

<b>Ex no:01</b>	<b>Create HTML Page with Lists, Tables, and Hyperlinks</b>
<b>Date:</b>	

**AIM:**

To design a basic website using HTML to demonstrate text formatting and image insertion.

**ALGORITHM:**

**Step 1:** Start with `<!DOCTYPE html>`, `<html>`, `<head>`, and `<body>` tags.

**Step 2:** Inside `<head>`, add a `<title>` for the webpage.

**Step 3:** Use ordered (`<ol>`) and unordered (`<ul>`) lists to display items.

**Step 4:** Add table using `<table>`, with `<tr>` for rows and `<td>` for cells.

**Step 5:** Use `<th>` to define table headers.

**Step 6:** Insert hyperlinks using `<a href="URL">Link Text</a>`.

**Step 7:** Apply basic formatting for neat display.

**Step 8:** Close all opened tags properly.

**Step 9:** Save the file with .html extension.

**Step 10:** Open in a browser to check lists, table, and links.

## SOURCE CODE:

```
<!DOCTYPE html>

<html>

<head>

  <title>Text Formatting and Images</title>

  <style>

    body {

      font-family: Verdana;

      background-color: #e8f0fe;

      padding: 20px;

    }

  </style>

</head>

<body>

  <h1>Welcome to My Website</h1>

  <p>This is a <b>bold</b> paragraph.</p>

  <p>This is an <i>italicized</i> word.</p>

  <p>This is an <u>underlined</u> sentence.</p>

  <p><strong>Combining</strong> <em>multiple</em> <u>formats</u>.</p>

  <h2>About Us</h2>

  <p>We offer tutorials in HTML, CSS, JavaScript, and more.</p>

  <h2>Our Logo</h2>

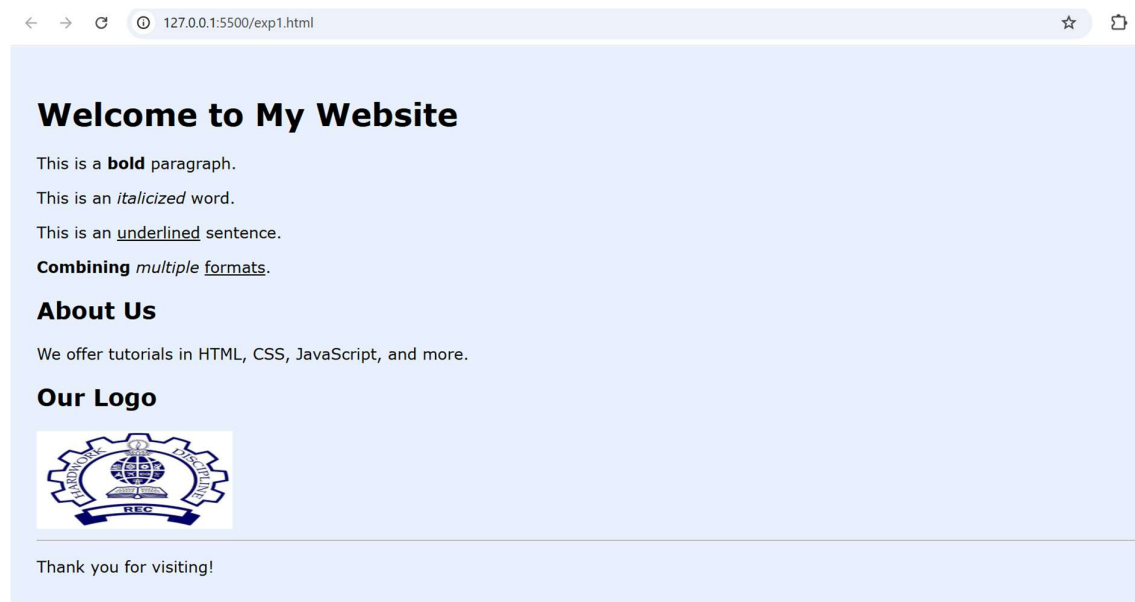
  <hr>

  <p>Thank you for visiting!</p>

</body>

</html>
```

## OUTPUT:



## RESULT:

We have designed a basic website using HTML to demonstrate text formatting and image insertion.

<b>Ex no:02</b>	<b>Basic Website using HTML (Text Formatting + Image)</b>
<b>Date:</b>	

**AIM:**

To write a HTML program for creation of forms, links, and tables.

**ALGORITHM:**

**Step 1:** Start with `<!DOCTYPE html>`, `<html>`, `<head>`, and `<body>` tags.

**Step 2:** Inside `<head>`, add the `<title>` for the page.

**Step 3:** Start the `<body>` section for the main content.

**Step 4:** Add headings (`<h1>` to `<h6>`) to structure the page.

**Step 5:** Insert paragraphs (`<p>`) for regular text.

**Step 6:** Apply formatting tags like `<b>`, `<i>`, and `<u>` for styling.

**Step 7:** Use `<hr>` to add horizontal lines and `<br>` for line breaks.

**Step 8:** Insert an image with the `<img>` tag and set `src` and `alt`.

**Step 9:** Close the `</body>` and `</html>` tags.

**Step 10:** Save the file as `.html` and view it in a browser.

## SOURCE CODE:

```
<!DOCTYPE html>

<html>

<head>

<title>Forms, Links, and Tables Example</title>

<style>

  body {

    font-family: Arial, sans-serif;

    background-color: #f9f9f9;

    padding: 20px;

  }

  form, table {

    margin-bottom: 20px;

  }

  table {

    border-collapse: collapse;

    width: 60%;

  }

  th, td {

    border: 1px solid #333;

    padding: 8px;

    text-align: center;

  }

</style>

</head>

<body>

<h1>Welcome to My Web Page</h1>

<hr>
```

