

Web Technology Lab Manual

BCA V SEM
SCHOOL OF COMPUTER APPLICATIONS



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PART A – HTML Programs (Static Web Pages)

1. Design a Home Page for an Online Book Store using frames:
 - Divide the page into three frames (top, left, right)
 - Top Frame: Display site title and navigation links (Home, Login, Registration, Catalogue)
 - Left Frame: Display category links (e.g., CSE, ECE, EEE)
 - Right Frame: Display default welcome message or contents loaded via left frame links
 - Use <frameset> and <frame> tags.

left.html

```
<html>
<head>
    <title>Left Frame</title>
</head>
<body style="background-color:#e0e0e0; font-family:Arial;">
    <h3>Categories</h3>
    <a href="cse.html" target="rightFrame">CSE</a><br>
    <a href="ece.html" target="rightFrame">ECE</a><br>
    <a href="eee.html" target="rightFrame">EEE</a>
</body>
</html>
```

Right.html

```
<html>
<head>
    <title>Right Frame</title>
</head>
<body style="font-family:Arial;">
    <h2>Welcome to the Online Book Store</h2>
    <p>Select a category from the left or use the menu above to explore more options.</p>
</body>
</html>
```

top.html

```
<html>
<head>
    <title>Top Frame</title>
</head>
<body style="text-align:center; background-color:#f0f0f0; font-family:Arial;">
    <h2>Online Book Store</h2>
    <a href="right.html" target="rightFrame">Home</a> | 
    <a href="login.html" target="rightFrame">Login</a> | 
    <a href="register.html" target="rightFrame">Registration</a> | 
    <a href="catalogue.html" target="rightFrame">Catalogue</a>
</body>
</html>
```

index.html

```
<html>
<head>
    <title>Online Book Store</title>
</head>
<!-- Divide the page into frames --&gt;
&lt;frameset rows="20%,80%"&gt;
    &lt;!-- Top frame for site title and navigation --&gt;
    &lt;frame src="top.html" name="topFrame"&gt;
    &lt;!-- Remaining area is divided into left and right frames --&gt;
    &lt;frameset cols="25%,75%"&gt;
        &lt;!-- Left frame for category links --&gt;
        &lt;frame src="left.html" name="leftFrame"&gt;
            &lt;!-- Right frame for displaying content --&gt;
            &lt;frame src="right.html" name="rightFrame"&gt;
    &lt;/frameset&gt;
&lt;/frameset&gt;
&lt;/html&gt;</pre>
```

OUTPUT:

The screenshot displays the output of the provided HTML code. At the top, there is a header bar with the title "Online Book Store" and navigation links for "Home | Login | Registration | Catalogue". Below this, the page is divided into three frames. The top frame contains the header and navigation. The left frame, titled "Categories", lists "CSE", "ECE", and "EEE". The right frame, titled "Welcome to the Online Book Store", displays a message: "Select a category from the left or use the menu above to explore more options.".

2. Create a Login Page using HTML Forms:

- Use `<form>` tag to collect Username and Password
- Include Submit and Reset buttons
- Use proper `<input>` types (text, password)
- Align the form using `<table>` or `<div>` tags.

```
<html>
<head>
    <title>Login Page</title>
</head>
<body>
    <h2 align="center">Login Page</h2>

    <form action="login_process.html" method="post">
        <table align="center" cellpadding="10" border="1">
            <tr>
                <td><label for="username">Username:</label></td>
                <td><input type="text" id="username" name="username" required></td>
            </tr>
            <tr>
                <td><label for="password">Password:</label></td>
                <td><input type="password" id="password" name="password" required></td>
            </tr>
            <tr>
                <td colspan="2" align="center">
                    <input type="submit" value="Login">
                    <input type="reset" value="Reset">
                </td>
            </tr>
        </table>
    </form>
</body>
</html>
```

OUTPUT:**Login Page**

Username:	<input type="text"/>
Password:	<input type="password"/>
<input type="button" value="Login"/> <input type="button" value="Reset"/>	

