Experiment 6-HTML Form

COURSE OUTCOMES:

CO1 : Build interactive web pages using program flow control structure.
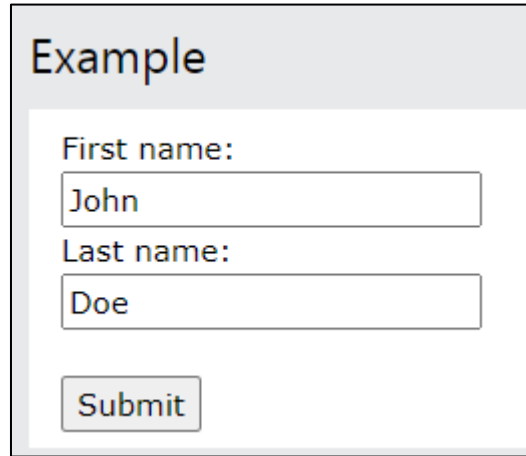
CO2 : Implement Arrays , functions and create event based web forms using Java Script.

CO3 : Use JavaScript for browser data persistence.

CO4 : Create menus, navigation in interactive webpages using regular expressions for validations.

HTML Forms:

An HTML form is used to collect user input. The user input is most often sent to a server for processing.

Example

First name:

John

Last name:

Doe

Submit

The <form> Element

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

Label tag:

The <label> tag defines a label for several elements:

Attributes

Attribute	Value	Description
for	*element_id*	Specifies the id of the form element the label should be bound to
form	*form_id*	Specifies which form the label belongs to

Text Fields

The <input type="text"> defines a single-line input field for text input.

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

This is how the HTML code above will be displayed in a browser:

First name:

[   ]

Last name:

[   ]

Note: The default width of an input field is 20 characters.

HTML Name attribute:

- The name attribute specifies the name of an <input> element.
- The name attribute is used to reference elements in a JavaScript, or to reference form data after a form is submitted.

HTML id Attribute:

- The id attribute specifies a unique id for an HTML element (the value must be unique within the HTML document).

- The id attribute is most used to point to a style in a style sheet, and by JavaScript (via the HTML DOM) to manipulate the element with the specific id.

The id Attribute

- The id attribute is a unique identifier of the HTML element. Each id attribute must be unique. Also, this attribute must begin with a letter and is case sensitive.

- In CSS, the id attribute is referenced with the # character. In Javascript, it is referenced with getElementById().

The name Attribute

- The name attribute defines a name of the element. It is used in the HTTP request that is sent to the server as a variable name by the browser.
- This attribute is associated with the data within the element.
- Like the id attribute, the name attribute must begin with a letter and is case sensitive, but unlike the id attribute, it can be not unique.
- The name attribute cannot be referenced in CSS. In Javascript, it is referenced with getElementsByName().

The for attribute of the <label> tag should be equal to the id attribute of the <input> element to bind them together.

HTML \<input\> value Attribute

Example

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

Definition and Usage

The value attribute specifies the value of an \<input\> element.

The value attribute is used differently for different input types:

- For "button", "reset", and "submit" - it defines the text on the button
- For "text", "password", and "hidden" - it defines the initial (default) value of the input field
- For "checkbox", "radio", "image" - it defines the value associated with the input (this is also the value that is sent on submit)

HTML <input type="password">

The <input type="password"> defines a password field (characters are masked).

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

Email:

Password: •••••••••

Submit

HTML <input type="file">

- The <input type="file"> defines a file-select field and a "Browse" button for file uploads.

- To define a file-select field that allows multiple files to be selected, add the multiple attribute.

```html
<label for="myfile">Select a file:</label>
<input type="file" id="myfile" name="myfile">
```

Multiple file

```
<h1>Show File-select Fields</h1>

<h3>Show a file-select field which allows only one file to be
chosen:</h3>
<form action="/action_page.php">
  <label for="myfile">Select a file:</label>
  <input type="file" id="myfile" name="myfile"><br><br>
  <input type="submit">
</form>

<h3>Show a file-select field which allows multiple files:</h3>
<form action="/action_page.php">
  <label for="myfile">Select files:</label>
  <input type="file" id="myfile" name="myfile" multiple><br><br>
  <input type="submit">
</form>
```

Show File-select Fields

Show a file-select field which allows only one file to be chosen:

Select a file: [Choose File] No file chosen

[Submit]

Show a file-select field which allows multiple files:

Select files: [Choose Files] No file chosen

[Submit]

HTML <input type="date">

- The <input type="date"> defines a date picker.

