**1.HTML Forms**

**1.BASE ELEMENTS**

What are HTML forms?

HTML forms are generally used to interact with users to take specific inputs as per the requirement of form handler.

JavaScript is also capable of allowing users to communicate with the server. And most of websites prefer JavaScript to bridge the communication.

EXAMPLE:-

<!DOCTYPE html>

<html>

<body>

<form>

<h1>Hey I am a simple web form</h1>

<div>

<label for="name">Name</label>

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

</div>

<br >

<div>

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

</div>

<input type="email" name="email">

<br >

<input type="submit" >

</form>

</body>

</html>

For:-

When used together with the <label> element, the for attribute specifies which form element a label is bound to.

When used together with the <output> element, the for attribute specifies the relationship between the result of the calculation, and the elements used in the calculation.

<form action="/action\_page.php">

<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><br><br>

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

</form>

Base Elements

Base elements of HTML forms are generally the tags/elements that is majorly used for creating an interactive HTML web forms for the user.

Base elements consists of: Form tag, Input Tag, Text input, Label, Submit & many more.

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1. Form Tag

2. Input Tag

3. Text Input

4. Label

5. Radio Button

6. Checkbox

7. <input name="name">

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1. Form tag:-

What is <form> tag?

The <form> tag is used for collecting all web form tags for a single form. It also contains the interactive controls for submitting information.

The standard practice is to set at least the action and method attributes.

Sytax:-

<form>

.....It works as a container for all form-elements.....

</form>

Attributes of <form> tag:

* name: Specifies the name of the form.
* The name attribute specifies a name for an HTML element.
* This name attribute can be used to reference the element in a JavaScript.
* For a <form> element, the name attribute is  used as a reference when the data is submitted.
* For an <iframe> element, the name attribute can be used to target a form submission.
* For a <map> element, the name attribute is associated with the <img>'s usemap attribute and creates a relationship between the image and the map.
* For a <meta> element, the name attribute specifies a name for the information/value of the [content](https://www.w3schools.com/tags/att_meta_content.asp) attribute.
* For a <param> element, the name attribute is used together with the value attribute to specify parameters for the plugin specified with the [<object>](https://www.w3schools.com/tags/tag_object.asp) tag.
* rel: Creates a hyperlink or annotation depending on the value.
* The rel attribute specifies the relationship between the current document and the linked document.
* Only used if the href attribute is present.
* **Tip:** Search engines can use this attribute to get more information about a link!
* action: The URL that processes the form submission.
* method: The HTTP method to submit the form with. Accepts values:

-post: Form data sent as request body.

-get: Form data appended to action URL with ? separator.

* enctype: It determines how a browser decodes the data before it sends it to the server

-application/x-www-form-urlencoded: Primary method of using forms

-multipart/form-data: Used for storing / uploading files of images, word files, etc

* target: It is used to specify where to display the response after submitting the form. In HTML5, it is a name/keyword for a browsing context. Following keywords have special meanings:

\_self (default): Load into the same browsing context as the current one.

\_blank: Load into a new unnamed browsing context.

\_parent: Load into the parent browsing context of the current one. If no parent, behaves the same as \_self.

\_top: Load into the top-level browsing context. If no parent, behaves the same as \_self.

Input tag :-

What is <input> tag?

In web forms, <input> tags are used for specifying where users have to give the inputs.

Note: <input> tag is always used inside <form> tag.

Basically inputs tag are an empty elements with attributes. For specifying the title of input elements <label> tag is used.

SYNTAX:-

<form>

<input attribute\_name = "value"/>

</form>

Attributes of <input> tag:

* type: Defines the type of input to accept from the user. Can accept the following "values: button, checkbox, color, date, datetime, datetime-local, email, file, hidden, image, month, number, password, radio, range, reset, search, tel, text, time, url & week".
* accept: It is used to specify the acceptable file type in file upload.
* alt: This attribute is used to display the alternate text, if specified image is unable to load.
* autocomplete: It is used to activate the autocomplete feature of saved credentials
* autofocus: This attribute is used for specifying the element which should automatically get focused when the page loads.
* disabled: The disabled attribute specifies that the element should be disabled.
* pattern: This element is used checking if the value follows the given pattern
* placeholder: This attribute is used to specify hint that describes the expected value of an input field.
* required: The required attribute specifies that an input field must be filled out before submitting the form.
* value: It is used to specify the value of the input element.