3. Design a Registration Page using HTML Forms:

- Include fields: First Name, Last Name, Email, Password, Gender (radio), Address (textarea), Phone Number, Date of Birth (select boxes), Languages Known (checkboxes)
- Use `<form>` tag with proper structure and validations through HTML attributes (like 'required').

```
<html>
<head>
    <title>Registration Page</title>
</head>
<body>
    <h2 align="center">Registration Form</h2>
    <form action="submit_registration.html" method="post">
        <table align="center" cellpadding="10" border="1">
            <tr>
                <td><label for="fname">First Name:</label></td>
                <td><input type="text" id="fname" name="fname" required></td>
            </tr>
            <tr>
                <td><label for="lname">Last Name:</label></td>
                <td><input type="text" id="lname" name="lname" required></td>
            </tr>
            <tr>
                <td><label for="email">Email:</label></td>
                <td><input type="email" id="email" name="email" required></td>
            </tr>
            <tr>
                <td><label for="password">Password:</label></td>
                <td><input type="password" id="password" name="password" required></td>
            </tr>
            <tr>
                <td>Gender:</td>
                <td>
                    <input type="radio" name="gender" value="Male" required> Male
                    <input type="radio" name="gender" value="Female"> Female
                    <input type="radio" name="gender" value="Other"> Other
                </td>
            </tr>
            <tr>
                <td><label for="address">Address:</label></td>
                <td><textarea id="address" name="address" rows="4" cols="30" required></textarea></td>
            </tr>
            <tr>
                <td><label for="phone">Phone Number:</label></td>
                <td><input type="tel" id="phone" name="phone" pattern="[0-9]{10}" required placeholder="10-digit number"></td>
            </tr>
            <tr>
                <td>Date of Birth:</td>
```

```
<td>
    <select name="day" required>
        <option value="">Day</option>
        <!-- Days 1 to 31 -->
        <script>
            for (let i = 1; i <= 31; i++) {
                document.write('<option value="' + i + '">' + i + '</option>');
            }
        </script>
    </select>
    <select name="month" required>
        <option value="">Month</option>
        <option value="Jan">Jan</option>
        <option value="Feb">Feb</option>
        <option value="Mar">Mar</option>
        <option value="Apr">Apr</option>
        <option value="May">May</option>
        <option value="Jun">Jun</option>
        <option value="Jul">Jul</option>
        <option value="Aug">Aug</option>
        <option value="Sep">Sep</option>
        <option value="Oct">Oct</option>
        <option value="Nov">Nov</option>
        <option value="Dec">Dec</option>
    </select>
    <select name="year" required>
        <option value="">Year</option>
        <!-- Years 1980 to 2020 -->
        <script>
            for (let y = 1980; y <= 2020; y++) {
                document.write('<option value="' + y + '">' + y + '</option>');
            }
        </script>
    </select>
</td>
</tr>

<tr>
    <td>Languages Known:</td>
    <td>
        <input type="checkbox" name="lang" value="English"> English
        <input type="checkbox" name="lang" value="Kannada"> Kannada
        <input type="checkbox" name="lang" value="Hindi"> Hindi
        <input type="checkbox" name="lang" value="Other"> Other
    </td>
</tr>
<tr>
    <td colspan="2" align="center">
        <input type="submit" value="Register">
        <input type="reset" value="Reset">
    </td>
```

```
</tr>
</table>
</form>
</body>
</html>
```

OUTPUT:

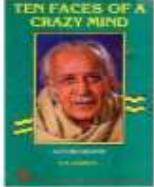
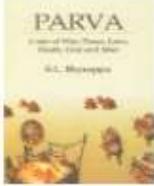
Registration Form

First Name:	<input type="text"/>
Last Name:	<input type="text"/>
Email:	<input type="text"/>
Password:	<input type="text"/>
Gender:	<input type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Other
Address:	<input type="text"/>
Phone Number:	<input type="text"/> 10-digit number
Date of Birth:	<input type="button" value="Day"/> <input type="button" value="Month"/> <input type="button" value="Year"/>
Languages Known:	<input type="checkbox"/> English <input type="checkbox"/> Kannada <input type="checkbox"/> Hindi <input type="checkbox"/> Other
<input type="button" value="Register"/> <input type="button" value="Reset"/>	

