

HTML Form

HTML Forms are required, when you want to collect some data from the site visitor. For example, during user registration you would like to collect information such as name, email address, phone number, etc.

A form will take input from the site visitor and then will post it to a back-end application such as ASP Script or PHP script etc. The back-end application will perform required processing on the passed data based on defined business logic inside the application.

There are various form elements available like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc.

The HTML `<form>` tag is used to create an HTML form and it has following syntax –

```
<form action = "Script URL" method = "GET|POST">  
    form elements like input, textarea etc.  
</form>
```

Attributes of `<form>` tag

Attributes	Value	Description
action	URL	Specifies where to send the form-data when a form is submitted.
method	Get or post	Specifies the HTTP method to use when sending form-data.
enctype	<ul style="list-style-type: none">application/x-www-form-urlencodedmultipart/form-data	Specifies how the form-data should be encoded when submitting it to the server.

HTML Form Controls

There are various types of form control that are defined in the HTML, these controls are responsible for accepting the User input in a specified manner.

1) HTML input Tag

`<input>` tag is an input control that presents users with an interactive control for entering data.

Traditionally, the `<input>` tag is found within the `<form>` tag and can represent text fields, checkboxes, radio button, buttons and other inputs, simply by setting the appropriate type attribute.

This tag is also commonly referred to as the `<input>` element.

Syntax

<input type = "value" />

Attributes of input tag

Attribute	Description
Id	specifies a unique id for an HTML element
autocomplete	Value of either on or off to indicate whether the browser can automatically complete the values in the input elements based on values previously entered in the form
disabled	Boolean value indicating that the user cannot interact with the input.
name	Name of the input
Required	Boolean value indicating whether the input is required. Required inputs must be completed before the form can be submitted.
Type	Type of the input. It can be one of the following values: button, checkbox, color, date, email, file, number, password, radio, range, reset, search, submit, tel, text, time, url etc.
Value	Initial value of the input

Input Type Text

Input text fields are one-line areas that allow the user to input text.

Single-line text input controls are created using an <input> element, whose type attribute has a value of text.

Example:

```
<form>
  <label for="username">Username:</label>
  <input type="text" name="username" id="username">
</form>
```

Input Type Password

Input type password fields are similar to text fields. The only difference is; characters in a password field are masked, i.e. they are shown as asterisks or dots. This is to prevent someone else from reading the password on the screen. This is

also a single-line text input controls created using an `<input>` element whose type attribute has a value of password.

Example:

```
<form>
    <label for="user-pwd">Password:</label>
    <input type="password" name="user-password" id="user-pwd">
</form>
```

Input Type Email

input type email is used get email id from user. Default pattern for email id is n@n where n is any string, i.e. a string character, followed by @, and again one more string.

Example:

```
<form>
    <label for="user-email">Email Id:</label>
    <input type="email" name="user-email" id="user-email">
</form>
```

Input Type Url

Input type url is used get insert a website url. A URL includes protocol(HTTP or HTTPS).

Example:

```
<form>
    <label for="website-url">Website URL:</label>
    <input type="url" name="web-url" id="weburl">
</form>
```

Input type date

Input type date is used choose a valid date from user. It shows date picker calendar in input type date.

Example:

```
<form>
```

```
<label for="date-of-birth">Date of Birth:</label>
<input type="date" name="user-dob" id="dob">
</form>
```

Input type time

Input type time is used to choose a valid time from user in 12 hours format.

Example:

```
<form>
  <label for="birth-time">Birth Time</label>
  <input type="time" name="birth-time" id="b-time">
</form>
```

input type number

Input type number is used to insert only numbers from user. For example age, number etc. *min* and *max* attributes are also used with input type number. step can increase step value; default step value is 1

Example:

```
<form>
  <label for="age">Age</label>
  <input type="number" name="us-age" id="age" min="1" max="120">
</form>
```

Input type color

Input type color is used to choose a color from user. It shows a color picker to choose color.

Example:

```
<form>
  <label for="color">Select Color</label>
  <input type="color" name="user-color" id="u-color">
</form>
```

Radio Buttons

Radio buttons are used to let the user select exactly one option from a pre-defined set of options. It is created using an `<input>` element whose type attribute has a value of radio.