<p>This page demonstrates the creation of <b>forms</b>, <i>links</i>, and <u>tables</u> using HTML.</p>

## <h2>User Information Form</h2>

<form action="#">

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

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

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

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

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

</form>

<hr>

## <h2>Useful Link</h2>

<p>Visit <a href="https://www.w3schools.com" target="\_blank"><b>W3Schools</b></a> for learning web development!</p>

<hr>

## <h2>Sample Student Table</h2>

<table>

<tr>

<th>Student Name</th>

<th>Roll Number</th>

</tr>

<tr>

<td>Alice</td>

<td>101</td>

</tr>

<tr>

<td>Bob</td>

<td>102</td>

</tr>

```
<tr>

  <td>Charlie</td>

  <td>103</td>

</tr>

</table>

<hr>

<h2>Sample Image</h2>



<br><br>

<p><i>Above is a sample image displayed using the <b>&lt;img&gt;</b> tag.</i></p>

</body>

</html>
```

OUTPUT:

← → ↻ 127.0.0.1:5500/exp2.html

Welcome to My Web Page

This page demonstrates the creation of forms, links, and tables using HTML.

User Information Form

Name:

Email:

Submit


Useful Link

Visit [W3Schools](#) for learning web development!

Sample Student Table

Student Name	Roll Number
Alice	101
Bob	102
Charlie	103

Sample Image



Above is a sample image displayed using the <img> tag.

RESULT:

Thus we have written a HTML program for creation of forms, links, and tables.



<b>Ex no:03</b>	<b>Create a web page with HTML5 with image map, hotspot and information when hotspot is clicked</b>
<b>Date:</b>	

**AIM:**

create an image map in a webpage, identify hotspots, and display related information when clicked.

**ALGORITHM:**

**Step 1:** Create a basic HTML page with a <form> inside <body>.

**Step 2:** Add input fields for name, email, password, etc., using <input> tags.

**Step 3:** Write a JavaScript function to check if all fields are filled.

**Step 4:** Use if-else conditions to validate inputs like email format.

**Step 5:** Display alerts or error messages if validation fails.

**Step 6:** Call the JavaScript function when the form is submitted using onsubmit.

**Step 7:** Prevent form submission if any field is incorrect.

**Step 8:** Save the HTML file with embedded or linked JavaScript.

**Step 9:** Open the file in a browser and test by submitting the form.

**Step 10:** Debug and fix errors if the form validation doesn't work properly.

## SOURCE CODE:

```
<!DOCTYPE html>

<html>

<head>

  <title>Image Map Example</title>

  <style>

    body {

      font-family: Arial;

      background-color: #f0f8ff;

      padding: 20px;

    }

  </style>

</head>

<body>

  <h2>India Map - Image Map</h2>

  <p>Click on a region to learn more about it.</p>

  <!-- Replace with your actual image and usemap -->

  <map name="indiastates">

    <area shape="rect" coords="120,90,180,150" alt="Delhi"
href="https://en.wikipedia.org/wiki/Delhi" target="_blank">

    <area shape="circle" coords="300,200,40" alt="Mumbai"
href="https://en.wikipedia.org/wiki/Mumbai" target="_blank">

    <area shape="poly" coords="400,300,420,320,410,350,390,330" alt="Chennai"
href="https://en.wikipedia.org/wiki/Chennai" target="_blank">

  </map>

</body>

</html>
```

## OUTPUT:



## RESULT:

Thus we have created an image map in a webpage, identify hotspots, and display related information when clicked.

<b>Ex no:04</b>	<b>Create a webpage with all types of CSS</b>
<b>Date:</b>	

**AIM:**

To create a structured web page using HTML5 semantic elements.

