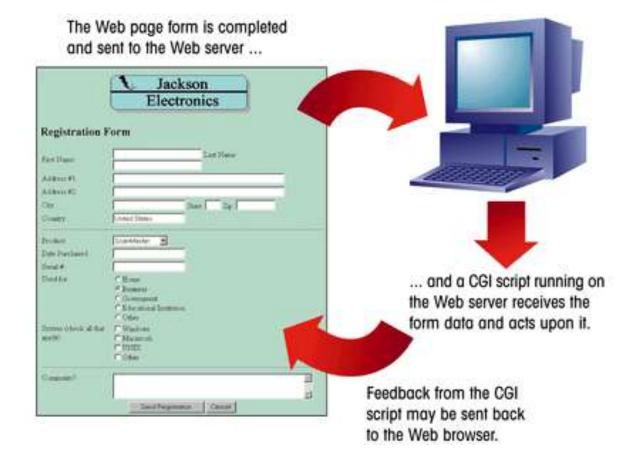
This figure shows a sketch of a proposed registration form.





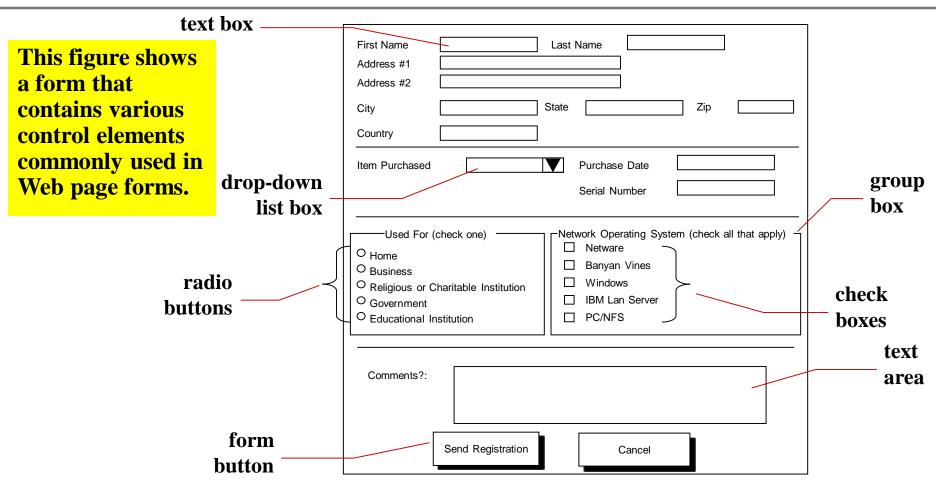
The Interaction between a Web Page Form and a CGI/PHP Script

This figure shows how a Web page form interacts with a CGI/PHP script.





Form Components and Elements





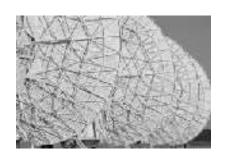
Form Control Elements

- Control elements that are commonly used:
 - text boxes for text and numerical entries
 - selection lists for long lists of options, usually appearing in a drop-down list box
 - radio buttons, also called option buttons, to select a single option from a predefined list
 - check boxes to specify an item as either present or absent
 - groups boxes to organize form elements
 - text areas for extended entries that can include several lines of text
 - buttons that can be clicked to start processing the form



Form Control Elements Continued

- Each control element in which the user can enter information is called a **field**.
- Information entered into a field is called the **field value**, or simply the **value**.
- In some fields, users are free to enter anything they choose.
- Other fields, such as selection lists, limit the user to a predefined list of options.



The <form> Tag

- The **<form>** tag identifies the beginning and end of a form.
- A single page can include several different forms, but you cannot nest one form inside another.
- The general syntax of the **<form>** tag is:

```
<form attributes>
form elements and layout tags
</form>
```

- Between the **<form>** and **</form>** tags, place the various tags for each of the fields in the form.
- Use standard HTML tags to specify the form's appearance.



The <form> Tag Continued

- A single Web page can contain multiple forms, the **<form>** tag includes the **name** attribute.
- The name attribute identifies each form on the page.
- The name attribute is also needed for programs that retrieve values from the form.



