

Aim: Create a form (HTML5) with the use of new semantic elements like <header>, <footer>, <nav>, <article>.

```
<html>
<head>
  <title>Semantic Form</title>
</head>
<body>
  <header>
    <h1>Contact Us</h1>
  </header>
  <nav>
    <ul>
      <li><a href="#">Home</a></li>
      <li><a href="#">About</a></li>
      <li><a href="#">Services</a></li>
    </ul>
  </nav>
  <article>
    <form action="#" method="post">
      <label for="name">Name:</label>
      <input type="text" id="name" name="name"
required><br><br>
      <label for="email">Email:</label>
      <input type="email" id="email" name="email"
required><br><br>
      <label for="message">Message:</label><br>
      <textarea id="message" name="message"
required></textarea><br><br>
      <input type="submit" value="Submit">
    </form>
  </article>
  <footer>
    <p>&copy; 2024 Your Website. All rights reserved.</p>
  </footer>
</body>
</html>
```

Aim: Create a form using placeholder, required autocomplete, and SVG.

```
<html>
<head>
  <title>Form with Placeholder and SVG</title>
</head>
<body>
  <form action="#" method="post">
    <label for="username">Username:</label>
    <input type="text" id="username" name="username"
placeholder="Enter your username" required
autocomplete="username"><br><br>
    <label for="password">Password:</label>
    <input type="password" id="password" name="password"
placeholder="Enter your password" required
autocomplete="current-password"><br><br>
    <label for="email">Email:</label>
    <input type="email" id="email" name="email"
placeholder="Enter your email" required autocomplete="email"><br><br>
    <label for="phone">Phone:</label>
    <input type="tel" id="phone" name="phone" placeholder="Enter
your phone number" required autocomplete="tel"><br><br>
    <button type="submit">Submit</button>
  </form>
  <svg width="100" height="100">
    <circle cx="50" cy="50" r="40" stroke="black"
stroke-width="2" fill="red" />
  </svg>
</body>
</html>
```

Aim: Show the basic use of CSS (Background, Borders, Font, Height, Width, Margin, Padding)

```
<html>
<head>
  <title>CSS Basics</title>
  <style>
    body {
      background-color: #f0f0f0;
      font-family: Arial, sans-serif;
    }
    .container {
      width: 80%;
      margin: 20px auto;
      padding: 20px;
      background-color: #fff;
      border: 1px solid #ccc;
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    }
    h1 {
      text-align: center;
      color: #333;
    }
    p {
      line-height: 1.6;
      color: #666;
    }
  </style>
</head>
<body>
  <div class="container">
    <h1>Welcome to CSS Basics</h1>
    <p>This is a paragraph demonstrating the basic use of CSS
properties like background, borders, font, height, width, margin, and
padding.</p>
  </div>
</body>
</html>
```

Aim: Create a webpage using Animation.

```
<html>
<head>
  <title>Animation Demo</title>
  <style>
    .box {
      width: 100px;
      height: 100px;
      background-color: red;
      position: relative;
      animation: move 2s infinite alternate;
    }

    @keyframes move {
      from {left: 0;}
      to {left: calc(100% - 100px);}
    }
  </style>
</head>
<body>
  <div class="box"></div>
</body>
</html>
```

Aim: Show the use of Flexbox, Grid layouts, and Media Queries.

```
<html>
<head>
  <title>Layout Demo</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 0;
    }

    .container {
      display: flex;
      flex-direction: column;
      height: 100vh;
    }

    header {
      background-color: #333;
      color: #fff;
      padding: 20px;
      text-align: center;
    }

    nav {
      background-color: #666;
      color: #fff;
      padding: 10px;
      text-align: center;
    }

    .main-content {
      flex-grow: 1;
      background-color: #f0f0f0;
      padding: 20px;
      text-align: center;
    }
  </style>
</head>
<body>
  <div class="container">
    <div class="header">
      <h1>Layout Demo</h1>
    </div>
    <div class="nav">
      <a href="#home">Home</a>
      <a href="#about">About</a>
      <a href="#contact">Contact</a>
    </div>
    <div class="main-content">
      <h2>Main Content</h2>
    </div>
  </div>
</body>
</html>
```

```
    footer {
      background-color: #333;
      color: #fff;
      padding: 20px;
      text-align: center;
    }

    @media (min-width: 768px) {
      .container {
        flex-direction: row;
      }

      nav, .main-content {
        width: 20%;
      }
    }
  </style>
</head>
<body>
  <div class="container">
    <header>
      <h1>Header</h1>
    </header>
    <nav>
      <h2>Navigation</h2>
    </nav>
    <div class="main-content">
      <h2>Main Content</h2>
    </div>
    <footer>
      <h3>Footer</h3>
    </footer>
  </div>
</body>
</html>
```