**ALGORITHM:**

**Step 1:** Create an HTML structure with `<!DOCTYPE html>`, `<html>`, `<head>`, and `<body>` tags.

**Step 2:** Inside `<head>`, add a `<title>` for the page.

**Step 3:** Add a `<style>` tag inside `<head>` or link an external CSS file.

**Step 4:** Define CSS rules for body, headings, paragraphs, etc.

**Step 5:** Set background color, font size, font family, and text color using CSS.

**Step 6:** Apply margins, padding, and borders to elements.

**Step 7:** Style buttons, images, and links using CSS properties.

**Step 8:** Save the HTML and CSS files properly.

**Step 9:** Open the HTML file in a browser to check the styling.

**Step 10:** Make necessary adjustments if the page needs improvements.

## SOURCE CODE:

```
<!DOCTYPE html>

<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>HTML5 Semantic Page</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #eef2f3;
      margin: 0;
    }

    header, nav, section, article, aside, footer {
      padding: 15px;
      margin: 10px;
      border-radius: 8px;
    }
    header {
      background-color: #4CAF50;
      color: white;
      text-align: center;
    }
    nav {
      background-color: #ddd;
    }
    section {
      display: flex;
```

```

    }
    article {
        flex: 2;
        background-color: #fff;
    }
    aside {
        flex: 1;
        background-color: #f4f4f4;
    }
    footer {
        background-color: #333;
        color: white;
        text-align: center;
    }
</style>
</head>
<body>
<header>
    <h1>My HTML5 Webpage</h1>
</header>
<nav>

    <a href="#">Home</a> |
    <a href="#">About</a> |
    <a href="#">Contact</a>

</nav>
<section>
    <article>
        <h2>Main Article</h2>

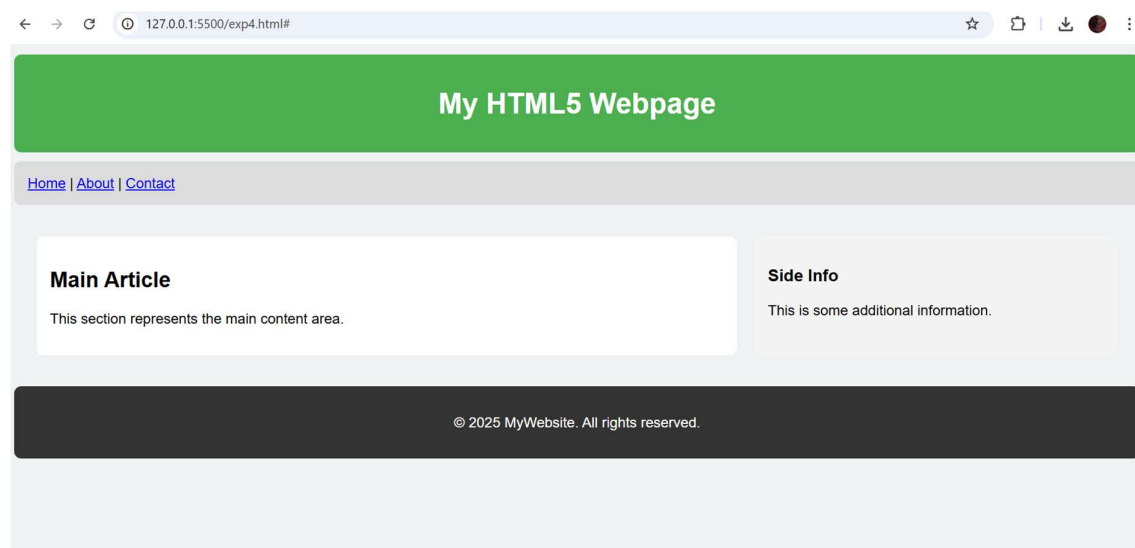
```

```
<p>This section represents the main content area.</p>
</article>
<aside>
  <h3>Side Info</h3>
  <p>This is some additional information.</p>
</aside>
</section>

<footer>
  <p>&copy; 2025 MyWebsite. All rights reserved.</p>
</footer>

</body>
</html>
```

## OUTPUT:



## RESULT:

We have created a structured web page using HTML5 semantic elements.



<b>Ex no:05</b>	<b>Create a Simple Calculator Using JavaScript</b>
<b>Date:</b>	

**AIM:**

To develop a basic calculator that performs addition, subtraction, multiplication, and division using JavaScript.

**ALGORITHM:**

- Step1:** Create an HTML form with two input fields.
- Step2:** Add buttons for Add, Subtract, Multiply, and Divide.
- Step3:** Write JavaScript functions to do operations.
- Step4:** Read the input numbers inside JavaScript.
- Step5:** Perform calculations based on button clicked.
- Step6:** Display the result inside a div or paragraph.
- Step7:** Check for invalid input like division by zero.
- Step8:** Add proper event handlers for each button.
- Step9:** Save the file and open in browser.
- Step10:** Verify all calculator functions work properly.

## SOURCE CODE

```
<!DOCTYPE html>

<html>

<head>

  <title>Simple Calculator</title>

  <style>

    body {

      font-family: Arial;

      background-color: #f2f2f2;

      padding: 20px;

    }

    input, button {

      padding: 8px;

      margin: 5px;

    }

    #result {

      font-weight: bold;

      margin-top: 10px;

    }

  </style>

</head>

<body>


  <h2>Simple Calculator</h2>


  <label>Enter First Number:</label>

  <input type="number" id="num1"><br>


  <label>Enter Second Number:</label>
```

```
<input type="number" id="num2"><br>
```

```
<button onclick="calculate('+')">Add</button>
```

```
<button onclick="calculate('-')">Subtract</button>
```

```
<button onclick="calculate('*')">Multiply</button>
```

```
<button onclick="calculate('/')">Divide</button>
```

```
<p id="result"></p>
```

```
<script>
```

```
function calculate(operator) {
```

```
    var n1 = parseFloat(document.getElementById("num1").value);
```

```
    var n2 = parseFloat(document.getElementById("num2").value);
```

```
    var result;
```

```
    if (isNaN(n1) || isNaN(n2)) {
```

```
        document.getElementById("result").innerText = "Please enter valid numbers.";
```

```
        return;
```

```
    }
```

```
    switch (operator) {
```

```
        case '+':
```

```
            result = n1 + n2;
```

```
            break;
```

```
        case '-':
```

```
            result = n1 - n2;
```

```
            break;
```

```
        case '*':
```

```
            result = n1 * n2;
```

```
        break;
    case '/':
        result = n2 !== 0 ? (n1 / n2) : "Cannot divide by zero";
        break;
    }

    document.getElementById("result").innerText = "Result: " + result;
}
</script>

</body>
</html>
```

## OUTPUT:

Simple Calculator

Enter First Number: 5

Enter Second Number: 5

Add Subtract Multiply Divide

Result: 25

## RESULT:

We have developed a basic calculator that performs addition, subtraction, multiplication, and division using JavaScript.

<b>Ex no:06</b>	<b>Design a Registration Form</b>
<b>Date:</b>	

**AIM:**

To design a registration form that validate fields such as name, email, and password using JavaScript before submitting the form.

