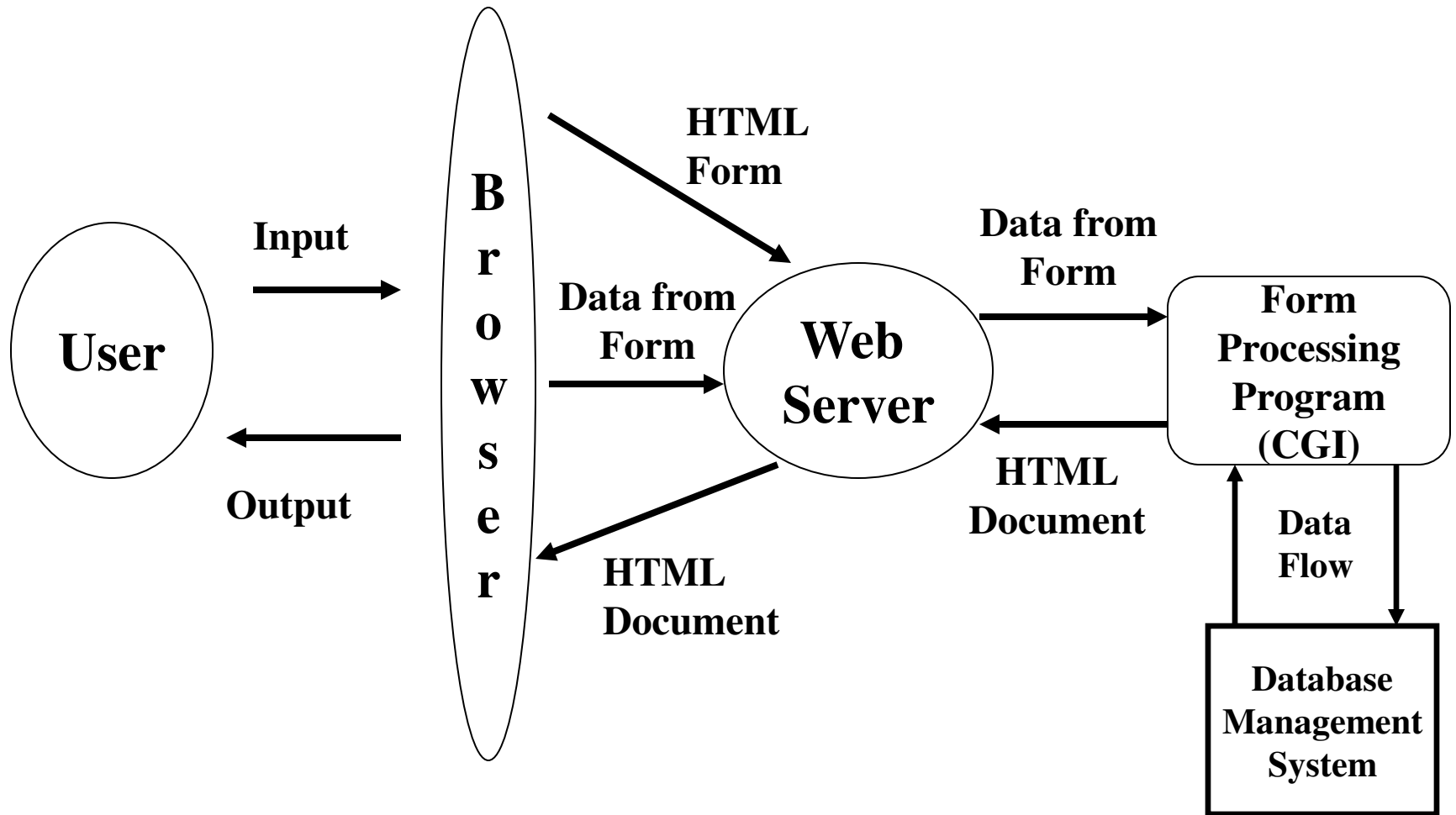


USER INTERACTIONS: FORMS

Form Processing



Flow of Information for 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

- **ACTION:**
 - 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

<Form Action=“getemp.asp” Method=“post”>

(all form elements inside)

</Form>

Forms

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

TYPE Attribute

- **Checkbox:**
 - **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*.**

TYPE Attribute

- **Checkbox:**

<FORM>

What pets do you own?

**<P><INPUT TYPE=CHECKBOX name = petdog
value="dog"> DOG**

**
<INPUT TYPE=CHECKBOX name = petcat
value="cat"> CAT**

**
<INPUT TYPE=CHECKBOX name = petbird
value="bird"> BIRD**

**
<INPUT TYPE=CHECKBOX name = petfish
value="fish"> FISH**

</FORM>

TYPE Attribute

- **Radio Boxes:**

- 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>Charge Card:

<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**

TYPE Attribute

- **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.

TYPE Attribute

- **TEXT type:**
 - Specifies a single line text entry field.
 - Can be used with the MAXLENGTH and SIZE attributes (MAXLENGTH >= SIZE)
- <P> First Name: <INPUT
NAME="fname" TYPE = text MAXLENGTH=30
SIZE =30></P>**
- <P> Last Name: <INPUT
NAME="lname" TYPE = text MAXLENGTH=30
SIZE =30></P>**

TYPE Attribute

- **PASSWORD Type:**

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

<P> Enter Your Password:

**<INPUT NAME="password" TYPE = password
MAXLENGTH=30 SIZE =30></P>**

TYPE Attribute

- **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”>

TYPE Attribute

- **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.

PullDown Menu

- **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**

PullDown Menu

- **Example:**

<P>Pick your favorite baseball team:

**
<SELECT NAME="team">**

<OPTION>Dodgers

<OPTION>Braves

<OPTION>Cardinals

<OPTION>Yankees

</SELECT>

Form Programming

- **Handling GET Forms:**

- A typical invocation of a GET-style application might use a URL like this:

http://www.kumquat.com/cgi-bin/dump_get?name=bob&phone=555-1212

- When the server processes this URL, it invokes the application named `dump_get` stored in the directory named `cgi-bin`. Everything after the question mark is passed to the application as parameters.
- The parameters are placed in a variable named `QUERY_STRING`.

Form Programming

- **Handling POST Method:**
 - **Data is sent in the format:**

name=bob&phone=555-1212

- **No URL is sent.**