

Lecture 9

HTML



HTML Forms

An HTML form is used to collect user input. The user input is most often sent to a server for processing. The HTML **<form>** element is used to create an HTML form for user input:

```
<form>  
.  
form elements  
.  
</form>
```

The **<form>** element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.



The **<input>** Element

The HTML **<input>** element is the most used form element. An **<input>** element can be displayed in many ways, depending on the type attribute.

Type	Description
<input type="text">	Displays a single-line text input field
<input type="radio">	Displays a radio button (for selecting one of many choices)
<input type="checkbox">	Displays a checkbox (for selecting zero or more of many choices)
<input type="submit">	Displays a submit button (for submitting the form)
<input type="button">	Displays a clickable button

Text Fields

The `<input type="text">` defines a single-line input field for text input. the default width of an input field is 20 characters.

```
<form>  
<label for="fname">First name:</label><br>  
  <input type="text" id="fname" value="hello">  
</form>
```

The `<label>` tag defines a label for many form elements. The `<label>` element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focus on the input element. The `for` attribute of the `<label>` tag should be equal to the `id` attribute of the `<input>` element to bind them together.



Radio Buttons

The `<input type="radio">` defines a radio button. Radio buttons let a user select ONE of a limited number of choices.

```
<p>Gender:</p>
```

```
<form>
```

```
  <input type="radio" id="m" value="Male">
```

```
  <label for="m">Male</label><br>
```

```
  <input type="radio" id="f" value="Female">
```

```
  <label for="f">Female</label>
```

```
</form>
```



Checkboxes

The `<input type="checkbox">` defines a checkbox. Checkboxes let a user select ZERO or MORE options of a limited number of choices.

`<form>`

```
<input type="checkbox" id="vehicle1" name="vehicle1" value="Bike">
```

```
<label for="vehicle1"> I have a bike</label><br>
```

```
<input type="checkbox" id="vehicle2" name="vehicle2" value="Car">
```

```
<label for="vehicle2"> I have a car</label><br>
```

```
<input type="checkbox" id="vehicle3" name="vehicle3" value="Boat">
```

```
<label for="vehicle3"> I have a boat</label><br><br>
```

`</form>`

The Submit Button

The `<input type="submit">` defines a button for submitting the form data to a form-handler. The form-handler is typically a file on the server with a script for processing input data. The form-handler is specified in the form's action attribute.

```
<form action="url">
```

```
  <label for="fname">First name:</label><br>
```

```
  <input type="text" id="fname" name="fname" value="hello"><br>
```

```
  <label for="lname">Last name:</label><br>
```

```
  <input type="text" id="lname" name="lname" value="world"><br><br>
```

```
  <input type="submit" value="Submit">
```

```
</form>
```

The Name Attribute for **<input>**

Notice that each input field must have a name attribute to be submitted. If the name attribute is omitted, the value of the input field will not be sent at all.

```
<form action="/action_page.php">  
  <label for="fname">First name:</label><br>  
  <input type="text" id="fname" value="John"><br><br>  
  <input type="submit" value="Submit">  
</form>
```

This example will not submit the value of the "First name" input field.

HTML Form Attributes

The different attributes for the HTML `<form>` element are:

- The Action Attribute
- The Target Attribute
- The Method Attribute
- The Autocomplete Attribute
- The Novalidate Attribute



The Action Attribute

The **action** attribute defines the action to be performed when the form is submitted. Usually, the form data is sent to a file on the server when the user clicks on the submit button. In the example below, the form data is sent to a file called "**action_page.php**". This file contains a server-side script that handles the form data:

```
<form action="/action_page.php">  
  <label for="fname">First name:</label><br>  
  <input type="text" id="fname" name="fname" value="John"><br>  
  <input type="submit" value="Submit">  
</form>
```

If the action attribute is omitted, the action is set to the current page.



The Method Attribute

The **method** attribute specifies the HTTP method to be used when submitting the form data. The form-data can be sent as URL variables (with **method="get"**) or as HTTP post transaction (with **method="post"**). The default HTTP method when submitting form data is **GET**.

This example uses the **GET** method when submitting the form data:

```
<form action="/action_page.php" method="get">
```

This example uses the **POST** method when submitting the form data:

```
<form action="/action_page.php" method="post">
```

GET Method

- Appends the form data to the URL, in name/value pairs
- **NEVER** use GET to send sensitive data! (the submitted form data is visible in the URL!)
- The length of a URL is limited (2048 characters)
- Useful for form submissions where a user wants to bookmark the result
- GET is good for non-secure data, like query strings in Google



POST Method

- Appends the form data inside the body of the HTTP request (the submitted form data is not shown in the URL)
- Always use POST if the form data contains sensitive or personal information
- POST has no size limitations, and can be used to send large amounts of data.
- Form submissions with POST cannot be bookmarked



The Autocomplete Attribute

The autocomplete attribute specifies whether a form should have autocomplete on or off. When autocomplete is on, the browser automatically complete values based on values that the user has entered before.

```
<form action="/action_page.php" autocomplete="on">
```



The Novalidate Attribute

The novalidate attribute is a boolean attribute. When present, it specifies that the form-data (input) should not be validated when submitted.

```
<form action="/action_page.php" novalidate>
```



HTML Form Elements

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

- **<input>**
- **<label>**
- **<select>**
- **<textarea>**
- **<button>**
- **<option>**



The `<select>` Element

The `<select>` element defines a drop-down list and the `<option>` element is nested inside the `<select>` element. The `<option>` elements defines an option that can be selected. By default, the first item in the drop-down list is selected.

Use the size attribute to specify the number of visible values.

```
<select id="cars"
name="cars" size="3">
```

Use the multiple attribute to allow the user to select more than one value.

```
<select id="cars" name="cars" size="4" multiple>
```

```
<form action="/action_page.php">
<label for="cars">Choose a car:</label>
<select id="cars" name="cars">
  <option value="volvo">Volvo</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
<input type="submit">
</form>
```

The `<textarea>` Element

The `<textarea>` element defines a multi-line input field (a text area):

```
<textarea name="message" rows="10" cols="30">
```

The cat was playing in the garden.

```
</textarea>
```

The rows attribute specifies the visible number of lines in a text area.

The cols attribute specifies the visible width of a text area.

You can also define the size of the text area by using CSS:

```
<textarea name="message" style="width:200px; height:600px;">
```

The cat was playing in the garden.

```
</textarea>
```

The **<button>** Element

The **<button>** element defines a clickable button:

```
<button type="button" onclick="alert('Hello World!')">Click Me!  
</button>
```

Always specify the type attribute for the button element. Different browsers may use different default types for the button element.