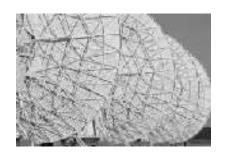
Adding the <form> Tag

The <form> tag
includes attributes
that control how the
form is processed,
including
information on what
CGI/PHP script to
use, how the data is
to be transferred to
the script, and so
forth.

This figure shows the form name "reg."

```
<html>
<head>
<title>LanGear Registration Form</title>
</head>
<body text="#850000">
<form name="reg">

</form>
</body>
</html>
```



Layout of a Registration Form

Horizontal lines can provide structure to a form by separating sections.

This figure shows sections that are separated from each other with a horizontal line. Structuring a form in this fashion can make it easier to identify the different sections.

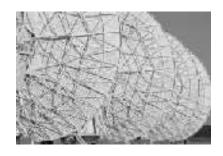




HTML Form Elements

The HTML <form> element can contain one or more of the following form elements:

- •<input>
- •<label>
- •<select>
- •<textarea>
- •<button>
- •<fieldset>
- •<legend>
- •<datalist>
- •<output>
- •<option>
- •<optgroup>



Input Types

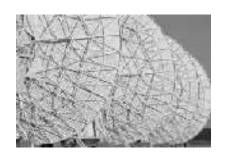
This figure shows other supported HTML input types.

Type	Description	
type="button"	Display a button which can be clicked to perform an action from a script	button
type="checkbox"	Display a check box	>
type="file"	Display a browse button to locate and select a file	Browse
type="hidden"	Create a hidden field, not viewable on the form	
type="image"	Display an inline image which can be clicked to perform an action from a script	1
type="password"	Display a text box in which hides text entered by the user	Jolobolololok
type="radio"	Display a radio (option) button	•
type="reset"	Display a button which resets the form when clicked	reset
type="submit"	Display a button which submits the form when clicked	submit
type=''text''	Display a text box in which displays text entered by the user	LanGear



Input type

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



Working with Text Boxes

- Text boxes are created using the **<input>** tag.
- The general syntax is:

```
<input type="type" name="name" id="id">
```

- type specifies the type of input field
- name and id attributes identifies the input field for the script
- To create a text box, you would enter the tag:

```
<input type="text">
```

• If the *type* attribute is not included, the Web browser assumes, by default, that you want to create a text box.



Creating a Text Box

• To create a text box, use the following HTML code:

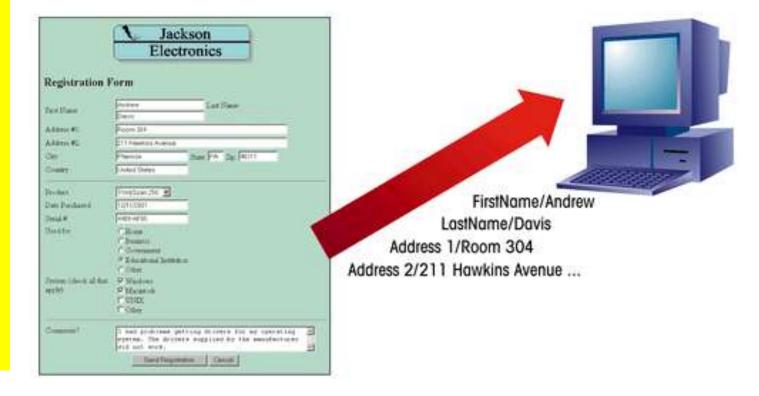
```
<input name="name" id="id" value="value"
size="value" maxlength="value">
```

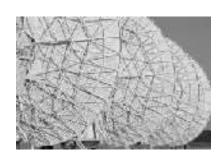
- name and id attributes identify the field
- value attribute assigns a default value to the text box
- size attribute defines the width of the text box in number of characters
- maxlength attribute defines the maximum number of characters allowed in the field



Name/Value Pairs sent from the Web Form to the CGI Script

This figure shows when form data is sent to the CGI script, the script receives the name or id of each field in the form paired with whatever value the user entered in the field. The script then processes the data according to each name/value pair.





