

UNIT NO 03

Form and Event Handling

Unit– III Form and Event Handling	<p>3a. Write JavaScript to design a form to accept input values for the given problem.</p> <p>3b. Use JavaScript to implement form events to solve the given problem.</p> <p>3c. Develop JavaScript to dynamically assign specified attribute value to the given form control.</p> <p>3d. Use the given intrinsic function with specified parameters.</p>	<p>3.1 Building blocks of a Form, properties and methods of form, button, text, text area, checkbox, radio button, select element.</p> <p>3.2 Form events- mouse event, key events.</p> <p>3.3 Form objects and elements.</p> <p>3.4 Changing attribute value dynamically.</p> <p>3.5 Changing option list dynamically</p> <p>3.6 Evaluating checkbox selection</p> <p>3.7 Changing a label dynamically</p> <p>3.8 Manipulating form elements</p> <p>3.9 Intrinsic JavaScript functions, disabling elements, read only elements.</p>
--	---	--

3.1 Building Blocks of a form

- Form is an HTML element which takes the user input using various controls like text field, text area etc.
- This data can be validated on the client browser using the JavaScript. After validation of data when user clicks on the 'Submit' button form data is sent to the server for further processing.
- HTML Form is used for development of dynamic web applications where user enters the input and based on the user input server sends response to the client.
- The <form> element is used to create a form for user. There are many other elements which are used within form tag. - For example: <input>, <textarea>, <button>, <select>, <option> etc.
- **Syntax:**

```
<form>  
    //form element  
</form>
```

3.1.1 Properties and Methods of form

- Attributes can be added to an HTML element to provide more information about how the element should appear on behave.
- From element attributes are:
 - 1.Name**-It specifies a name used to identify the form
 - 2.Action**-It is used to specify an address(url) where to submit the form
 - 3.Method**- It is used to specify the HTTP method when submitting the form data to server. value can be either
 - GET**-the form data is appended to the URL when submitted. It is by default method.
 - POST**-the form data is not appended to the URL .
 - 4.Target**- It is used to specify the target of the address in the action attribute. Values can be set to
 - a._blank**
 - b._self**
 - c._parent**
 - d._top**
- **Example-**

```
<form name="frmLogin" action="" method="GET" >  
    //other form element  
</form>
```

3.1.1 Properties and Methods of form

➤ The HTML form contains following four elements.

1. **input**
2. **textarea**
3. **Button**
4. **Label**

➤ Form Methods

1. **reset()**-this method of form object is used to reset a form.

Event name=onreset()

2. **submit()**- this method of form object is used to submit a form.

Event name=onsubmit()

3.1.2 Button Element

➤ In HTML following are three types of buttons that we create using **<input>** element:

1. Submit
2. Reset
3. Button

➤ Attributes

Attribute	Value	Explanation
Type=" "	button submit reset	Creates a general purpose push button.
value=" "	Button text	Value is the text displayed on the button
name=" "	field name	The field name is used to identify the form field.

➤ Example- `<input type="Submit" value="Send">`

Activate Windows
Go to Settings to activate Windows.

3.1.3 Text

- INPUT element defines an input field. A textbox is created by specifying the type attribute to “text”.
- Attributes

Attribute	Value	Explanation
Type=“ ”	text	It creates a textbox on form.
value=“ ”	Initial value	Initial text displayed in the input field.
name=“ ”	field name	The field name is used to identify the form field.
size=“ ”	Number of characters	The input field width is specified by the number of characters
maxlength=“ ”	Number of characters	Specifies the maximum number of characters allowed in the input field.

3.1.4 TextArea

- The TEXTAREA element defines a multi-line text area
- Attributes

Attribute	Value	Explanation
name=" "	field name	The field name is used to identify the form field.
cols=" "	Number	specifies the number of visible columns in the text area
rows=" "	Number	specifies the number of visible rows in the text area.
wrap=" "	hard	the input text is wrapped (and submitted text contains line breaks)
	soft	the input text is wrapped (but submitted text doesn't contains line breaks)
	off	The input text is not wrapped.

3.1.5 Checkbox

- INPUT element defines an input field. When we specify “checkbox” for the type attribute of this element ,a checkbox is created.
- Attributes

Attribute	Value	Explanation
Type=“ ”	checkbox	It creates a checkbox on form.
name=“ ”	field name	The field name is used to identify the form field. several checkboxes share same name.
value=“ ”	Initial value	The value is submitted to the server when selected.
checked	checked	The checkbox is checked in the initial state.

3.1.6 Radio Button

- INPUT element defines an input field. When we specify “radio” for the type attribute of this element ,a radio is created.
- Attributes

Attribute	Value	Explanation
Type=“ ”	radio	It creates a radio button on form.
name=“ ”	field name	The field name is used to identify the form field. several radio button share same name , but only one can be selected.
value=“ ”	Initial value	The value is submitted to the server when selected.
checked	checked	The button is checked in the initial state.

3.1.7 Select Element

- The **SELECT** element defines a selectable list , and the **OPTION** element is used to define a list item.

Attribute	Value	Explanation
Attributes of SELECT		
name=" "	field name	The field name is used to identify the form field.
size=" "	number	Specifies the number of visible items in the list
multiple	multiple	Multiple item can be selected at a time. Use shift and ctrl key to select multiple items.
Attributes of OPTION		
value=" "	Initial value	The value is submitted to the server when selected.
selected	selected	The item is selected in the initial state.

3.2 Form Events

- There are following four events that can be used to trigger any JavaScript code when there is an event occurs on form level.

Event Name	Description
onchange	JavaScript runs this event when an element changes.
onselect	JavaScript runs this event when an element is selected.
onblur	JavaScript runs this event when an element loses focus.
onfocus	JavaScript runs this event when an element gets focus

3.2.1 Mouse Events

- The object mouse has numerous events associated with it which depends on the user's actions.
- There are following 7 events which are generated by mouse when it comes in contact of any HTML tag.

Event Name	Description
onclick	JavaScript runs when a mouse click.
ondblclick	JavaScript runs when a mouse double click.
oncontextmenu	JavaScript runs when a user right click on an element to open context menu.
onmousedown	JavaScript runs when mouse button is pressed.
onmousemove	JavaScript runs when mouse pointer moves.
onmouseout	JavaScript runs when mouse pointer moves out of an element .
onmouseover	JavaScript runs when mouse pointer moves over an element .
onmouseup	JavaScript runs when mouse button is released.

3.2.2 Key Events

Event Name	Description
onkeydown	JavaScript runs this event when key is pressed.
onkeypress	JavaScript runs this event when key is pressed and released.
onkeyup	JavaScript runs this event when key is released.

3.3 form objects and Elements

- Web page is a collection of various elements including **window** as a first element.
- A window contains an HTML document which is known as **document** object.
- The object are represented as hierarchical order:
 1. Window object
 2. Document object
 3. Form object
 4. Form control elements
- Example

window.document.forms.invoice

14 15 16 inner html 17

3.4 Changing Attribute Value Dynamically

- We can change the value of any form elements dynamically.
- **Onchange event:**
- It executes a JavaScript when a user changes the value of an element.

Manipulating Form Elements

Intrinsic Function

Enable or Disable Element

ReadOnly Element