Aim: Show the use of Variable, Function, Condition, and Loops.

```
<html>
<head>
  <title>JavaScript Basics</title>
  <script>
    // Variables
    let name = "John";
    let age = 30;

    // Function
    function greet() {
      return "Hello, " + name + "!";
    }

    // Condition
    let isAdult = age >= 18;

    // Loop
    let numbers = [1, 2, 3, 4, 5];
    let sum = 0;
    for (let i = 0; i < numbers.length; i++) {
      sum += numbers[i];
    }
  </script>
</head>
<body>
  <h1>JavaScript Basics</h1>
  <p>Name: <span id="name"></span></p>
  <p>Age: <span id="age"></span></p>
  <p>Greeting: <span id="greeting"></span></p>
  <p>Is Adult: <span id="isAdult"></span></p>
  <p>Sum of Numbers: <span id="sum"></span></p>

  <script>
    // Outputting values
    document.getElementById("name").textContent = name;
    document.getElementById("age").textContent = age;
```

```
        document.getElementById("greeting").textContent = greet();
        document.getElementById("isAdult").textContent = isAdult ?
"Yes" : "No";
        document.getElementById("sum").textContent = sum;
    </script>
</body>
</html>
```


Aim: Create a responsive webpage and use a viewport.

```
<html>
<head>
  <title>Responsive Design</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 0;
    }

    .container {
      max-width: 1200px;
      margin: 0 auto;
      padding: 20px;
      background-color: #f0f0f0;
    }

    p {
      font-size: 18px;
      line-height: 1.6;
      margin-bottom: 20px;
    }

    @media (max-width: 768px) {
      p {
        font-size: 16px;
      }
    }
  </style>
</head>
<body>
  <div class="container">
    <h1>Responsive Design</h1>
    <p>This is a paragraph demonstrating a responsive design. The
font size decreases on smaller screens.</p>
  </div>
</body></html>
```

Aim: Create an HTML form with error handling using built-in JavaScript functions. This form includes validation for a name, email, and password.

```
<html>
<head>
  <title>Form with Error Handling</title>
  <style>
    .error {
      color: red;
    }
  </style>
</head>
<body>
  <form id="myForm" action="#" method="post">
    <label for="name">Name:</label><br>
    <input type="text" id="name" name="name"><br>
    <span id="nameError" class="error"></span><br>

    <label for="email">Email:</label><br>
    <input type="email" id="email" name="email"><br>
    <span id="emailError" class="error"></span><br>

    <label for="password">Password:</label><br>
    <input type="password" id="password" name="password"><br>
    <span id="passwordError" class="error"></span><br>

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

  <script>
    document.getElementById("myForm").addEventListener("submit",
function(event) {
    let name = document.getElementById("name").value.trim();
    let email =
document.getElementById("email").value.trim();
    let password =
document.getElementById("password").value.trim();
    let nameError = document.getElementById("nameError");
    let emailError = document.getElementById("emailError");
```

```
        let passwordError =
document.getElementById("passwordError");
        let isValid = true;

        if (name === "") {
            nameError.textContent = "Name is required";
            isValid = false;
        } else {
            nameError.textContent = "";
        }

        if (email === "") {
            emailError.textContent = "Email is required";
            isValid = false;
        } else {
            emailError.textContent = "";
        }

        if (password === "") {
            passwordError.textContent = "Password is required";
            isValid = false;
        } else {
            passwordError.textContent = "";
        }

        if (!isValid) {
            event.preventDefault(); // Prevent form submission if
there are errors
        }
    });
</script>
</body>
</html>
```