Text Boxes on the Form

Text boxes are blank and do not contain any accompanying text, a text description needs to be inserted, such as "Last Name", adjacent to each box so that the user knows what to enter.

	text box
Product Regis	tration
First Name	Last Name
Address #1	
Address #2	
City	State Zip
Country	



Controlling the Size of a Text Box

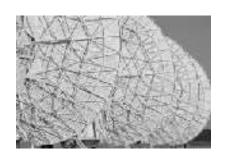
- By default, all text boxes are 20 characters wide.
- The syntax for changing the size of a text box is:
 <input size="value">
 - *value* is the size of the text box in characters



Setting the Width of Text Boxes

This figure shows an example of code for setting the width of text boxes.

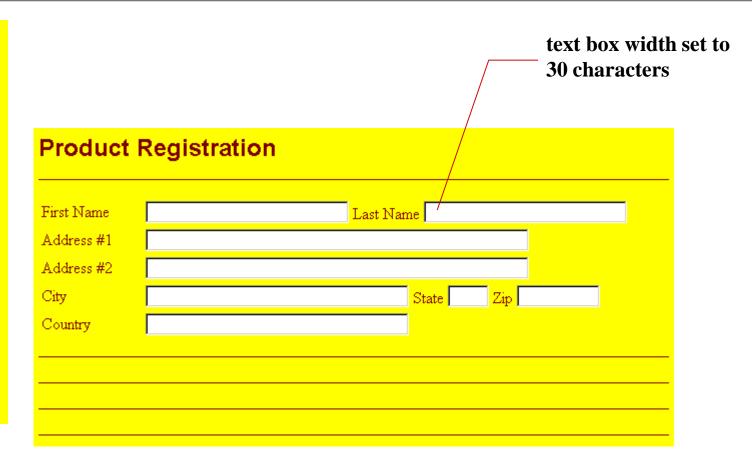
```
    First Name
    <input type="text" name="fname" id="fname" size="30">
      Last Name
      <input type="text" name="lname" id="lname" size="30">
  <T#>?
    Address #1
    <input type="text" name="address1" id="address1" size="60">
  <Tr>
    Address #2
    <input type="text" name="address2" id="address2" size=</pre>
```

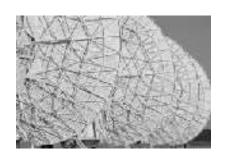


Result of Setting the Width of Text Boxes

Once changes are made, save the changes to a file, and then reload or refresh it in the browser.

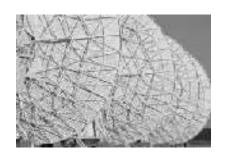
Netscape users may have to close and open the file for the changes to the Web form to take effect.





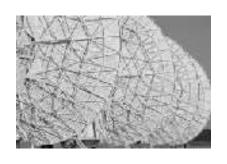
Setting the Maximum Length for Text Input

- Setting the width of a text box does not limit the number of characters the box can hold.
 - if a user enters text longer than the box's width, the text scrolls to the left
 - the user cannot see the entire text, but all of it is sent to the
 CGI script for processing
- The syntax for setting the maximum length for field input is:
 <input maxlength="value">
 - value is the maximum number of characters that can be stored in the field



Specify the Maximum Length for a Field

This figure shows an example of limiting the width of the zip code field to five characters.

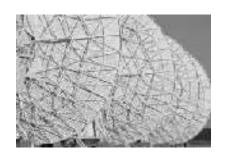


Setting a Default Value for a Field

- When the same value is entered into a field, it may make sense to define a default value for a field.
- Default values can save time and increase accuracy for users of a Web site.
- To define a default value, use the following syntax:

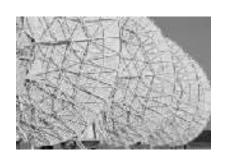
<input value="value">

 value is the default text or number that is displayed in the field



Defining a Default Value for a Field

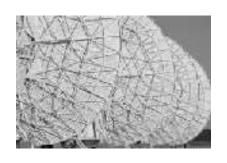
If customers from countries other than the United States use this Web form, they can remove the default value by selecting the text and pressing the Delete key.