**ALGORITHM:**

**Step1:** Design an HTML page with <input> fields for two numbers.

**Step2:** Create buttons for operations like Add, Subtract, Multiply, Divide.

**Step3:** Write JavaScript functions to perform each operation.

**Step4:** Fetch numbers from input fields inside functions.

**Step5:** Perform calculations and store results.

**Step6:** Display the output inside a paragraph or div.

**Step7:** Use onclick event for buttons to call the functions.

**Step8:** Check for invalid inputs like dividing by zero.

**Step9:** Close all tags and save the file.

**Step10:** Open the HTML file and test all operations.

.

## SOURCE CODE

```
<!DOCTYPE html>

<html>

<head>

  <title>Form Validation</title>

  <style>

    body {

      font-family: Arial, sans-serif;

      background-color: #eef;

      padding: 20px;

    }

    .error {

      color: red;

    }

    input {

      padding: 5px;

      margin: 5px;

    }

  </style>

</head>

<body>

  <h2>Registration Form</h2>

  <form name="regForm" onsubmit="return validateForm()">

    Name: <input type="text" name="name"><br>

    Email: <input type="text" name="email"><br>

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

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

  </form>
```

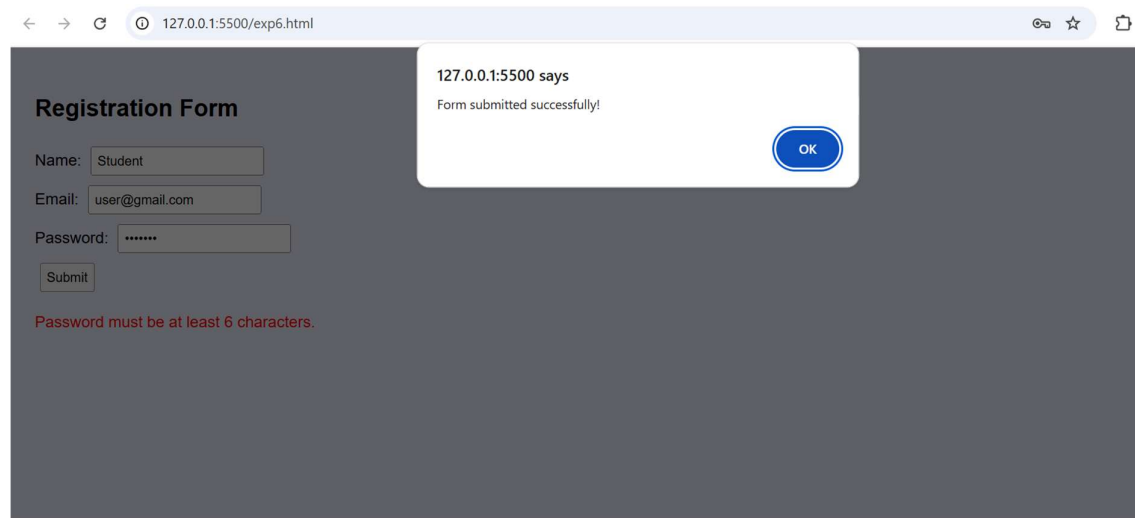
```

<p id="errorMsg" class="error"></p>
<script>
function validateForm() {
    let name = document.forms["regForm"]["name"].value;
    let email = document.forms["regForm"]["email"].value;
    let password = document.forms["regForm"]["password"].value;
    let errorMsg = document.getElementById("errorMsg");
    if (name == "" || email == "" || password == "") {
        errorMsg.innerHTML = "All fields must be filled out.";
        return false;
    }
    let emailPattern = /^[^ ]+@[^ ]+\.[a-z]{2,3}$/;
    if (!email.match(emailPattern)) {
        errorMsg.innerHTML = "Invalid email format.";
        return false;
    }
    if (password.length < 6) {
        errorMsg.innerHTML = "Password must be at least 6 characters.";
        return false;
    }
    errorMsg.innerHTML = "";
    alert("Form submitted successfully!");
    return true;
}
</script>
</body>
</html>

```



## OUTPUT:



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:5500/exp6.html". The main content area has a dark gray background. On the left, there is a "Registration Form" with three input fields: "Name:" containing "Student", "Email:" containing "user@gmail.com", and "Password:" containing six asterisks. Below these fields is a "Submit" button. A red error message "Password must be at least 6 characters." is visible below the password field. On the right side of the form, a white notification box with a blue border displays the text "127.0.0.1:5500 says" and "Form submitted successfully!". A blue "OK" button is located at the bottom right of the notification box.

## RESULT:

Thus we have created a Registration form that validates fields such as name, email, and password using JavaScript before submitting the form.

<b>Ex no:07</b>	<b>Develop a responsive website using bootstrap</b>
<b>Date:</b>	

**AIM:**

To develop a responsive website using Bootstrap that adjusts to different screen sizes (e.g., desktop, tablet, mobile).

**ALGORITHM:**

**Step 1:** Include the Bootstrap CSS and JS files.

**Step 2:** Set up the basic HTML structure for the web page.

**Step 3:** Create a navigation bar that adapts to different screen sizes.

**Step 4:** Use Bootstrap's grid system to create a responsive layout.

**Step 5:** Add images, text, or any other content within grid columns.

**Step 6:** Make the layout responsive by using appropriate Bootstrap classes.

**Step 7:** Add a footer that stays at the bottom of the page.

**Step 8:** Test the website on different screen sizes to ensure responsiveness.

**Step 9:** Style the website with custom CSS if needed.

**Step 10:** Deploy the website and test it in various browsers.

## SOURCECODE

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Responsive Website</title>

  <link href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
rel="stylesheet">

</head>

<body>

  <nav class="navbar navbar-expand-lg navbar-light bg-light">

    <a class="navbar-brand" href="#">My Website</a>

    <button class="navbar-toggler" type="button" data-toggle="collapse" data-
target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle
navigation">