- The resulting value includes the year, month, and day.

```
<label for="birthday">Birthday:</label>
<input type="date" id="birthday" name="birthday">
```

Show a Date Control

Birthday: [mm/dd/yyyy 📅] [Submit]

Radio Buttons:

The <input type="radio"> defines a radio button.

Radio buttons let a user select ONE of a limited number of choices.

Example

```
<p>Choose your favorite Web language:</p>
<form>
  <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>
```

OUTPUT

Choose your favorite Web language:

○ HTML
○ CSS
○ JavaScript

Checkboxes:

The <input type="checkbox"> defines a checkbox.

Checkboxes let a user select ZERO or MORE options of a limited number of choices.

```html
<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>
</form>
```

This is how the HTML code above will be displayed in a browser:

☐ I have a bike
☐ I have a car
☐ I have a boat

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

This is how the HTML code above will be displayed in a browser:

First name:

John

Last name:

Doe

Submit

The <select> Element:

The <select> element defines a drop-down list:

```
<label for="cars">Choose a car:</label>
<select id="cars" name="cars">
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
```

- The <option> elements defines an option that can be selected.

- By default, the first item in the drop-down list is selected.

- To define a pre-selected option, add the selected attribute to the option:

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

Visible Values:

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

```
<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>
```

Visible Option Values

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

Choose a car:

```
Volvo ▲
Saab  ▓
Fiat  ▼
```

Submit

Allow Multiple Selections:

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

```
<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 <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>
```

Textarea

The textarea element defines a multi-line input field.

```
The cat was playing in the
garden.




```

Submit

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

The <button> Element

The <button> element defines a clickable button:

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

This is how the HTML code above will be displayed in a browser:

Click Me!

The <fieldset> and <legend> Elements

- The <fieldset> element is used to group related data in a form.

- The <legend> element defines a caption for the <fieldset> element.

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

This is how the HTML code above will be displayed in a browser:

Personalia:

First name:

John

Last name:

Doe

Submit

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.

```
<form action="/action_page.php">
 <input list="browsers">
 <datalist id="browsers">
   <option value="Internet Explorer">
   <option value="Firefox">
   <option value="Chrome">
   <option value="Opera">
   <option value="Safari">
 </datalist>
</form>
```

The datalist Element

The datalist element specifies a list of pre-defined options for an input element.

[_____] Submit

[_____ ▼] Submit

Note: The [Internet Explorer   ] pported in Safari prior version 12.1.

Firefox

Chrome

Opera

Safari

The datalist element

Choose your browser from the list: [chr_____ ▼] Submit

Note: The datalist tag is not supported in Safa Chrome

<input type="color">

The <input type="color"> is used for input fields that should contain a color.
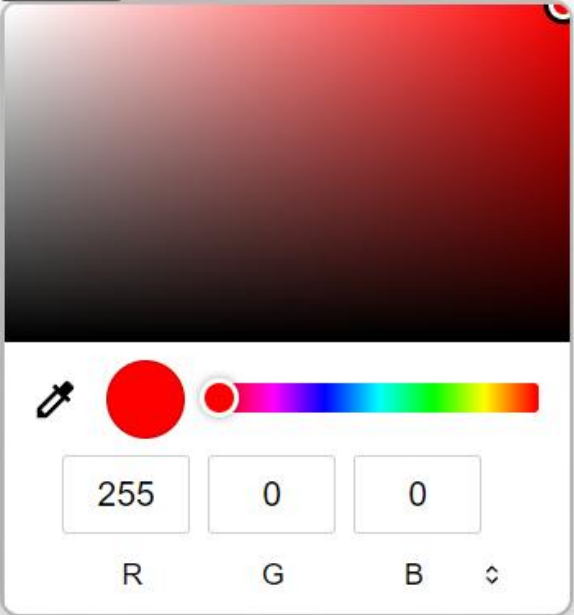
```
<form>
  <label for="favcolor">Select your favorite color:</label>
  <input type="color" id="favcolor" name="favcolor">
</form>
```

The default value is #000000 (black).
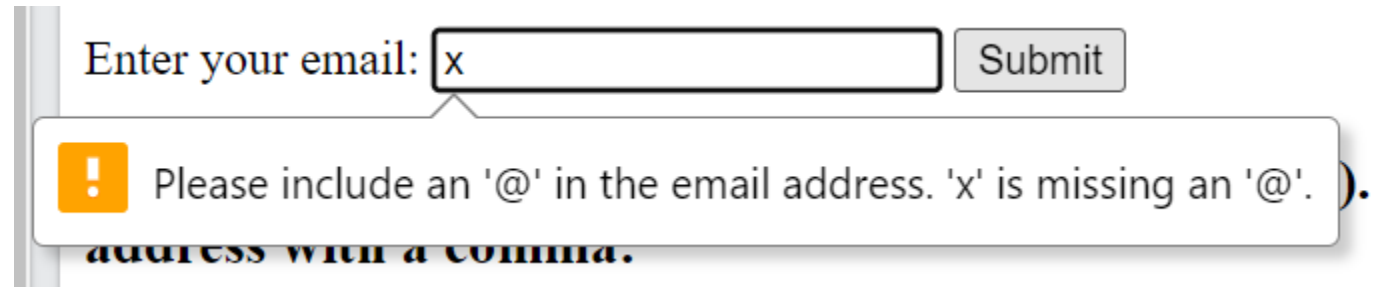The value must be in seven-character
hexadecimal notation.