Creating a Password Field

- A password field is a text box in which the characters typed by the user are displayed as bullets or asterisks i.e.

- The syntax for creating a Password field is:
 - <input type="password">
- Using a password field should not be confused with having a secure connection.
- The password itself is not encrypted.
- The password field only acts as a mask for a field entry as it is entered.

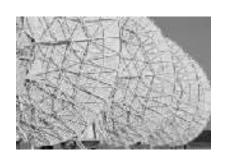


Working with Form Labels

- HTML allows you to formally link a label with an associated text element for scripting purposes.
- The syntax for creating a form label is:

<label for="id">label text</label>

- *id* is the value of the id attribute for a field on the form
- *label* text is the text of the label
- you must bind the label to the id attribute of the field and not the name attribute



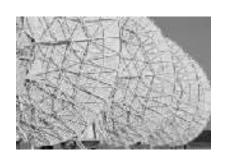
Working with Form Labels

- Labels can simplify the data entry process by allowing a user to click on either the control element or the element's label to enter data.
- Labels allow users to write scripts to modify their content for interactive forms.
- The **<label>** tag is part of the HTML 4.0 specifications, however, it is not currently supported by **Netscape**.
- The **Netscape** browser, and versions of the **Internet Explorer** browser prior to 4.0, ignore the **<label>** tag, but still display the label text.



Creating a Label for the fname Field

This figure shows a label for the fname field.



Creating a Selection List

- A **selection list** is a list box from which a user selects a particular value or set of values.
- Selection lists are good to use when there is a fixed set of possible responses.
- Selection lists help prevent spelling mistakes and erroneous entries.
- A selection list is created using the **<select>** tag.
- The **<option>** tag is used to specify individual selection items.



Creating a Selection List

This figure shows HTML code for creating a selection list.

```
<!-- Product Information -->
<

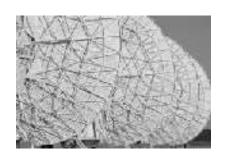
     <label for="item">Item Purchased</label>
    <select name="item" id="item">>
                                       selection list field
           <option>LanPass 115
           <option>LanPass 125
                                       name
           <option>LanPass 250
           <option>FastSwitch 200
           <option>FastSwitch 400
           <option>LG 10Mpbs
           <option>LG 10Mpbs/w
           <option>LG 100Mpbs
 <ok
</select>
           <option>LG 100Mpbs/w
                                     items in the selection
                                     list
<hr color="#850000" size="1">
```



Using a Selection List

Your selection list might look slightly different depending on the browser and browser version.

Product Registration		
First Name	Last Name	
Address #1		
Address #2		
City	State Zip	
Country	United States	
Item Purchased	LanPass 115 🔻 Purchase Date	
	LanPass 115 Serial Number LanPass 125	
	LanPass 250	
	FastSwitch 200 FastSwitch 400	
	LG 10Mpbs	
	LG 10Mpbs/w	
	LG 100Mpbs/w Wittlow Way • Farley, SD 85312 • 1 (800) 555-2377	



Using the <select> and <option> Tags

The general syntax for the <select> and <option> tags is:

```
<select name="name" id="id">
<option> item1
  <option> item2
  .
  .
  .
```

</select>

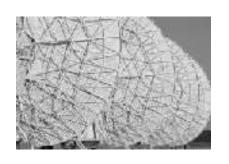
- name and id attribute identify the selection field
- each **<option>** tag represents an individual item in the selection list
- the text in the selection list is indicated by the text in *item1*, *item2*, and so forth
- The **<option>** tag is a one-sided tag.