      <span class="navbar-toggler-icon"></span>

    </button>

    <div class="collapse navbar-collapse" id="navbarNav">

      <ul class="navbar-nav ml-auto">

        <li class="nav-item active">

          <a class="nav-link" href="#">Home</a>

        </li>

        <li class="nav-item">

          <a class="nav-link" href="#">About</a>

        </li>

        <li class="nav-item">

          <a class="nav-link" href="#">Contact</a>

        </li>

      </ul>

    </div>

  </nav>

</body>

</html>
```

```

        </ul>
    </div>
</nav>

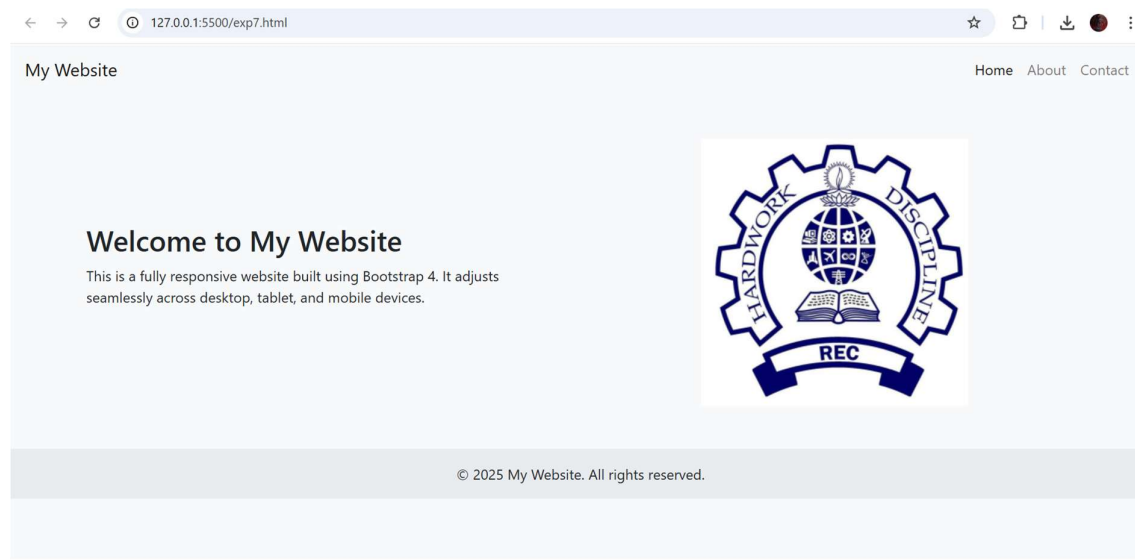
<div class="container my-5">
    <div class="row">
        <div class="col-md-6">
            <h2>Welcome to My Website</h2>
            <p>This is a responsive website built using Bootstrap.</p>
        </div>
        <div class="col-md-6">
            
        </div>
    </div>
</div>

<footer class="bg-light py-3">
    <div class="container text-center">
        <p>&copy; 2025 My Website</p>
    </div>
</footer>

<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
<script
src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.2/dist/umd/popper.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>
</body>
</html>

```

## OUTPUT



## RESULT:

A responsive website with a navigation bar, content area, and footer. The layout adapts automatically based on the screen size (desktop, tablet, mobile).

<b>Ex no:08</b>	<b>Design a web page with grid system using Bootstrap</b>
<b>Date:</b>	

**AIM:**

To create a web page layout using Bootstrap's Grid System.

**ALGORITHM:**

**Step 1:** Create a new HTML file.

**Step 2:** Link Bootstrap CSS and JS files (via CDN).

**Step 3:** Create a container (<div class="container">).

**Step 4:** Create a row (<div class="row">).

**Step 5:** Add columns using Bootstrap classes like col-md-4.

**Step 6:** Add some sample content inside each column.

**Step 7:** Repeat rows and columns if needed.

**Step 8:** Style with background colors for better visualization.

**Step 9:** Save the HTML file.

**Step 10:** Open it in a browser to view the grid layout.

## SOURCE CODE

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>Bootstrap Grid System</title>

  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">

</head>

<body>

<div class="container mt-4">

  <h1 class="text-center">Bootstrap Grid Example</h1>

  <div class="row">

    <div class="col-md-4 bg-primary text-white p-3">Column 1</div>

    <div class="col-md-4 bg-success text-white p-3">Column 2</div>

    <div class="col-md-4 bg-danger text-white p-3">Column 3</div>

  </div>

  <div class="row mt-4">

    <div class="col-md-6 bg-warning text-dark p-3">Column 4</div>

    <div class="col-md-6 bg-info text-white p-3">Column 5</div>

  </div>

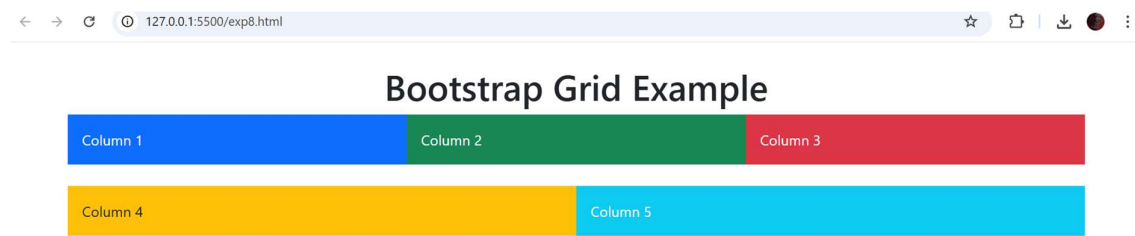
</div>

<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>

</body>

</html>
```

## OUTPUT:



## RESULT:

Thus we have created A web page showing a grid with 3 columns in the first row and 2 columns in the second row, using Bootstrap.