Show a Color Picker

Select your favorite color:

Submit

255   0   0

R   G   B

<input type="email">

Define a field for an e-mail address (validates automatically when submitted):

```html
<label for="email">Enter your email:</label>
<input type="email" id="email" name="email">
```

Enter your email: x   Submit

⚠ Please include an '@' in the email address. 'x' is missing an '@'.).

address with a comma.

To define an e-mail field that allows multiple e-mail addresses, add the "multiple" attribute.

<input type="hidden">

The <input type="hidden"> defines a hidden input field.

A hidden field lets web developers include data that cannot be seen or modified by users when a form is submitted.

```
<form action="/action_page.php">
  <label for="fname">First name:</label>
  <input type="text" id="fname" name="fname"><br><br>
  <input type="hidden" id="custId" name="custId" value="3487">
  <input type="submit" value="Submit">
</form>
```

<input type="image">

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

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

```
<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="image" src="img_submit.gif" alt="Submit" width="48" height="48">
</form>
```

First name: [   ]

Last name: [   ]

<input type="month">

- The <input type="month"> defines a month and year control.

- The format is "YYYY-MM".

```
<form action="/action_page.php">
  <label for="bdaymonth">Birthday (month and year):</label>
  <input type="month" id="bdaymonth" name="bdaymonth">
  <input type="submit">
</form>
```

Birthday (month and year): `February, 2023` 📅 | Submit |

<input type="number">

The <input type="number"> defines a field for entering a number.

<label for="quantity">Quantity (between 1 and 5):</label>
<input type="number" id="quantity" name="quantity" min="1" max="5">

Quantity (between 1 and 5): 8   ◆   Submit

! Value must be less than or equal to 5.

Use the following attributes to specify restrictions:

•max - specifies the maximum value allowed
•min - specifies the minimum value allowed
•step - specifies the legal number intervals

```
<form action="/action_page.php">
  <label for="points">Points:</label>
  <input type="number" id="points" name="points" step="3">
  <input type="submit">
</form>
```

The step attribute specifies the interval between legal numbers in an <input> element.

Example: if step="3", legal numbers could be -3, 0, 3, 6, etc.

<input type="range">

The <input type="range"> defines a control for entering a number whose exact value is not important (like a slider control).

```
<form action="/action_page.php">
  <label for="vol">Volume (between 0 and 50):</label>
  <input type="range" id="vol" name="vol" min="0" max="50">
  <input type="submit">
</form>
```

Volume (between 0 and 50): Submit

<input type="tel">

<form action="/action_page.php">
 <label for="phone">Enter a phone number:</label>

 <input type="tel" id="phone" name="phone" placeholder="123-45-6789" pattern="[0-9]{3}-[0-9]{2}-[0-9]{4}" required>

 <small>Format: 123-45-678</small>

 <input type="submit">
</form>

Practice Example 1:

My feedback form

- Name: [   ]
- Email: [   ]
- Password: [   ]

- Please check all the emotions that apply to you:
    - Angry ☑
    - Sad ☐
    - Happy ☐
    - Ambivalent ☐
- How satisfied were you with our service?
    - Very satisfied ◉
    - Satisfied ○
    - Didn't care ○
    - Dissatisfied ○
    - Very dissatisfied ○

- Further comments: [   ]

- Bio photo: [   ] (Choose…)
- Location visited: [Select location ⇕]

- (submit)

Practice Example 2:

┌─ Customer ──────────────────────────────────────┐
│   │
│   Name*   [_____]   │
│   │
│   Email*   [_____] │
│   │
│   Investment   [_____▼]   │
│   │
│   Date Joined*   [_____] 📅   │
│   │
│   Active   ☐   │
│   │
└──┘

[OK]   [Cancel]

Practice Example 3:

Name	Value
Name	
Sex	○ Male ● Female
Eye color	green ▾
Check all that apply	☐ Over 6 feet tall ☐ Over 200 pounds
Describe your athletic ability:	
	Enter my information

Thank You!