Aim: Create a simple calculator using JavaScript operators.

```
<html lang="en">
<head>
  <title>Simple Calculator</title>
</head>
<body>
  <h2>Simple Calculator</h2>
  <label for="num1">Number 1:</label>
  <input type="text" id="num1"><br><br>
  <label for="num2">Number 2:</label>
  <input type="text" id="num2"><br><br>
  <button onclick="add()">Add</button>
  <button onclick="subtract()">Subtract</button>
  <button onclick="multiply()">Multiply</button>
  <button onclick="divide()">Divide</button><br><br>
  <label for="result">Result:</label>
  <span id="result"></span>

  <script>
    function add() {
      let num1 =
parseFloat(document.getElementById("num1").value);
      let num2 =
parseFloat(document.getElementById("num2").value);
      document.getElementById("result").textContent = num1 +
num2;
    }

    function subtract() {
      let num1 =
parseFloat(document.getElementById("num1").value);
      let num2 =
parseFloat(document.getElementById("num2").value);
      document.getElementById("result").textContent = num1 -
num2;
    }

    function multiply() {
      let num1 =
```

```
parseFloat(document.getElementById("num1").value);
    let num2 =
parseFloat(document.getElementById("num2").value);
    document.getElementById("result").textContent = num1 *
num2;
}

function divide() {
    let num1 =
parseFloat(document.getElementById("num1").value);
    let num2 =
parseFloat(document.getElementById("num2").value);
    if (num2 !== 0) {
        document.getElementById("result").textContent = num1
/ num2;
    } else {
        document.getElementById("result").textContent =
"Cannot divide by zero";
    }
}
</script>
</body>
</html>
```

Aim: Create a page using jQuery effects and also get/post.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
  <title>jQuery Effects</title>
  <script
src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <button id="fadeInBtn">Fade In</button>
  <button id="fadeOutBtn">Fade Out</button>
  <button id="slideToggleBtn">Slide Toggle</button>

  <div id="content" style="display: none;">
    <h2>jQuery Effects Demo</h2>
    <p>This is a paragraph demonstrating jQuery effects.</p>
  </div>

  <script>
    $(document).ready(function() {
      $("#fadeInBtn").click(function() {
        $("#content").fadeIn();
      });

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

      $("#slideToggleBtn").click(function() {
        $("#content").slideToggle();
      });
    });
  </script>
</body>
</html>
```

Create a HTML5 page using jQuery methods. (animate(),stop(),slide())

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width,
initial-scale=1.0">
<title>jQuery Animation Demo</title>
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
<style>
    #box {
        width: 100px;
        height: 100px;
        background-color: blue;
        margin: 20px;
        text-align: center;
        color: white;
        line-height: 100px;
        cursor: pointer;
    }
</style>
</head>
<body>

<div id="box">Click Me!</div>

<script>
$(document).ready(function(){
    var $box = $('#box');

    $box.click(function(){
        $(this).stop().animate({
            left: '+=100px',
            opacity: '0.5'
        }, 1000).animate({
            left: '-=100px',
            opacity: '1'
        }, 1000);
    });
});
</script>
```

```
    }, 1000);
});

$(document).on('click', function(e){
    if (!$(e.target).closest('#box').length) {
        $box.stop().animate({
            left: '0',
            opacity: '1'
        }, 500);
    }
});

$('#toggleButton').click(function(){
    $('#toggleContent').slideToggle();
});
});
</script>

</body>
</html>
```


Show the use of Bootstrap Component (button), plugins, grid system.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width,
initial-scale=1.0">
<title>jQuery Animation with Bootstrap</title>
<link
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap
.min.css" rel="stylesheet">
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
<script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.
min.js"></script>
<style>
    #box {
        width: 100px;
        height: 100px;
        background-color: blue;
        margin: 20px;
        text-align: center;
        color: white;
        line-height: 100px;
        cursor: pointer;
    }
</style>
</head>
<body>

<div class="container">
    <div class="row">
        <div class="col-md-6">
            <h1>jQuery Animation Demo</h1>
            <div id="box">Click Me!</div>
        </div>
        <div class="col-md-6">
            <h1>Bootstrap Modal</h1>
```

```

        <button type="button" class="btn btn-primary"
data-toggle="modal" data-target="#exampleModal">
            Open Modal
        </button>
    </div>
</div>
</div>
</div>

<!-- Modal -->
<div class="modal fade" id="exampleModal" tabindex="-1" role="dialog"
aria-labelledby="exampleModalLabel" aria-hidden="true">
    <div class="modal-dialog" role="document">
        <div class="modal-content">
            <div class="modal-header">
                <h5 class="modal-title" id="exampleModalLabel">Modal
title</h5>
                <button type="button" class="close"
data-dismiss="modal" aria-label="Close">
                    <span aria-hidden="true">&times;</span>
                </button>
            </div>
            <div class="modal-body">
                This is a Bootstrap modal example.
            </div>
            <div class="modal-footer">
                <button type="button" class="btn btn-secondary"
data-dismiss="modal">Close</button>
                <button type="button" class="btn btn-primary">Save
changes</button>
            </div>
        </div>
    </div>
</div>