Example:

```
<form>

  <input type="radio" name="gender" id="male">
  <label for="male">Male</label>

  <input type="radio" name="gender" id="female">
  <label for="female">Female</label>

</form>
```

Checkboxes

Checkboxes allows the user to select one or more option from a pre-defined set of options. It is created using an `<input>` element whose type attribute has a value of checkbox.

Example:

```
<form>

  <input type="checkbox" name="sports" id="soccer">
  <label for="soccer">Soccer</label>

  <input type="checkbox" name="sports" id="cricket">
  <label for="cricket">Cricket</label>

  <input type="checkbox" name="sports" id="baseball">
  <label for="baseball">Baseball</label>

</form>
```

Input Type File

Input type file fields allow a user to browse for a local file and send it as an attachment with the form data. Web browsers such as Google Chrome and Firefox render a file select input field with a Browse button that enables the user to navigate the local hard drive and select a file.

This is also created using an `<input>` element, whose type attribute value is set to file.

Example:

```
<form>
```

```
<label for="file-select">Upload:</label>
<input type="file" name="upload" id="file-select">
</form>
```

Input Type Button, Submit and Reset

Input type button is used to define a clickable Button in a Document. It is mostly used with the Javascript to activate the script.

A submit button is used to send the form data to a web server. When submit button is clicked the form data is sent to the file specified in the form's action attribute to process the submitted data.

A reset button resets all the forms control to default values.

Example:

```
<form action="action.php" method="post">
  <label for="first-name">First Name:</label>
  <input type="text" name="first-name" id="first-name">
  <input type="submit" value="Submit" name="btn-submit">
  <input type="button" value="Click Me">
  <input type="reset" value="Reset">
</form>
```

Note: You can also create buttons using the <button> element. Buttons created with the <button> element function just like buttons created with the input element, but they offer richer rendering possibilities by allowing the embedding of other HTML elements.

2) HTML Textarea Tag

Textarea is a multiple-line text input control that allows a user to enter more than one line of text. Multi-line text input controls are created using an <textarea> element.

Attributes of <Textarea> tag:

Attribute	Value	Description
cols	<i>number</i>	Specifies the visible width of a text area
disabled	disabled	Specifies that a text area should be disabled

maxlength	<i>number</i>	Specifies the maximum number of characters allowed in the text area
name	<i>text</i>	Specifies a name for a text area
placeholder	<i>text</i>	Specifies a short hint that describes the expected value of a text area
Readonly	readonly	Specifies that a text area should be read-only
Required	required	Specifies that a text area is required/must be filled out
Rows	<i>number</i>	Specifies the visible number of lines in a text area

Example:

```
<form>
    <label for="address">Address:</label>
    <textarea rows="3" cols="30" name="address" id="address"></textarea>
</form>
```

3) HTML Select Tag

A select box is a dropdown list of options that allows user to select one or more option from a pull-down list of options. Select box is created using the <select> element and <option> element.

The <option> elements within the <select> element define each list item.

Attributes of <select> tag:

Attribute	Value	Description
disabled	disabled	Specifies that a drop-down list should be disabled
multiple	multiple	Specifies that multiple options can be selected at once
name	name	Defines a name for the drop-down list
required	required	Specifies that the user is required to select a value before submitting the form
size	number	Defines the number of visible options in a drop-down list

Example:

```
<form>
```

```
<label for="city">City:</label>
<select name="city" id="city">
    <option value="sydney">Sydney</option>
    <option value="melbourne">Melbourne</option>
    <option value="cromwell">Cromwell</option>
</select>
</form>
```

Label Tag

The <label> tag defines the label for <input>, <select>, or <textarea> element.

Syntax:

```
<label> form content... </label>
```

Attribute of <label> tag:

for: It refers to the input control that this label is for. Its value must be the same as the value of the input control's "id" attribute.

Fieldset Tag

HTML <fieldset> tag is used to group the logically related fields/labels contained within an HTML form.

The use of this tag is optional while creating an HTML form but using <fieldset>, it is easy to understand the purpose of grouped elements of form.

The <legend> tag is used with the <fieldset> element as a first child to define the caption for the grouped related fields.

Syntax:

```
<fieldset>.....</fieldset>
```