Modifying the Appearance of a Selection List

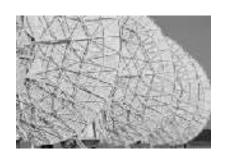
- HTML provides several attributes to modify the appearance and behavior of selection lists and options.
- By default, the **<select>** tag displays one option from the selection list, along with a list arrow to view additional selection options.
- The number of options displayed can be modified with the **size** attribute.
- The syntax of the **size** attribute is:

<select size="value">



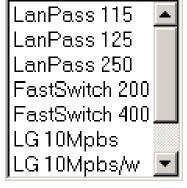
Modifying the Appearance of a Selection List Continued

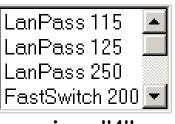
- value is the number of items that the selection list displays in the form
- by specifying a value greater than 1, the selection list changes from a drop-down list box to a list box
- if the *size* attribute is equal to the number of options in the selection list, the scroll bar is either not displayed or is dimmed



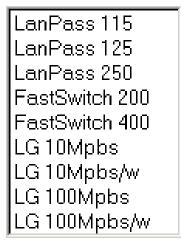
Selection Lists with Different Size Values

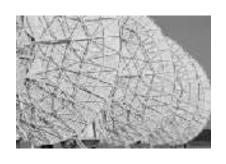
This figure shows selection lists with different size values.





size = "4"



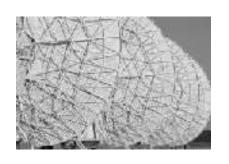


Making Multiple Selections

- When using multiple selections, users are not limited to a single selection from a selection list.
- Adding the **multiple** attribute to the **<select>** tag allows multiple selections from a list.
- The syntax for this attribute is:

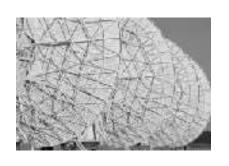
<select multiple>

• A common method to make multiple selections from a selection list is to hold down a specific key while making selections.



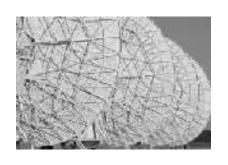
Making Multiple Selections Continued

- The Windows operating system, multiple selections can be made as follows:
 - for noncontiguous selections, press and hold the Ctrl key while you make your selections
 - for a contiguous selection, select the first item, press and hold the Shift key, and then select the last item in the range
- Check and verify that the CGI scripts used are designed to handle multiple selection lists.



Working with Option Values

- By default, a form sends the values that are displayed in the selection list to the CGI script.
- Instead of sending an entire text string, an abbreviation or code can be sent to the CGI script.
- Specify the value that is sent to the CGI script with the value attribute.
- Use the **selected** attribute to specify which item in the selection is selected, or highlighted, when the form is displayed.



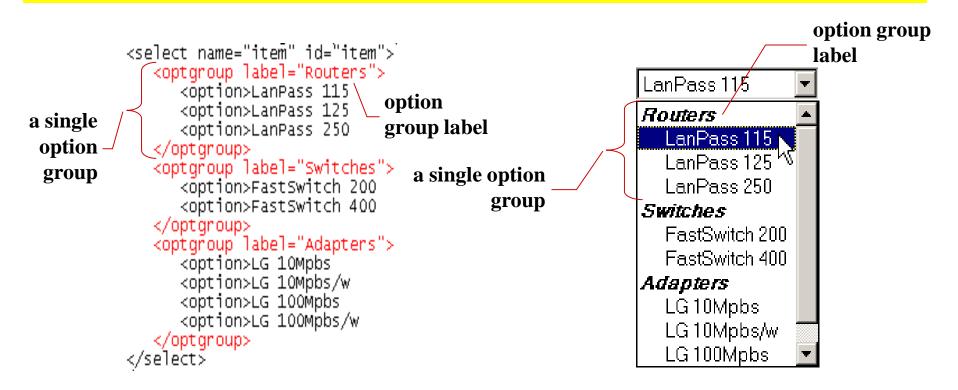
Working with Option Groups

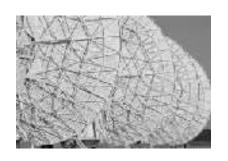
- The most recent releases of HTML allows you to organize selection lists into distinct groups called **option groups**.
- The syntax for creating an option group is:
 - <optgroup label="label">
 - label is the label assigned to the option group
 - the text for the label appears in the selection list above each group of items but is not a selectable item from the list



Option Groups

Internet Explorer and Netscape versions prior to 6.0 display the selection list without the group labels.