<script>
$(document).ready(function(){
    var $box = $('#box');

    $box.click(function(){

```

```
$(this).stop().animate({
    left: '+=100px',
    opacity: '0.5'
}, 1000).animate({
    left: '-=100px',
    opacity: '1'
}, 1000);
});

$(document).on('click', function(e){
    if (!$(e.target).closest('#box').length) {
        $box.stop().animate({
            left: '0',
            opacity: '1'
        }, 500);
    }
});
});
</script>

</body>
</html>
```

Create an Employee Registration Page in PHP and Perform CRUD operation with all validations using JavaScript.

Index.php:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Employee Registration</title>
    <script src="validation.js"></script>
</head>
<body>
    <h1>Employee Registration</h1>
    <form id="employeeForm" action="process.php" method="POST"
onsubmit="return validateForm()">
        <input type="hidden" id="employeeId" name="employeeId">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name" required><br><br>

        <label for="email">Email:</label>
        <input type="email" id="email" name="email" required><br><br>

        <label for="designation">Designation:</label>
        <input type="text" id="designation" name="designation"
required><br><br>

        <label for="salary">Salary:</label>
        <input type="number" id="salary" name="salary"
required><br><br>

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

    <h2>Employee List</h2>
    <div id="employeeList">
        <!-- Employee list will be displayed here -->
    </div>
```

```

<script>
    // Function to fetch and display employee list
    function fetchEmployees() {
        fetch('fetch.php')
        .then(response => response.text())
        .then(data => {
            document.getElementById('employeeList').innerHTML =
data;
        });
    }
    fetchEmployees(); // Initial fetch

    // Function to refresh employee list after CRUD operations
    function refreshList() {
        fetchEmployees();
    }

    // Function to fill the form with employee details for
editing
    function fillForm(id, name, email, designation, salary) {
        document.getElementById('employeeId').value = id;
        document.getElementById('name').value = name;
        document.getElementById('email').value = email;
        document.getElementById('designation').value =
designation;
        document.getElementById('salary').value = salary;
    }
</script>
</body>
</html>

```

Fetch.php:

```

<?php
// Database connection
$servername = "localhost";
$username = "username";
$password = "password";

```

```

$dbname = "database";

$conn = new mysqli($servername, $username, $password, $dbname);
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Fetch operation
$sql = "SELECT * FROM employees";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    while($row = $result->fetch_assoc()) {
        echo "Name: " . $row["name"]. " - Email: " . $row["email"]. "
- Designation: " . $row["designation"]. " - Salary: " .
$row["salary"]. " <button onclick='fillForm(\".$row['id'].\",
\"\".$row['name'].\"\\\", \"\".$row['email'].\"\\\",
\"\".$row['designation'].\"\\\", \".$row['salary'].\")'>Edit</button><br>";
    }
} else {
    echo "0 results";
}
$conn->close();
?>

```

Process.php:

```

<?php
// Database connection
$servername = "localhost";
$username = "username";
$password = "password";
$dbname = "database";

$conn = new mysqli($servername, $username, $password, $dbname);
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

```

```
// Insert operation
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    if (!empty($_POST["employeeId"])) {
        $id = $_POST["employeeId"];
        $name = $_POST["name"];
        $email = $_POST["email"];
        $designation = $_POST["designation"];
        $salary = $_POST["salary"];

        $sql = "UPDATE employees SET name='$name', email='$email',
designation='$designation', salary=$salary WHERE id=$id";

        if ($conn->query($sql) === TRUE) {
            echo "Record updated successfully";
        } else {
            echo "Error: " . $sql . "<br>" . $conn->error;
        }
    } else {
        $name = $_POST["name"];
        $email = $_POST["email"];
        $designation = $_POST["designation"];
        $salary = $_POST["salary"];

        $sql = "INSERT INTO employees (name, email, designation,
salary) VALUES ('$name', '$email', '$designation', $salary)";

        if ($conn->query($sql) === TRUE) {
            echo "New record created successfully";
        } else {
            echo "Error: " . $sql . "<br>" . $conn->error;
        }
    }
}

$conn->close();
?>
```