4. Develop a Catalogue Page to display book listings with a table:
- Use `<table>` tag with headers: Book Image, Title, Author, Price, and 'Add to Cart' button
 - Use `` tag for book covers
 - Use `<input type='button'>` for the cart

```
<html>
<head>
    <title>Book Catalogue</title>
</head>
<body>
    <h2>Book Catalogue</h2>
    <table border="1" cellpadding="10">
        <tr>
            <th>Book Image</th>
            <th>Title</th>
            <th>Author</th>
            <th>Price</th>
            <th>Add to Cart</th>
        </tr>
        <tr>
            <td></td>
            <td>Think about these Things</td>
            <td>Jiddu Krishnamurthy</td>
            <td>₹300</td>
            <td><input type="button" value="Add to Cart"></td>
        </tr>
        <tr>
            <td></td>
            <td>Ten faces of a crazy mind</td>
            <td>Shivram Karanth</td>
            <td>₹450</td>
            <td><input type="button" value="Add to Cart"></td>
        </tr>
        <tr>
            <td></td>
            <td>Parva</td>
            <td>S L Bhayrappa</td>
            <td>₹250</td>
            <td><input type="button" value="Add to Cart"></td>
        </tr>
    </table>
</body>
</html>
```

OUTPUT:**Book Catalogue**

Book Image	Title	Author	Price	Add to Cart
	Think about these Things	Jiddu Krishnamurthy	₹300	<input type="button" value="Add to Cart"/>
	Ten faces of a crazy mind	Shivram Karanth	₹450	<input type="button" value="Add to Cart"/>
	Parva	S L Bhayrappa	₹250	<input type="button" value="Add to Cart"/>

5. Create a Shopping Cart Page using HTML Tables:

- Use <table> to display items in cart with columns: Book Name, Price, Quantity, Amount
- Add a final row to show the total amount
- Align data centrally using appropriate attributes.

```

<!DOCTYPE html>
<html>
<head>
    <title>Shopping Cart</title>
</head>
<body>
    <h2 align="center">Shopping Cart</h2>

    <table border="1" align="center" cellpadding="10">
        <tr>
            <th>Book Name</th>
            <th>Price (₹)</th>
            <th>Quantity</th>
            <th>Amount (₹)</th>
        </tr>

        <tr align="center">
            <td>HTML Made Easy</td>
            <td>300</td>
            <td>2</td>
            <td>600</td>
        </tr>
    </table>
</body>

```

```
<td>600</td>
</tr>

<tr align="center">
<td>Learning JavaScript</td>
<td>450</td>
<td>1</td>
<td>450</td>
</tr>
<tr align="center">
<td>Web Design Basics</td>
<td>250</td>
<td>3</td>
<td>750</td>
</tr>
<!-- Total Row -->
<tr align="center">
<td colspan="3"><strong>Total Amount</strong></td>
<td><strong>₹1800</strong></td>
</tr>
</table>
</body>
</html>
```

OUTPUT:

Shopping Cart

Book Name	Price (₹)	Quantity	Amount (₹)
HTML Made Easy	300	2	600
Learning JavaScript	450	1	450
Web Design Basics	250	3	750
Total Amount			₹1800

6. Create a Time Table for your class using HTML Tables:

- Columns: Days (Mon-Sat), Periods (I to VII)
- Include breaks using rowspan/colspan
- Use <table>, <tr>, <th>, and <td> appropriately.

```
<html>
<head>
    <title>Class Time Table</title>
</head>
<body>
    <h2 align="center">Class Time Table</h2>

    <table border="1" align="center" cellpadding="10">
        <tr>
            <th>Period</th>
            <th>Monday</th>
            <th>Tuesday</th>
            <th>Wednesday</th>
            <th>Thursday</th>
            <th>Friday</th>
            <th>Saturday</th>
        </tr>

        <tr align="center">
            <td>I (9:00-10:00)</td>
            <td>Math</td>
            <td>English</td>
            <td>Physics</td>
            <td>Math</td>
            <td>Computer</td>
            <td>English</td>
        </tr>

        <tr align="center">
            <td>II (10:00-11:00)</td>
            <td>English</td>
            <td>Physics</td>
            <td>Math</td>
            <td>Computer</td>
            <td>English</td>
            <td>Physics</td>
        </tr>

        <tr align="center">
            <td>III (11:00-12:00)</td>
            <td>Computer</td>
            <td>Math</td>
            <td>English</td>
            <td>Physics</td>
            <td>Math</td>
        </tr>
    </table>
</body>
</html>
```

```
<td>Computer</td>
</tr>

<!-- Break Row -->
<tr align="center">
    <td colspan="7"><strong>Lunch Break (12:00 - 1:00)</strong></td>
</tr>

<tr align="center">
    <td>IV (1:00-2:00)</td>
    <td>Physics</td>
    <td>Computer</td>
    <td>Math</td>
    <td>English</td>
    <td>Physics</td>
    <td>--</td>
</tr>

<tr align="center">
    <td>V (2:00-3:00)</td>
    <td>English</td>
    <td>Math</td>
    <td>Computer</td>
    <td>Math</td>
    <td>Computer</td>
    <td>--</td>
</tr>

<tr align="center">
    <td>VI (3:00-4:00)</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>--</td>
</tr>

<tr align="center">
    <td>VII (4:00-5:00)</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>Lab</td>
    <td>--</td>
</tr>
</table>
</body>
</html>
```

