



Internet Fundamentals

Lecture-25

HTML/XHTML Forms





What are forms?

- `<form>` is just another kind of XHTML/HTML tag
- Forms are used to create (rather primitive) GUIs on Web pages
 - Usually the purpose is to ask the user for information
 - The information is then sent back to the server
- A **form** is an area that can contain **form elements**
 - The syntax is: `<form parameters> ...form elements... </form>`
 - Form elements include: buttons, checkboxes, text fields, radio buttons, drop-down menus, etc
 - Other kinds of tags can be mixed in with the form elements
 - A form usually contains a **Submit** button to send the information in the form elements to the server
 - The form's *parameters* tell JavaScript how to send the information to the server (there are two different ways it could be sent)
 - Forms can be used for other things, such as a GUI for simple programs



Forms and JavaScript

- The **JavaScript** language can be used to make pages that “do something”
 - You *can* use JavaScript to write complete programs, but...
 - Usually you just use snippets of JavaScript here and there throughout your Web page
 - JavaScript code snippets can be attached to various form elements
 - For example, you might want to check that a **zipcode** field contains a 5-digit integer before you send that information to the server
- Microsoft calls its version of JavaScript “active scripting”
- Forms can be used without JavaScript, and JavaScript can be used without forms, but they work well together
- JavaScript for forms is covered in a separate lecture



The <form> tag

- The `<form arguments> ... </form>` tag encloses form elements (and probably other elements as well)
- The arguments to `form` tell what to do with the user input
 - `action="url"` (required)
 - Specifies where to send the data when the `Submit` button is clicked
 - `method="get"` (default)
 - Form data is sent as a URL with `?form_data` info appended to the end
 - Can be used *only* if data is all ASCII and not more than 100 characters
 - `method="post"`
 - Form data is sent in the body of the URL request
 - Cannot be bookmarked by most browsers
 - `target="target"`
 - Tells where to open the page sent as a result of the request
 - `target= _blank` means open in a new window
 - `target= _top` means use the same window



The `<input>` tag

- Most, but not all, form elements use the `input` tag, with a `type="..."` argument to tell which kind of element it is
 - `type` can be `text`, `checkbox`, `radio`, `password`, `hidden`, `submit`, `reset`, `button`, `file`, or `image`
- Other common `input` tag arguments include:
 - `name`: the name of the element
 - `id`: a unique identifier for the element
 - `value`: the “value” of the element; used in different ways for different values of `type`
 - `readonly`: the value cannot be changed
 - `disabled`: the user can’t do anything with this element
 - Other arguments are defined for the `input` tag but have meaning only for certain values of `type`

Text input

A text field:

```
<input type="text" name="textfield" value="with an initial value" />
```

A text field:

A multi-line text field

```
<textarea name="textarea" cols="24" rows="2">Hello</textarea>
```

A multi-line text field:

A password field:

```
<input type="password" name="textfield3" value="secret" />
```

A password field:

- Note that two of these use the **input** tag, but one uses **textarea**

Buttons

- A submit button:
`<input type="submit" name="Submit" value="Submit" />`
- A reset button:
`<input type="reset" name="Submit2" value="Reset" />`
- A plain button:
`<input type="button" name="Submit3" value="Push Me" />`

A submit button:

A reset button:

A plain button:

- **submit**: send data
- **reset**: restore all form elements to their initial state
- **button**: take some action as specified by JavaScript

- Note that the type is **input**, not “button”



Radio buttons

Radio buttons:


```
<input type="radio" name="radiobutton" value="myValue1" />  
male<br>
```

```
<input type="radio" name="radiobutton" value="myValue2"  
checked="checked" />female
```

Radio buttons:

male

female

- If two or more radio buttons have the same **name**, the user can only select one of them at a time
 - This is how you make a radio button “group”
- If you ask for the value of that **name**, you will get the **value** specified for the selected radio button
- As with checkboxes, radio buttons do not contain any text



Labels

- In many cases, the labels for controls are not part of the control
 - `<input type="radio" name="gender" value="m" />male`
 - In this case, clicking on the word “male” has no effect
- A **label** tag will bind the text to the control
 - `<label><input type="radio" name="gender" value="m" />male</label>`
 - Clicking on the word “male” now clicks the radio button
- w3schools says that you should use the **for** attribute:
 - `<label for="lname">Last Name:</label>`
`<input type="text" name="lastname" id="lname" />`
 - In my testing (Firefox and Opera), this isn't necessary, but it may be for some browsers
- Labels also help page readers read the page correctly
- Some browsers may render labels differently

Checkboxes

- A checkbox:

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

A checkbox:

- **type:** "checkbox"
- **name:** used to reference this form element from JavaScript
- **value:** value to be returned when element is checked
- Note that there is *no text* associated with the checkbox
 - Unless you use a **label** tag, only clicking on the box itself has any effect

Drop-down menu or list

- A menu or list:

```
<select name="select">  
  <option value="red">red</option>  
  <option value="green">green</option>  
  <option value="BLUE">blue</option>  
</select>
```

A menu or list:



- Additional arguments:
 - **size**: the number of items visible in the list (default is "1")
 - **multiple**
 - if set to "true" (or just about anything else), any number of items may be selected
 - if omitted, only one item may be selected
 - if set to "false", behavior depends on the particular browser



Hidden fields

- `<input type="hidden" name="hiddenField" value="nyah">`
 <-- right there, don't you see it?

A hidden field: <-- right there, don't you see it?

- What good is this?
 - All **input** fields are sent back to the server, including hidden fields
 - This is a way to include information that the user doesn't need to see (or that you don't want her to see)
 - The **value** of a hidden field can be set programmatically (by JavaScript) before the form is submitted



A complete example

```
<html>
<head>
<title>Get Identity</title>
<meta http-equiv="Content-Type" content="text/html;
      charset=iso-8859-1">
</head>
<body>
<p><b>Who are you?</b></p>
<form method="post" action="">
  <p>Name:
    <input type="text" name="textfield">
  </p>
  <p>Gender:
    <input type="radio" name="gender" value="m" />Male<label>
    <input type="radio" name="gender" value="f" />Female</label>
  </p>
</form>
</body>
</html>
```

Who are you?

Name:

Gender: Male Female