

## ❖ Form:

- An HTML form is used to collect user input.
- An **HTML form** is *a section of a document* which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.
- An HTML form facilitates the user to enter data that is to be sent to the server for processing such as name, email address, password, phone number, etc. .
- HTML forms are required if you want to collect some data from of the site visitor.
- For example: If a user want to purchase some items on internet, he/she must fill the form such as shipping address and credit/debit card details so that item can be sent to the given address.

## Creating form

The **HTML <form> element** provide a document section to take input from user. It provides various interactive controls for submitting information to web server such as text field, text area, password field, etc.

Note: The <form> element does not itself create a form but it is container to contain all required form elements, such as <input>, <label>, etc.

### Syntax:

**<form>**

//Form elements

**</form>**

## Input Element

- This is the most commonly used element within HTML forms.
- The HTML `<input>` element is the most used form element.
- An `<input>` element can be displayed in many ways, depending on the type attribute.
- Here are some examples:

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

### ❖ Add labels (HTML `<label > Tag`)

- The `<label>` tag is used to specify a label for an `<input>` element of a form.
- It adds a label to a form control such as text, email, password, textarea etc. It toggles the control when a user clicks on a text within the `<label>` element.
- `<label>` tag defines a label for many form elements.
- The “for” attribute of the label tag should be equal to the “id” attribute of the `<input>` element to bind them together.

## Syntax:

1. `<label> form_content... </label>`

### This tag can be used with the following two ways:

1. Set the **id attribute** inside the `<input>` element and specify its name for the **for attribute** inside the `<label>` tag.

### Example:

## Notes of WEB APPLICATION DEVELOPMENT

This example uses the for attribute with each label tag in the form.

used

```
<!DOCTYPE html>

<html>

  <head>

    <title>Title of the document</title>

  </head>

  <body>

    <form>

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

      <input id="fname" name="fname" type="text" />

    </form>

  </body>

</html>
```

### Output:-

First name:

❖ **Text box**

## Notes of WEB APPLICATION DEVELOPMENT

The Input Text object represents an HTML `<input>` element with `type="text"`.

1. For creating the text box, firstly we have to define the `<form>` tag, if not defined in the code. Now, we have to place the cursor at that point in the `<form>` tag where we want to create the text box. And, then we have to type the `<input>` tag at that point.

```
<form>
```

Student Name:

```
<input >
```

```
</form>
```

2: After writing the `<input>` tag, we have to use its attribute whose name is `type`. This attribute specifies what type of data is to be entered. So, to create the text box we have to give the value `"text"` in the `type` attribute.

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

3: If we want to define the **width** of the text box, then we can define it with the help of the `size` attribute.

```
<form>
```

Student Name:

```
<input type="text" name="Name" size="20">
```

```
</form>
```

### Example:


```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Title of the document</title>
</head>
<body>
  <form>
    <label for="lfname">First name:</label>
    <input id="lfname" name="fname" type="text" />
  </form>
</body>
</html>
```

**Output:-**



First name:

❖ check box

## Notes of WEB APPLICATION DEVELOPMENT

- The `<input type="checkbox">` defines a checkbox.
- The checkbox is shown as a square box that is ticked (checked) when activated.
- Checkboxes are used to let a user select one or more options of a limited number of choices.

### Syntax

```
<input type="checkbox">
```

If we want to select any checkbox by default, then we have to set the checked attribute with the "yes" value as described in the following syntax:

```
<input type="checkbox" name="field name" value="abc" checked="yes">
```

### Example

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>The input checked attribute</h1>
```

```
<form >
```

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

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

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

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

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

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

```
</form>
```

```
</body>
```

</html>

**Output:-**

## The input checked attribute

- I have a bike
- I have a car
- I have a boat

### ❖ Radio buttons

- The **HTML <Radio>** button is used to define the small circles, which are highlighted when selected. It is a form element which allows the users to select only one option from the given set of options.
- **Note:** The radio group must have share the same name (the value of the name attribute) to be treated as a group. Once the radio group is created, selecting any radio button in that group automatically deselects any other selected radio button in the same group. You can have as many radio groups on a page as you want, as long as each group has its own name.
- It is created by the **type** attribute of the **<input>** element as shown in the following
- **syntax:**