OUTPUT:**Class Time Table**

Period	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
I (9:00-10:00)	Math	English	Physics	Math	Computer	English
II (10:00-11:00)	English	Physics	Math	Computer	English	Physics
III (11:00-12:00)	Computer	Math	English	Physics	Math	Computer
Lunch Break (12:00 - 1:00)						
IV (1:00-2:00)	Physics	Computer	Math	English	Physics	--
V (2:00-3:00)	English	Math	Computer	Math	Computer	--
VI (3:00-4:00)	Lab	Lab	Lab	Lab	Lab	--
VII (4:00-5:00)	Lab	Lab	Lab	Lab	Lab	--



7. Develop a Web Page using Ordered, Unordered and Definition Lists:

- Use ``, ``, ``, and `<dl>`, `<dt>`, `<dd>`
- Provide appropriate headings and content for each list type
- Include at least one nested list.

```
<html>
<head>
    <title>List Example Page</title>
</head>
<body>
    <h2>1. Ordered List - Steps to Create a Web Page</h2>
    <ol>
        <li>Open Notepad</li>
        <li>Write HTML Code</li>
        <li>Save with .html extension</li>
        <li>Open in Web Browser</li>
    </ol>

    <h2>2. Unordered List - Web Development Tools</h2>
    <ul>
        <li>VS Code</li>
        <li>Notepad++</li>
        <li>Brackets</li>
        <li>Sublime Text</li>
    </ul>

    <h2>3. Nested List - Web Technologies</h2>
    <ul>
        <li>Frontend
            <ul>
                <li>HTML</li>
                <li>CSS</li>
                <li>JavaScript</li>
            </ul>
        </li>
        <li>Backend
            <ul>
                <li>PHP</li>
                <li>Python</li>
                <li>Node.js</li>
            </ul>
        </li>
    </ul>

    <h2>4. Definition List - HTML Terminology</h2>
    <dl>
        <dt>HTML</dt>
        <dd>HyperText Markup Language used to create web pages.</dd>
        <dt>CSS</dt>
```

```
<dd>Cascading Style Sheets used for designing web pages.</dd>  
  
<dt>JavaScript</dt>  
<dd>A scripting language used to make web pages interactive.</dd>  
</dl>  
</body>  
</html>
```

OUTPUT:**1. Ordered List - Steps to Create a Web Page**

1. Open Notepad
2. Write HTML Code
3. Save with .html extension
4. Open in Web Browser

2. Unordered List - Web Development Tools

- VS Code
- Notepad++
- Brackets
- Sublime Text

3. Nested List - Web Technologies

- Frontend
 - HTML
 - CSS
 - JavaScript
- Backend
 - PHP
 - Python
 - Node.js

4. Definition List - HTML Terminology**HTML**

HyperText Markup Language used to create web pages.

CSS

Cascading Style Sheets used for designing web pages.

JavaScript

A scripting language used to make web pages interactive.