<b>Ex no:09</b>	<b>Design a web page with dropdown navigation bar and pagination</b>
<b>Date:</b>	

### **AIM:**

To create a navigation bar with a dropdown menu and a pagination component using Bootstrap.

### **ALGORITHM:**

- Step 1:** Create a new HTML file.
- Step 2:** Link Bootstrap CSS and JS files.
- Step 3:** Create a <nav> tag for the navigation bar.
- Step 4:** Add brand name and links inside the navbar.
- Step 5:** Add a dropdown menu inside the navbar.
- Step 6:** Create the dropdown items inside it.
- Step 7:** Below the navbar, create a pagination component.
- Step 8:** Style the navbar and pagination.
- Step 9:** Save the HTML file.
- Step 10:** Open it in a browser and test the dropdown and pagination.

## SOURCE CODE

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>Dropdown Navbar and Pagination</title>

  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">

</head>

<body>

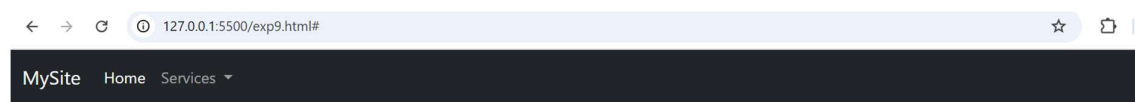

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">
  <div class="container-fluid">
    <a class="navbar-brand" href="#">MySite</a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarNavDropdown">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navbarNavDropdown">
      <ul class="navbar-nav">
        <li class="nav-item">
          <a class="nav-link active" href="#">Home</a>
        </li>
        <li class="nav-item dropdown">
          <a class="nav-link dropdown-toggle" href="#" id="navbarDropdownMenuLink"
role="button" data-bs-toggle="dropdown">
            Services
          </a>
          <ul class="dropdown-menu">
            <li><a class="dropdown-item" href="#">Web Design</a></li>
```

```

        <li><a class="dropdown-item" href="#">Development</a></li>
        <li><a class="dropdown-item" href="#">SEO</a></li>
    </ul>
</li>
</ul>
</div>
</div>
</nav>
<div class="container mt-5">
    <h2 class="text-center">Pagination Example</h2>
    <nav aria-label="Page navigation">
        <ul class="pagination justify-content-center">
            <li class="page-item disabled">
                <a class="page-link" href="#">Previous</a>
            </li>
            <li class="page-item"><a class="page-link" href="#">1</a></li>
            <li class="page-item"><a class="page-link" href="#">2</a></li>
            <li class="page-item"><a class="page-link" href="#">3</a></li>
            <li class="page-item">
                <a class="page-link" href="#">Next</a>
            </li>
        </ul>
    </nav>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>

```

## OUTPUT:



## RESULT:

Thus we have created a navigation bar with a dropdown menu and a pagination component using Bootstrap.

<b>Ex no:10</b>	<b>Design a web page with jQuery selector</b>
<b>Date:</b>	

**AIM:**

To create a web page and demonstrate using jQuery selectors to manipulate HTML elements.

**ALGORITHM:**

**Step 1:** Create a new HTML file.

**Step 2:** Link jQuery library (via CDN).

**Step 3:** Create some HTML elements like heading, paragraph, button.

**Step 4:** Write a <script> tag.

**Step 5:** Use jQuery to select elements (like \$("h1"), \$(".class"), \$("#id")).

**Step 6:** Apply effects like hide(), show(), toggle().

**Step 7:** Attach a click event to the button.

**Step 8:** Write jQuery code inside \$(document).ready().

**Step 9:** Save the HTML file.

**Step 10:** Open it in a browser and test the selectors.

## SOURCE CODE

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>jQuery Selector Example</title>

  <script src="https://code.jquery.com/jquery-3.7.1.min.js"></script>

</head>

<body>

<h1 id="mainHeading">Welcome to jQuery Selector Example</h1>

<p class="info">This is a paragraph with class 'info'.</p>

<p>This is a normal paragraph.</p>

<button id="toggleButton">Toggle Info Paragraph</button>

<script>

$(document).ready(function(){

  $("#toggleButton").click(function(){

    $(".info").toggle();

  });

});

</script>

</body>

</html>
```

## OUTPUT:



## RESULT:

Thus we have created such that When the user clicks the button, the paragraph with class info will show/hide (toggle) using jQuery selector.

<b>Ex no:11</b>	<b>Design a simple web page using jQuery for Animation Effects</b>
<b>Date:</b>	

**AIM:**

To create a webpage that demonstrates basic jQuery animation effects such as hide, show, fade, and slide.

**ALGORITHM:**

Step 1: Create an HTML page with a div or box.

Step 2: Link the jQuery library using a CDN in <head>.

Step 3: Add buttons like Hide, Show, FadeIn, FadeOut, SlideUp, SlideDown.

Step 4: Write jQuery code to perform animations.

Step 5: Use jQuery methods like .hide(), .show(), .fadeIn(), .fadeOut().

Step 6: Bind button clicks to respective jQuery functions.

Step 7: Save the file and open in browser.

Step 8: Click buttons and check if animation works.

Step 9: Fix errors if any animation does not happen.

Step 10: Test all animation effects.