```
<input type="radio" name ="Any_name"/>
```

### **Example:-**

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>Display Radio Buttons</h1>
```

```
<form>
```



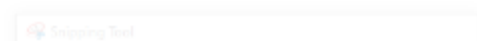
```
<p>Please select your favorite Web language:</p>
<input type="radio" id="html" name="fav_language" value="HTML">
<label for="html">HTML</label><br>
<input type="radio" id="css" name="fav_language" value="CSS">
<label for="css">CSS</label><br>
<input type="radio" id="javascript" name="fav_language" value="JavaScript">
<label for="javascript">JavaScript</label>
</form>
</body>
</html>
```

**Output:-**

## Display Radio Buttons

Please select your favorite Web language:

- HTML
- CSS
- JavaScript



❖ **Password**

## Notes of WEB APPLICATION DEVELOPMENT

- The HTML `<input type="password">` is used to specify the password field of input tag.
- usually by replacing each character with a symbol such as the asterisk ("\*") or a dot ("•").

## Syntax

```
<input type="password">
```

### Example:-

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>Display a Password Field</h1>
```

```
<form>
```

```
<label for="email">Email:</label>
```

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

```
<label for="pwd">Password:</label>
```

```
<input type="password" id="pwd" name="pwd" minlength="8"><br><br>
```

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

```
</form>
```

```
</body>
```

```
</html>
```

### Output:-

## Display a Password Field

Email:

Password:

## Attribute Values

<u>Value</u>	<u>Description</u>
<a href="#"><u>button</u></a>	<u>Defines a clickable button (mostly used with a JavaScript to activate a script)</u>
<a href="#"><u>checkbox</u></a>	<u>Defines a checkbox</u>
<a href="#"><u>color</u></a>	<u>Defines a color picker</u>
<a href="#"><u>date</u></a>	<u>Defines a date control (year, month, day (no time))</u>
<a href="#"><u>datetime-local</u></a>	<u>Defines a date and time control (year, month, day, time (no timezone))</u>
<a href="#"><u>email</u></a>	<u>Defines a field for an e-mail address</u>
<a href="#"><u>file</u></a>	<u>Defines a file-select field and a "Browse" button (for file uploads)</u>
<a href="#"><u>hidden</u></a>	<u>Defines a hidden input field</u>
<a href="#"><u>image</u></a>	<u>Defines an image as the submit button</u>

<a href="#"><u>month</u></a>	<u>Defines a month and year control (no timezone)</u>
<a href="#"><u>number</u></a>	<u>Defines a field for entering a number</u>
<a href="#"><u>password</u></a>	<u>Defines a password field</u>
<a href="#"><u>radio</u></a>	<u>Defines a radio button</u>
<a href="#"><u>range</u></a>	<u>Defines a range control (like a slider control)</u>
<a href="#"><u>reset</u></a>	<u>Defines a reset button</u>
<a href="#"><u>search</u></a>	<u>Defines a text field for entering a search string</u>
<a href="#"><u>submit</u></a>	<u>Defines a submit button</u>
<a href="#"><u>tel</u></a>	<u>Defines a field for entering a telephone number</u>
<a href="#"><u>text</u></a>	<u>Default. Defines a single-line text field</u>
<a href="#"><u>time</u></a>	<u>Defines a control for entering a time (no timezone)</u>
<a href="#"><u>url</u></a>	<u>Defines a field for entering a URL</u>
<a href="#"><u>week</u></a>	<u>Defines a week and year control (no timezo</u>

### ❖ Pull down menus

- A pull-down menu is also known as a **drop-down menu**, pull-down list, drop-down list or drop-down box.
- A pull-down **menu** is a menu that offers a list of options.
- A drop-down menu is a clean method of showing a large list of choices since only one choice is displayed initially until the user activates the drop-down box.
- To add a drop-down menu to a web page, you would use a <select> element. The <option> element with attribute **selected="selected"** is the default option, displayed before the menu is opened.
- **The <select> element is used to create a drop-down list. The <option> tags inside the <select> element define the available options in the drop-down list.**

#### Example:-

```
<!Doctype Html>
<Html>
<Head>
<Title>
Make a Drop Down Menu using Html Form
</Title>
</Head>
<Body>