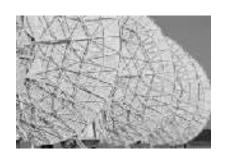


Working with Radio Buttons

- Radio buttons display a list of choices from which a user makes a selection.
- Only one radio button can be selected at a time.
- The syntax to create a radio button is:

```
<input type="radio" name="name" id="id"
  value="value">
```

- name identifies the field containing the radio button
- id attribute identifies the specific option. Only required if you intend to use a field label with the radio button
- value attribute indicates the value sent to the CGI script, if that radio button is selected by the user



Working with Radio Buttons Continued

- The **name** attribute must be included, because it groups distinct radio buttons together.
 - selecting one radio button in the group automatically deselects all of the other radio buttons in that group
- Insert descriptive text next to the button.
- Enclose text within a label tag to allow the user to select the radio button or label.



Creating Radio Buttons

This figure shows an example of HTML code that creates radio buttons for party affiliations.



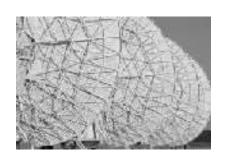
In this sample code, the value sent to the CGI script does not match the field label.

If the user selects the Republican radio button, the value "gop"
is sent to the CGI script paired with the field name "party."



Selection Lists vs. Radio Buttons

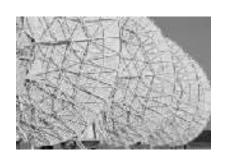
- If you have a long list of options, use a selection list.
- If you want to allow users to select more than one option, use a selection list with the multiple attribute.
- If you have a short list of options, and only one option is allowed at a time, use radio buttons.



Creating a Group Box

- A group box labels an entire collection of radio buttons.
- A group box is a box placed around a set of fields that indicates that they belong to a common group.
- The syntax for creating a group box is:

```
<fieldset>
    <legend align="align">legend
    text</legend>
    collection of fields
</fieldset>
```



Creating a Group Box Continued

- the **<legend>** tag is used to display a legend on the group box
- legend text specifies the text for that legend
- the *align* attribute specifies where the legend is placed in the box
 - align values are "top" (the default), "bottom", "left", and "right"
 - browsers only support "top" and "right" options at this time



Creating a Group Box and Legend

This figure shows an example of a group box applied to a set of radio buttons.

-Party Affiliation----

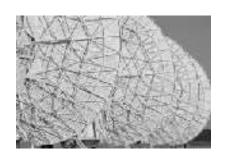
- O Democrati
- C Republican
- C Independent

resulting radio buttons and group box



Group Box Size

- There is no attribute to control the size of a group box.
- The box's height will be large enough to accommodate the fields and labels in the field set.
- The width is the width of whatever space remains on the Web page.
- To set the width to a specific value use a table cell to place the group box and set the width of the cell.
 - group boxes cannot extend across table cells; all of the fields in the field set must be placed within a single cell



Working with Check Boxes

- A **check box** is either selected or not, there is only one check box per field.
- Check boxes are created using the following syntax:

```
<input type="checkbox" name="name" id="id"
  value="value">
```

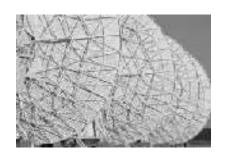
- name and id attribute identify the check box
- the *value* attribute specifies the value that is sent to the CGI script when the check box is selected
- The **<input>** tag for a check box does not display any text.
- Check boxes are not selected by default.
 - to do this, add the checked attribute to the <input> tag



Adding Check Boxes

This figure shows different check boxes. The user can click either the check box or the label associated with the check box to select and deselect.