## SOURCE CODE:

```
<!DOCTYPE html>

<html>

<head>

  <title>jQuery Animation Effects</title>

  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

  <style>

    #box {

      width: 200px;

      height: 200px;

      background-color: tomato;

      margin: 20px auto;

      text-align: center;

      line-height: 200px;

      font-weight: bold;

      color: white;

      font-size: 20px;

    }

    button {

      margin: 5px;

      padding: 10px 15px;

    }

  </style>

</head>

<body>

  <h2 style="text-align:center;">jQuery Animation Demo</h2>

  <div id="box">Animate Me!</div>
```

```
<div style="text-align:center;">
  <button id="hideBtn">Hide</button>
  <button id="showBtn">Show</button>
  <button id="fadeOutBtn">Fade Out</button>
  <button id="fadeInBtn">Fade In</button>
  <button id="slideUpBtn">Slide Up</button>
  <button id="slideDownBtn">Slide Down</button>
  <button id="toggleBtn">Toggle</button>
</div>
```

```
<script>
$(document).ready(function(){
  $("#hideBtn").click(function(){
    $("#box").hide();
  });

  $("#showBtn").click(function(){
    $("#box").show();
  });

  $("#fadeOutBtn").click(function(){
    $("#box").fadeOut();
  });

  $("#fadeInBtn").click(function(){
    $("#box").fadeIn();
  });
});
```

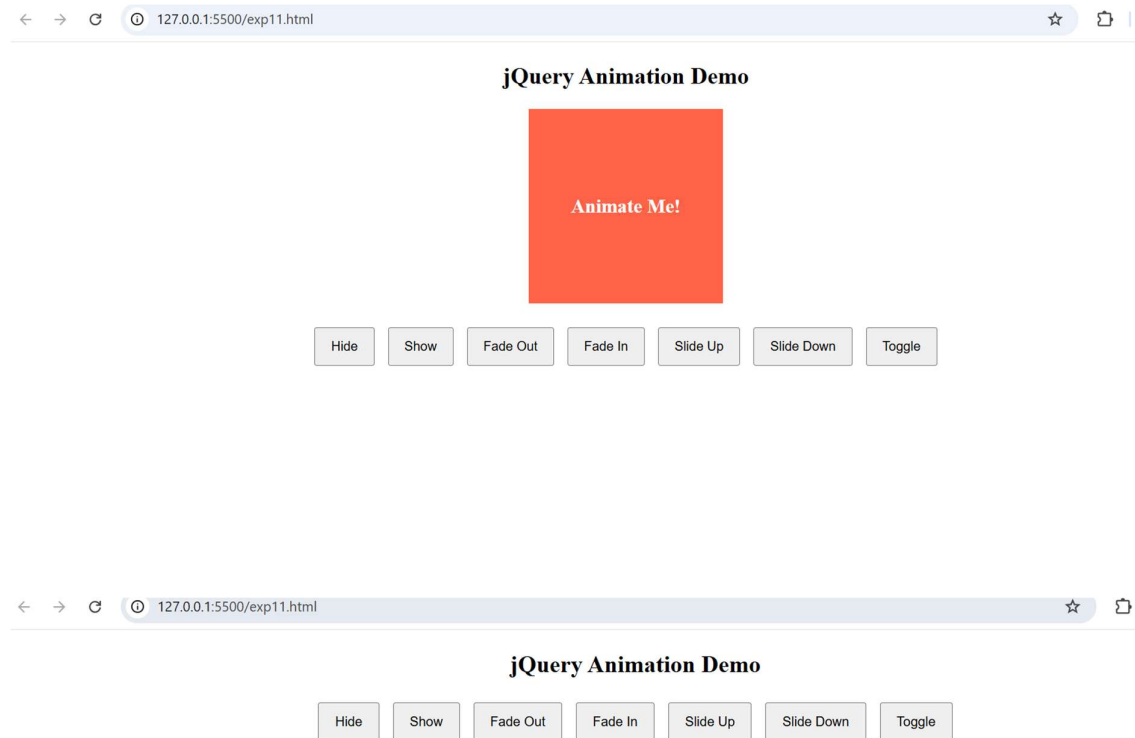
```
$("#slideUpBtn").click(function(){
    $("#box").slideUp();
});

$("#slideDownBtn").click(function(){
    $("#box").slideDown();
});

$("#toggleBtn").click(function(){
    $("#box").toggle();
});
});
</script>

</body>
</html>
```

## OUTPUT:



## RESULT:

Thus we have created a webpage that demonstrates basic jQuery animation effects such as hide, show, fade, and slide.

<b>Ex no:12</b>	<b>A web page to calculate the factorial of a number using php</b>
<b>Date:</b>	

**AIM:**

To create a simple web page where users can input a number, and the page will display its factorial.

**ALGORITHM:**

**Step 1:** Create an HTML form to accept a number input.

**Step 2:** Define a PHP script to handle the form submission.

**Step 3:** Retrieve the number input using `$_POST`.

**Step 4:** Define a function to calculate the factorial.

**Step 5:** Use a loop to calculate the factorial of the entered number.

**Step 6:** Display the result on the web page.

**Step 7:** If the input is invalid (e.g., negative or non-numeric), show an error message.

**Step 8:** Allow users to enter another number for calculation.

**Step 9:** Style the form using basic CSS.

**Step 10:** Test the page with various inputs and display the correct factorial.

## SOURCE CODE:

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Factorial Calculator</title>

</head>

<body>

    <h2>Factorial Calculator</h2>

    <form method="post">

        <label for="number">Enter a number:</label>

        <input type="number" id="number" name="number" required>

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

    </form>

    <?php

        if ($_SERVER["REQUEST_METHOD"] == "POST") {

            $number = $_POST['number'];

            if (is_numeric($number) && $number >= 0) {

                function factorial($n) {

                    $result = 1;

                    for ($i = 1; $i <= $n; $i++) {

                        $result *= $i;