8. Create a Navigation Web Page using Hyperlinks (internal and external):
- Use [tag to create links](#)
 - Include one internal (within the page using #id) and one external (another file) link
 - Apply link styling using 'alink', 'vlink', and 'link' attributes.

```
<html>
<head>
    <title>Navigation Page</title>
</head>
<body link="blue" alink="red" vlink="green">

    <h2>Welcome to My Navigation Page</h2>

    <!-- External Link -->
    <p>
        Visit <a href="https://www.google.com" target="_blank">Google</a>
    (External Link)
    </p>

    <!-- Internal Link -->
    <p>
        Go to <a href="G:\PHONES\MEMORIES\Twitter\CH.jpg">Section 2</a>
    (Internal Link)
    </p>

    <hr>

    <!-- Some Content -->
    <h3 id="section1">Section 1: About Google</h3>
    <p>This is the first section of the page. It talks about web browser google.</p>

    <h3 id="section2">Section 2: My Projects</h3>
        <p>This section includes information about my Favourite cartoon.</p>

</body>
</html>
```

OUTPUT:

Welcome to My Navigation Page

Visit [Google](#) (External Link)

Go to [Section 2](#) (Internal Link)

Section 1: About Google

This is the first section of the page. It talks about web browser google

Section 2: My Projects

This section includes information about my favourite cartoon.



PART B – JavaScript Programs (Dynamic Interaction)

1. Validate Registration Form using JavaScript:

- Validate: Name (min 6 chars, alphabets only), Email (standard pattern), Phone (10 digits), Password (min 6 chars), Empty check for Address
- Use alert to show error messages
- Trigger on form submission.

```
<!DOCTYPE html>
<html>
<head>
<title>Registration Form Validation</title>
<script>
function validateForm() {
    var name = document.forms["regForm"]["name"].value;
    var email = document.forms["regForm"]["email"].value;
    var phone = document.forms["regForm"]["phone"].value;
    var password = document.forms["regForm"]["password"].value;
    var address = document.forms["regForm"]["address"].value;

    // Name validation (min 6 chars, alphabets only)
    var namePattern = /^[A-Za-z]{6,}$/;
    if (!namePattern.test(name)) {
        alert("Name must be at least 6 characters long and contain only alphabets.");
        return false;
    }

    // Email validation
    var emailPattern = /^[^ ]+@[^ ]+\.[a-z]{2,3}$/;
    if (!emailPattern.test(email)) {
        alert("Enter a valid email address.");
        return false;
    }

    // Phone number validation (10 digits)
    var phonePattern = /^[0-9]{10}$/;
    if (!phonePattern.test(phone)) {
        alert("Phone number must be exactly 10 digits.");
        return false;
    }

    // Password validation (min 6 chars)
    if (password.length < 6) {
        alert("Password must be at least 6 characters long.");
        return false;
    }

    // Address empty check
    if (address.trim() === "") {
        alert("Address cannot be empty.");
        return false;
    }

    // All validations passed
}
```

```
        alert("Form submitted successfully!");
        return true;
    }
</script>
</head>
<body>
<h2>Registration Form</h2>
<form name="regForm" onsubmit="return validateForm()">
    Name: <input type="text" name="name"><br><br>
    Email: <input type="text" name="email"><br><br>
    Phone: <input type="text" name="phone"><br><br>
    Password: <input type="password" name="password"><br><br>
    Address:<br>
    <textarea name="address" rows="4" cols="30"></textarea><br><br>
    <input type="submit" value="Register">
</form>
</body>
</html>
```

OUTPUT:**Registration Form**

Name:

Email:

Phone:

Password:

Address:

Registration Form

Name:

Email:

Phone:

Password:

Address:

This page says
Name must be at least 6 characters long and contain only alphabets.