<form>
<label> Select Cars </label>
<select>
<option selected="selected" value = "BMW"> BMW
</option>
<option value = "Mercedes"> Mercedes
</option>
<option value = "Audi"> Audi
</option>
<option value = "Skoda"> Skoda
</option>
</select>
```

## Notes of WEB APPLICATION DEVELOPMENT

```
</form>
```

```
</Body>
```

```
</Html>
```

### Output:-

Select Cars

Select Cars   
BMW  
Mercedes  
Audi  
Skoda

### Visible Values:

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

### Example:-

```
<label for="cars">Choose a car:</label>
```

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

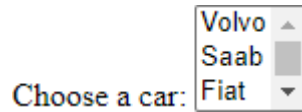
```
<option value="volvo">Volvo</option>
```

```
<option value="saab">Saab</option>
```

```
<option value="fiat">Fiat</option>
```

```
<option value="audi">Audi</option>
```

```
</select>
```



## Allow Multiple Selections:

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

**Example:-**

```
<label for="cars">Choose a car:</label>
```

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

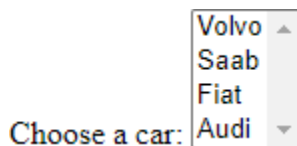
```
<option value="volvo">Volvo</option>
```

```
<option value="saab">Saab</option>
```

```
<option value="fiat">Fiat</option>
```

```
<option value="audi">Audi</option>
```

```
</select>
```



## The <datalist> Element

- The <datalist> element specifies a list of pre-defined options for an <input> element.
- Users will see a drop-down list of the pre-defined options as they input data.
- The list attribute of the <input> element, must refer to the id attribute of the <datalist> element.

## Notes of WEB APPLICATION DEVELOPMENT

Example:-

```
<form>
```

```
<input list="browsers">
```

```
<datalist id="browsers">
```

```
<option value="Internet Explorer">
```

```
<option value="Firefox">
```


```
<option value="Chrome">
```

```
<option value="Opera">
```

```
<option value="Safari">
```

```
</datalist>
```

```
</form>
```



### optgroup

The `<optgroup>` tag is used to group related options in a `<select>` element (drop-down list).

If you have a long list of options, groups of related options are easier to handle for a user.



## Notes of WEB APPLICATION DEVELOPMENT

### Example:-

```
<form >

<label for="cars">Choose a car:</label>

<select name="cars" id="cars">

  <optgroup label="Swedish Cars">

    <option value="volvo">Volvo</option>

    <option value="saab">Saab</option>

  </optgroup>

  <optgroup label="German Cars">

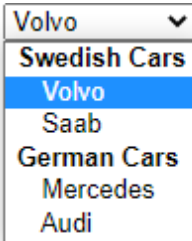
    <option value="mercedes">Mercedes</option>

    <option value="audi">Audi</option>

  </optgroup>

</select>

</form>
```

Choose a car: 

Volvo	▼
<b>Swedish Cars</b>	
Volvo	
Saab	
<b>German Cars</b>	
Mercedes	
Audi	

## ❖ Add button to a form

- The <button> tag is used to create a clickable button within HTML form on your webpage. You can put content like text or image within the <button>..... </button> tag.
- You should always specify the type attribute for a <button> tag.
- HTML Button tag can be used inside and outside the form.
- If you use it inside the form, it works as the submit button. You can also use it as reset button.
- If you use it **outside the form**, you can call JavaScript function on it.

**Example:-**

```
<button name="button" type="button">Click Here</button>
```

Output:

Click Here

## HTML Button Example: **Submit Form**

Submit button automatically submits a form on click. Using HTML forms, you can easily take user input.