                    }

                    return $result;

                }

                $result = factorial($number);
```

```
        echo "<p>The factorial of $number is: $result</p>";
    } else {
        echo "<p>Please enter a valid positive number.</p>";
    }
}

?>
</body>
</html>
```

## OUTPUT:



← → ↻ ⓘ localhost/tms/exp12.php ☆ 📄

### Factorial Calculator

Enter a number:

**Factorial of 4 is: 24**

## RESULT:

We have created a simple web page where users can input a number, and the page will display its factorial.



<b>Ex no:13</b>	<b>A Web page to Perform Arithmetic Operations Using PHP</b>
<b>Date:</b>	

**AIM:**

To create a PHP webpage that performs arithmetic operations (addition, subtraction, multiplication, division) on two numbers entered by the user.

**ALGORITHM:**

**Step 1:** Start with a basic HTML form inside a .php file.

**Step 2:** Create two input fields for the numbers.

**Step 3:** Add a dropdown menu to select the operation (Addition, Subtraction, Multiplication, Division).

**Step 4:** Set the form method to POST to securely send data.

**Step 5:** Retrieve the input values in PHP using `$_POST`.

**Step 6:** Apply conditional logic (if-else statements) to check which operation is selected.

**Step 7:** Perform the selected arithmetic operation and calculate the result.

**Step 8:** Display the calculated result dynamically after the form is submitted.

**Step 9:** Handle special cases like division by zero to avoid errors.

**Step 10:** Save the file with a .php extension and run it using a local server (like XAMPP) to test.

## SOURCE CODE

```
<!DOCTYPE html>

<html>

<head>

    <title>Arithmetic Operations</title>

</head>

<body>


<h2>Arithmetic Operation Calculator</h2>


<form method="post">

    Enter First Number: <input type="text" name="num1" required><br><br>
    Enter Second Number: <input type="text" name="num2" required><br><br>


    Select Operation:

    <select name="operation">

        <option value="add">Addition</option>

        <option value="subtract">Subtraction</option>

        <option value="multiply">Multiplication</option>

        <option value="divide">Division</option>

    </select><br><br>


    <input type="submit" name="submit" value="Calculate">

</form>

<?php
if(isset($_POST['submit'])){
    $num1 = $_POST['num1'];
    $num2 = $_POST['num2'];
    $operation = $_POST['operation'];
```

```

if($operation == "add"){
    $result = $num1 + $num2;
    echo "<h3>Result of Addition: $result</h3>";
}
elseif($operation == "subtract"){
    $result = $num1 - $num2;
    echo "<h3>Result of Subtraction: $result</h3>";
}
elseif($operation == "multiply"){
    $result = $num1 * $num2;
    echo "<h3>Result of Multiplication: $result</h3>";
}
elseif($operation == "divide"){
    if($num2 != 0){
        $result = $num1 / $num2;
        echo "<h3>Result of Division: $result</h3>";
    } else {
        echo "<h3>Cannot divide by zero!</h3>";
    }
} else {
    echo "<h3>Invalid Operation Selected</h3>";
}
}
?>
</body>
</html>

```

## OUTPUT:



← → ↻ localhost/tms/exp13.php ☆ 📄

### Arithmetic Operation Calculator

Enter First Number:

Enter Second Number:

Select Operation: Addition ▾

**Result of Addition: 6**

## RESULT:

Thus, the PHP webpage for performing arithmetic operations was successfully created and tested.

<b>Ex no:14</b>	<b>Program using regular expression in PHP</b>
<b>Date:</b>	

**AIM:**

To write a PHP program that uses regular expressions to validate strings like email addresses and phone numbers.

**ALGORITHM:**

**Step 1:** Open a new PHP file and use `<?php` and `?>` tags to start the script.

**Step 2:** Define sample input strings for email and phone number.

**Step 3:** Create a regular expression pattern to validate the email format.

**Step 4:** Create a regular expression pattern to validate the phone number (10 digits).

**Step 5:** Use `preg_match()` function to check if the email matches the email pattern.

**Step 6:** Use `preg_match()` function to check if the phone number matches the phone number pattern.

**Step 7:** If the email matches the pattern, display a success message ("Email is valid").

**Step 8:** If the email does not match the pattern, display an invalid message ("Invalid email format").

**Step 9:** If the phone number matches the pattern, display a success message ("Phone number is valid").

**Step 10:** If the phone number does not match the pattern, display an invalid message ("Invalid phone number format").

**Step 11:** Save the PHP file with a `.php` extension and run it on a local server like XAMPP or WAMP.

**Step 12:** Test the code with different sample inputs to check the validation results.

## SOURCE CODE

```
<?php

// Example for validating an email

$email = "example@gmail.com";

if (preg_match("/^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$/", $email)) {
    echo "Valid Email Address.<br>";
} else {
    echo "Invalid Email Address.<br>";
}

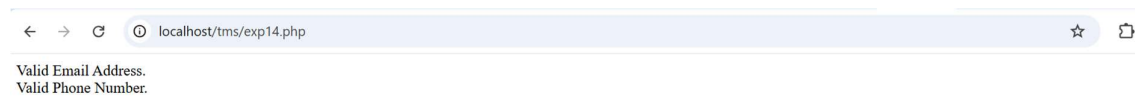
// Example for validating a phone number

$phone = "9876543210";

if (preg_match("/^[0-9]{10}$/", $phone)) {
    echo "Valid Phone Number.";
} else {
    echo "Invalid Phone Number.";
}

?>
```

## OUTPUT



## RESULT:

Thus, a PHP program using regular expressions to validate email addresses and phone numbers was successfully developed and tested.