□ Netware
□ Banyan Vines
□ Windows
□ IBM Lan Server
□ PC/NFS



Group Boxes for Radio Buttons and Check Boxes

```
<fieldset>
<legend align="top">Network Operating System (check all that apply)</legend>
<input type="checkbox" name="nw" id="nw" value="yes">
<label for="nw">Netware</label><br>
<input type="checkbox" name="bv" id="bv" value="yes">
<label for="bv">Banyan Vines</label><br>
<input type="checkbox" name="win" id="win" value="yes">
<label for="win">windows</label><br>
<input type="checkbox" name="ibm" id="ibm" value="yes">
<label for="ibm">IBM Lan Server</label><br>
<input type="checkbox" name="pcnfs" id="pcnfs" value="yes">
<label for="pcnfs">PC/NFS</label>
</fieldset>
 Used For (check one)
                                             Network Operating System (check all that apply):
  O Home
                                              ☐ Netware

    Business

                                              Banyan Vines

    Religious or Charitable Institution

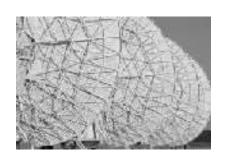
                                              Windows

    Government

                                              ☐ IBM Lan Server

    Educational Institution

                                              PC/NFS
```



Creating a Text Area

• To create a larger **text area** for a text box, use the tag:

```
<textarea name="name" id="id" rows="value"
cols="value"> default text </textarea>
```

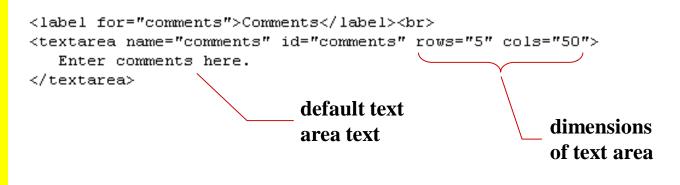
- rows and cols attributes define the dimensions of the text box
- the *rows* attribute indicates the number of lines in the text box
- Default text can be specified in the text box when the form is initially displayed.



Creating a Text Area

This figure shows an example of a text area with default text.

The <textarea>
tag is a two-sided tag,
which means that it
has an opening tag
<textarea>, and a
closing tag,
</textarea>.





resulting text area



Wrap Attribute Values

The text entered in a text area wraps to the next line when it exceeds the width of the box. To control how a browser wraps text to a new line use the wrap attribute.

This figure shows the three possible wrap options.

VALUE	DESCRIPTION
OFF	All the text is displayed on a single line, scrolling to the left if the text extends past the width of the box. Text goes to the next row in the box only if the Enter key is pressed. The text is sent to the CGI script in a single line.
SOFT (or VIRTUAL)	Text wraps automatically to the next row when it extends beyond the width of the text box. The text is still sent to the CGI script in a single line without any information about how the text was wrapped within the text box.
HARD (or PHYSICAL)	Text wraps automatically to the next row when it extends beyond the width of the text box. When the text is sent to the CGI script, the line-wrapping information is included, allowing the CGI script to work with the text exactly as it appears in the text box.



The wrap Attribute for Text

- Set the value of the **wrap** attribute to either "**soft**" or "**hard**" to allow text to wrap within the text box.
 - the "hard" setting preserves any line wrapping that takes place in the text box and the "soft" setting does not.
- If no value for the wrap attribute is specified, a value of "soft" is used.
- For comment fields, use the **<textarea>** tag with the wrap attribute set to "soft" so that the user's comments wrap to the next line in the box.



Comment Text Area

In this figure the text box includes a vertical scroll bar, so that a user can scroll to see the hidden text, if needed.

```
<!-- Comments -->

   <label for="comments">Comments?</label>
   <textarea name="comments" id="comments" rows="6" cols="50" wrap="soft">
 <hr color="#850000" size="1">
```

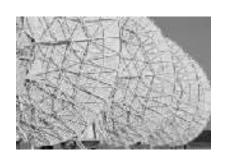
Comments?

I'm very pleased with my purchase of the LG 100 Mpbs/w wireless network adapter. How do I obtain updates to the driver and software?



Creating Form Buttons

- Another type of control element is one that performs an action. In forms, this is usually done with a **button**.
- Buttons can be clicked to:
 - run programs
 - submit forms
 - reset the form to its original state



Creating a Push Button

• One type of button, called a **push button**, is created using the **<input>** tag as follows:

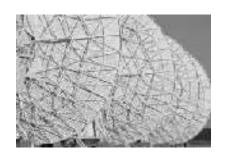
<input type="button" value="text">

- text is the text that appears on the button
- By themselves, push buttons perform no actions in the Web page.
- To create an action, write a script or program that runs automatically when the button is clicked.