2. Validate Login Form using JavaScript:

- Validate Username and Password fields (non-empty, basic length check)
- Show error if any field is empty
- Use 'onsubmit' or button 'onclick' for validation.

```
<!DOCTYPE html>
<html>
<head>
<title>Login Validation</title>
<script>
function validateLoginForm() {
    var username = document.getElementById("username").value;
    var password = document.getElementById("password").value;

    if (username === "") {
        alert("Please enter your username.");
        return false;
    }
    if (username.length < 4) {
        alert("Username must be at least 4 characters.");
        return false;
    }
    if (password === "") {
        alert("Please enter your password.");
        return false;
    }
    if (password.length < 6) {
        alert("Password must be at least 6 characters.");
        return false;
    }

    alert("Login Successful!");
    return true;
}
</script>
</head>
<body>
<h2>Login Form</h2>
<form>
<label>Username:</label>
<input type="text" id="username"><br><br>

<label>Password:</label>
<input type="password" id="password"><br><br>

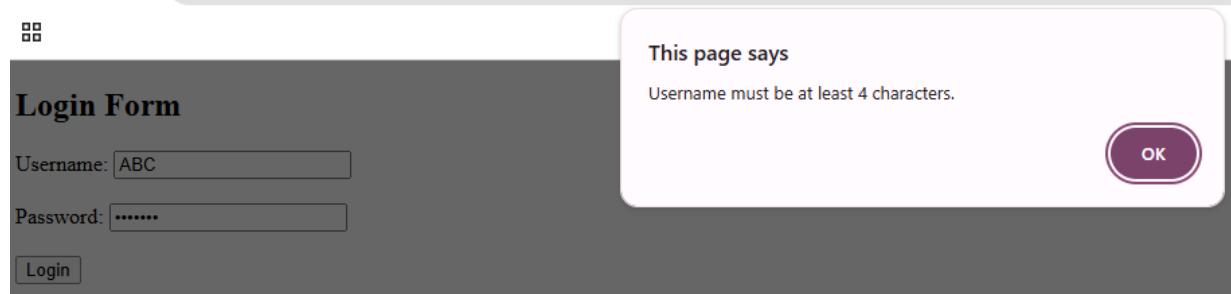
<button type="button" onclick="validateLoginForm()">Login</button>
</form>
</body>
</html>
```

OUTPUT:

Login Form

Username:

Password:



3. Use JavaScript to display current Date and Time in a text box:

- Create an <input> of type text
- Add a button to trigger JavaScript function
- Use new Date() to get current date and time and display in textbox.

```
<!DOCTYPE html>
<html>
<head>
    <title>Show Date and Time</title>
    <script>
        function showDateTime() {
            var current = new Date(); // Get current date and time
            document.getElementById("datetimeBox").value = current;
        }
    </script>
</head>
<body>
    <h2>Display Current Date and Time</h2>

    <input type="text" id="datetimeBox" size="40" readonly>
    <br><br>
    <button onclick="showDateTime()">Show Date & Time</button>

</body>
</html>
```

OUTPUT:

Display Current Date and Time

Thu Aug 07 2025 15:26:03 GMT+0530 (India Standard Time)

4. Create a JavaScript program to find factorial using prompt() and alert():

- Use prompt() to get user input
- Calculate factorial using loop
- Display result using alert().

```
<html>
<head>
    <title>Factorial using JavaScript</title>
    <script>
        function findFactorial() {
            var num = prompt("Enter a number:");
            // Get user input
            num = parseInt(num);
            // Convert to integer

            if (isNaN(num) || num < 0) {
                alert("Please enter a valid non-negative number.");
                return;
            }

            var fact = 1;
            for (var i = 1; i <= num; i++) {
                fact *= i;
            }

            alert("Factorial of " + num + " is: " + fact);
        }
    </script>
</head>
<body>
    <h2>Factorial Calculator</h2>
    <button onclick="findFactorial()">Find Factorial</button>
</body>
</html>
```

OUTPUT:

Factorial Calculator

Find Factorial



Factorial Calculator

Find Factorial



Factorial Calculator

Find Factorial

This page says

Enter a number:

5

OK

Cancel

OK

This page says

Factorial of 5 is: 120

5. Develop a script to display a multiplication table using JavaScript:

- Take a number input via `prompt()`
- Use loop to generate table (1 to 10)
- Display results using `alert()` or `<div>` with `innerHTML`.

```
<html>
<head>
    <title>Multiplication Table</title>
    <script>
        function showTable() {
            var num = prompt("Enter a number:");
            num = parseInt(num);

            if (isNaN(num)) {
                alert("Please enter a valid number.");
                return;
            }

            var result = "Multiplication Table of " + num + ":\n";
            for (var i = 1; i <= 10; i++) {
                result += num + " x " + i + " = " + (num * i) + "\n";
            }

            alert(result);
        }
    </script>
</head>
<body>
    <h2>Multiplication Table</h2>
    <button onclick="showTable()">Show Table</button>
</body>
</html>
```

OUTPUT:

Multiplication Table

Show Table



Multiplication Table

Show Table

This page says

Multiplication Table of 53:
53 x 1 = 53
53 x 2 = 106
53 x 3 = 159
53 x 4 = 212
53 x 5 = 265
53 x 6 = 318
53 x 7 = 371
53 x 8 = 424
53 x 9 = 477

OK

6. Create a simple calculator using JavaScript:

- Use <input> fields to get two numbers
- Add buttons for '+', '-', '*', '/'
- On button click, perform respective operation and show result using alert() or in a <div>.

```
<html>
<head>
    <title>Simple Calculator</title>
    <script>
        function calculate(op) {
            var num1 = parseFloat(document.getElementById("num1").value);
            var num2 = parseFloat(document.getElementById("num2").value);
            var result;

            if (isNaN(num1) || isNaN(num2)) {
                alert("Please enter valid numbers");
                return;
            }

            if (op === '+') {
                result = num1 + num2;
            } else if (op === '-') {
                result = num1 - num2;
            } else if (op === '*') {
                result = num1 * num2;
            } else if (op === '/') {
                if (num2 === 0) {
                    alert("Cannot divide by zero");
                    return;
                }
                result = num1 / num2;
            }

            document.getElementById("output").innerHTML = "Result: " + result;
        }
    </script>
</head>
<body>
    <h2>Simple Calculator</h2>
    <input type="text" id="num1" placeholder="Enter first number"> <br><br>
    <input type="text" id="num2" placeholder="Enter second number"> <br><br>

    <button onclick="calculate('+')">+</button>
    <button onclick="calculate('-')">-</button>
    <button onclick="calculate('*')">*</button>
    <button onclick="calculate('/')">/</button>

    <p id="output"></p>
</body>
</html>
```

OUTPUT:

Simple Calculator

Result: 9

7. Use JavaScript to display a message when a button is clicked (onclick):

- Create a button using <button> or <input type='button'>
- Use onclick event handler to display a custom message using alert() or innerHTML.

```
<html>
<head>
    <title>Button Click Message</title>
    <script>
        function showMessage() {
            alert("Hello! You clicked the button.");
        }
    </script>
</head>
<body>
    <h2>Click the Button</h2>
    <button onclick="showMessage()">Click Me</button>
</body>
</html>
```

OUTPUT:

Click the Button



Click the Button

This page says

Hello! You clicked the button.

OK

8. Create an Interactive Product Showcase Web Page"

Requirements:

HTML

- Display at least 3 products in a grid layout.
- Each product should have an image, name, price, and a short description.
- Add an "Add to Cart" button for each product.

CSS

- Style the layout to be visually appealing (use colors, borders, hover effects).
- Make the page responsive using simple media queries.

JavaScript

- When the "Add to Cart" button is clicked:
 - Display a message like "Product added to cart" (using alert() or dynamically in the page).
 - Keep track of the number of items in the cart and update a counter at the top of the page without refreshing.

```
<html>
<head>
    <title>Simple Product Showcase</title>
</head>
<body>
    <h1>Product Showcase</h1>
    <!-- Cart Count -->
    <p>Cart Items: <span id="cartCount">0</span></p>
    <!-- Product 1 -->
    <br>
    <b>Wireless Headphones</b><br>
    Price: $49.99<br>
    <button onclick="addToCart()">Add to Cart</button>
    <hr>
    <!-- Product 2 -->
    <br>
    <b>Smart Watch</b><br>
    Price: $89.99<br>
    <button onclick="addToCart()">Add to Cart</button>
    <hr>
    <!-- Product 3 -->
    <br>
    <b>Bluetooth Speaker</b><br>
    Price: $39.99<br>
    <button onclick="addToCart()">Add to Cart</button>
    <hr>
    <marquee behavior="scroll" direction="right">
        Happy Shopping!
    </marquee>
    <script>
        let cartCount = 0;
        function addToCart() {
            cartCount++; // increase count
            document.getElementById("cartCount").innerText = cartCount; // update on page
            alert("Product added to cart!");
        }
    </script>
</body>
</html>
```

OUTPUT:

Product Showcase

 Cart Items: 0**Wireless Headphones**

Price: \$49.99

[Add to Cart](#)**Smart Watch**

Price: \$89.99

[Add to Cart](#)**Bluetooth Speaker**

Price: \$39.99

[Add to Cart](#)

Happy Shopping!