```
<!DOCTYPE html>
<html>
<head></head>
<body>
  <form action="URL" method="get|post">
    text1<input type="text" name="add_name">
    text2<input type="text" name="add_name">
    <input type="submit|reset" value="submit|reset">
  </form>
</body>
</html>
```

```
<!DOCTYPE html>
<html>
  <body>
    <form action="/new.php">
      Student Name:<br>
      <input type="text" name="sname">
      <br>
      Student Subject:<br>
      <input type="text" name="ssubject">
      <br>
      <input type="submit" value="Submit">
    </form>
  </body>
</html>
```

## HTML Button Example: Reset Form

The Reset is the value of the type attribute of the <Button> element. It is used to reset the filled values of a form to its initial values.

### Example:-

```
<!DOCTYPE html>
<html>
<body>

<h1>Display a Reset Button</h1>

<form action="/action_page.php">
  <label for="email">Enter your email:</label>
  <input type="email" id="email" name="email"><br><br>
  <label for="pin">Enter a PIN:</label>
```

## Notes of WEB APPLICATION DEVELOPMENT

```
<input type="text" id="pin" name="pin"
maxlength="4"><br><br>
<input type="reset" value="Reset">
<input type="submit" value="Submit">
</form>

</body>
</html>
```

### Output

## Display a Reset Button

Enter your email:

Enter a PIN:

### ❖ Use of clickable image as a submit button

The `<input type="image">` defines an image as a submit button.

The path to the image is specified in the `src` attribute.

#### Syntax

```
<input type="image">
```

#### Attribute Value:

- **image:** It is used to define an image as the submit button.

#### Features:

- The input element does not accept a *value* attribute.
- The image path is defined in the *src* attribute.
- The input element is supported by various common attributes.

#### Approach:

- Firstly, create an HTML document that contains an `<input>` tag.
- use the **type** attribute with the `<input>` tag.
- set the type attribute to value **“image“**.
- You can also use the **src** attribute which contains the URL of the image.

## Notes of WEB APPLICATION DEVELOPMENT

### Example:-

```
<html>
<head>
  <title>
    How to specify the URL of
    the image to use as a
    submit button in HTML ?
  </title>
</head>
<body>
  <form action="#">
    Username: <input type="text" name="uname">
    <br><br>
    Password: <input type="password" name="pwd">
    <br><br>
    <input type="image" src="logo.PNG"
      alt="submit" width="75" height="75">
  </form>
</body>
</html>
```

### Output

Username:

Password:



## ❖ Pass information between forms (action ,method)

- The **action** attribute specifies where to send the form-data when a form is submitted.

### Syntax

```
<form action="URL">
```

### Attribute Values

Value	Description
<i>URL</i>	Where to send the form-data when the form is submitted.

### Example:-

```
<!DOCTYPE html>

<html>

<body>

<h1>The form action attribute</h1>

<form action="/action_page.php">

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

  <input type="text" id="fname" name="fname"><br><br>

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

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

```
<input type="submit" value="Submit">
</form>
</body>
</html>
```

## The form action attribute

First name:

Last name:

### <form> method

The **method** attribute specifies how to send form-data (the form-data is sent to the page specified in the **action** attribute).

The form-data can be sent as URL variables (with **method="get"**) or as HTTP post transaction (with **method="post"**).

#### Notes on GET:

- Appends form-data into the URL in name/value pairs
- The length of a URL is limited (about 3000 characters)
- Never use GET to send sensitive data! (will be visible in the URL)
- Useful for form submissions where a user wants to bookmark the result
- GET is better for non-secure data, like query strings in Google.



## Example:-

```
<!DOCTYPE html>
<html>
<body>

<h1>The form method="get" attribute</h1>

<form action="/action_page.php" method="get" target="_blank">
  <label for="fname">First name:</label>
  <input type="text" id="fname" name="fname"><br><br>
  <label for="lname">Last name:</label>
  <input type="text" id="lname" name="lname"><br><br>
  <input type="submit" value="Submit">
</form>

<p>Click on the submit button, and the input will be sent to a page on the server called
"action_page.php".</p>

</body>
</html>
```

## Output:-

### The form method="get" attribute

First name:

Last name:

Click on the submit button, and the input will be sent to a page on the server called "action\_page.php".

## Notes on POST:

- Appends form-data inside the body of the HTTP request (data is not shown in URL)
- Has no size limitations
- Form submissions with POST cannot be bookmarked.

## Syntax

```
<form method="get|post">
```

Example:-

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>The form method="post" attribute</h1>
```

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

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

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

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

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

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

```
</form>
```

```
<p>Click on the submit button, and the form will be submitted using the POST method.</p>
```

```
</body>
```

</html>

## The form method="post" attribute

First name:

Last name:

Click on the submit button, and the form will be submitted using the POST method.