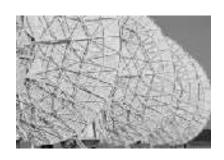
Creating Submit and Reset Buttons

- A **submit button** is a button that submits the form to the CGI script for processing.
- A **reset button** resets the form to its original (default) values.
- The syntax for creating these two buttons is:
 - <input type="submit" value="text">
 - <input type="reset" value="text">
 - value attribute defines the text that appears on the button



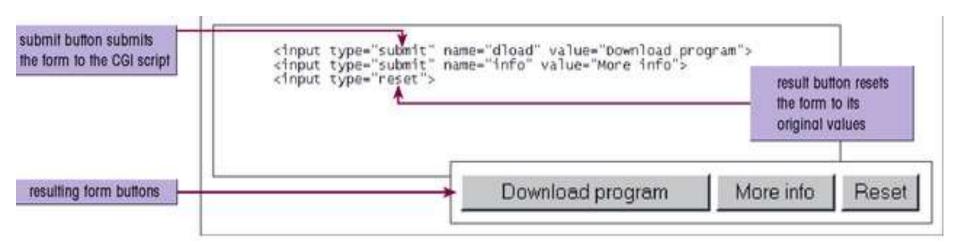
The name and value Attributes

- The name and value attributes can be used for push, submit, and reset buttons.
- Use these attributes when the form contains multiple buttons and a program that processes the form needs to distinguish one button from another.
 - for example, a Web page advertising a shareware program might include three buttons:
 - one used to download the program
 - another used to retrieve information
 - the third to cancel the form



Creating a Form Button

The figure shows HTML tags for buttons that download a program, retrieves information, and resets the form to its original values.



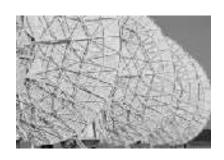


Creating Buttons with the <button> Tag

- Buttons created with the **<input>** tag do not allow the Web page designer to control the appearance of the button.
- For greater artistic control over the appearance of the button, use the **<button>** tag.
- The syntax of the **<button>** tag is:

```
<button name="name" value="value"
  type="option">
  button text and HTML tags
</button>
```

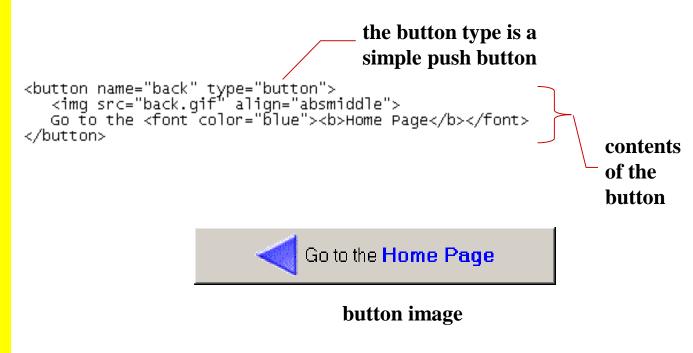
- *name* attribute specifies the name of the button
- value attribute sends to a CGI script
- type attribute specifies the button type (submit, reset, or button)



Using the <button> Tag

The figure shows how to create a button that contains formatted text and an inline image.

The default value for the type attribute is "button". Within the <button> tags you can place whatever HTML tags you wish to format the button's appearance. This includes inline images.



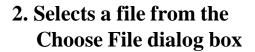


Using a File Button

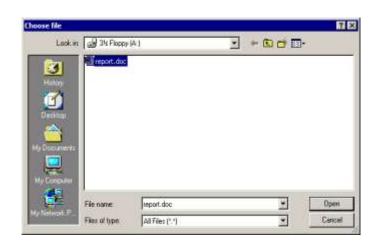
The figure shows an example of using the file button to return the location of a file named "report.doc."

A:\report.doc

1. User clicks the Browse button



3. The filename and location are automatically placed in the text box



<input type="file" name="file_name">

Browse

Browse...