Example:-

<!DOCTYPE html>

<html>

<body>

<h1>Learn about Input Tag</h1>

<form>

<label>Name:</label>

<input type="text" name="name" value=""> <br><br>

<label>E-mail:</label>

<input type="email" name="emailaddress"> <br><br>

<label>Password: </label>

<input type="password" name="password"> <br><br>

<input type="submit">

</form>

</body>

</html>

Text Input:-

Why do we use Text element of Type attribute in input tag?

Text value in type attribute in input element is used to specify user needs to enter textual information to fill out in the form.

Example:-

<body>

<form action="/url" method="GET">

<p>Please enter your first and last name:</p>

<input type="text" placeholder="John">

<input type="text" placeholder="Doe">

</form>

</body>

**Label**:-

What is <label> tag?

As the name itself says, <label> tag is used to specify the label for <button>, <input>, <meter>, <output>, <progress>, <select> or <textarea>.

By labeling form control gets bound to the label. This means that the user doesn't have to click only the input before it becomes active.

Mainly we use <label> tag in two types:

We use <label> tag as a element by binding a form control to it using for attribute. Basically here we assign a value to for attribute in <label> tag and the same value as for attribute to the id attribute in the form control tag.

For wrapping the form elements inside <label> tag.

Attributes of <label> tag:

for: This attribute is used for form control as specified in the above explanation. Value if for attribute of <label> tag must be the same as the value of the input control’s id attribute.

form: It refers to the form to which the label belongs to.

Example:-

<body>

<h1>Learn about Label Tag</h1>

<form>

<label for="name">Name:</label>

<input id="name" type="text" name="name" value="" >

<br><br>

<input type="submit">

</form>

</body>

Radio button:-

How to add radio button in Webform?

Primarily for adding radio button in Webform, we use "<input type="radio">". Radio button is used for displaying choice based options in web forms. In simple words, We use radio for making single choice based questions in Webform.

It is required in forms when the user allows choosing single option from multiple choice based options.

Syntax:-

<input type ="radio>

Example:-

<!DOCTYPE html>

<html>

<body>

<h2>We are implementing input type="radio"</h2>

<div>

<input type="radio" name="single-choice" value="Atul">

<label for="Netflix">Atul</label>

</div>

<div>

<input type="radio" name="single-choice" value="learning" />

<label for="Audi">Audi</label>

</div>

<div>

<input type="radio" name="single-choice" value="Learn" />

<label for="Microsoft">Learn D</label>

</div>

</body>

</html>

Checkbox:-

How to add checkbox in Webform?

Primarily for adding checkbox in Webform, we use "<input type="checkbox">". Checkbox is used for displaying choice based options in web forms. In simple words, We use checkbox for making multiple choice based questions in Webform. It is required in forms when the user allows choosing multiple choices from multiple options.

Syntax:-

<input type ="checkbox">

How the website will know that x-specific options are from one group?

Example:-

<!DOCTYPE html>

<html>

<body>

<h2>We are implementing input type="radio"</h2>

<div>

<input type=" checkbox " name="single-choice" value="Atul">

<label for="Netflix">Atul</label>

</div>

<div>

<input type=" checkbox " name="single-choice" value="learning" />

<label for="Audi">Audi</label>

</div>

<div>

<input type=" checkbox " name="single-choice" value="Learn" />

<label for="Microsoft">Learn D</label>

</div>

</body>

</html>

In the above implementation you can observe that we have used "name" attribute in all the options & value of all the name attribute are same.

Basically we use name attribute & assign same value to this attribute for specifying that these specific options belongs to same group. And for input type="checkbox", user can simply select multiple options as input from the multiple options with same value of name attribute. Even in the above implementation we have selected two options out of three & even we can select one single option or all of the options from same group.