

DEERWALK INSTITUTE OF TECHNOLOGY

Tribhuvan University

Faculties of Computer Science



**Bachelors of Science in Computer Science and Information
Technology (BSc. CSIT)**

Course: Web Technology (CSC318)

Class of 2024/Semester: 5

A Lab report on:

Web Technology

Submitted by:

Name: Sudin Rajbhandari

Roll: 1043

Submitted to:

Kumar Lamichhane

Department of Computer
Science

Submission Date: January 1, 2024

DEERWALK INSTITUTE OF TECHNOLOGY

Tribhuvan University

Faculties of Computer Science



**Bachelors of Science in Computer Science and Information
Technology (BSc. CSIT)**

Course: System Analysis and Design (CSC315)

Class of 2024/Semester: 5

**A Lab report on:
System Analysis and Design**

Submitted by:
Name: Sudin Rajbhandari
Roll: 1043

Submitted to:
Shristi Awale
Department of Computer
Science

Submission Date: January 1, 2024

DEERWALK INSTITUTE OF TECHNOLOGY

Tribhuvan University

Faculties of Computer Science



**Bachelors of Science in Computer Science and Information
Technology (BSc. CSIT)**

Course: Simulation and Modeling (CSC317)

Class of 2024/Semester: 5

**A Lab report on:
Simulation and Modeling**

Submitted by:
Name: Sudin Rajbhandari
Roll: 1043

Submitted to:
Nabin Neupane
Department of Computer
Science

Submission Date: January 2, 2024

DEERWALK INSTITUTE OF TECHNOLOGY

Tribhuvan University

Faculties of Computer Science



**Bachelors of Science in Computer Science and Information
Technology (BSc. CSIT)**

Course: Image Processing (CSC321)

Class of 2024/Semester: 5

A Lab report on:

Image Processing

Submitted by:

Name: Sudin Rajbhandari

Roll: 1043

Submitted to:

Shaurav Lamsal

Department of Computer
Science

Submission Date: January 3, 2024

S.N	Title	Signature
1.	Introduction to HTML Elements and Attribute	
2.	Tables and Forms in HTML	
3.	Styling of HTML using CSS	
4.	Responsive Design and Use of Bootstrap	
5.	JavaScript Concepts	
6.	Implementation of jQuery	
7.	Implementation of AJAX	
8.	Handling PHP CRUD operation using Database	

Lab 1

Objective: Introduction to HTML Elements and Attributes

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML Elements and Attributes</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 20px;
    }
  </style>
</head>
<body>

<h1>Introduction to HTML Elements and Attributes</h1>

<p>This is a simple HTML document that introduces some HTML elements and attributes.</p>

<!-- Heading Elements -->
<h2>Heading Elements</h2>
<h1>This is an H1 Heading</h1>
<h2>This is an H2 Heading</h2>

<!-- Paragraph Element -->
<p>This is a paragraph element. It is used to define paragraphs of text.</p>

<!-- Anchor Element -->
<p>Visit <a href="https://www.example.com" target="_blank">Click Here</a> for more
information.</p>

<!-- List Elements -->
<h2>List Elements</h2>
<ul>
  <li>Unordered List Item 1</li>
  <li>Unordered List Item 2</li>
</ul>

<ol>
  <li>Ordered List Item 1</li>
```

Ordered List Item 2

<!-- Image Element -->

<h2>Image Element</h2>

</body>

</html>

Output:

Introduction to HTML Elements and Attributes

This is a simple HTML document that introduces some HTML elements and attributes.

Heading Elements

This is an H1 Heading

This is an H2 Heading

This is a paragraph element. It is used to define paragraphs of text.

Visit [Click Here](#) for more information.

List Elements

- Unordered List Item 1
 - Unordered List Item 2
1. Ordered List Item 1
 2. Ordered List Item 2

Image Element



Lab 2

Objective: Tables and Forms in HTML

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Tables and Forms in HTML</title>
  <style>
    table {
      border-collapse: collapse;
      width: 100%;
      border: 1px solid black;
    }

    th, td {
      border: 1px solid black;
      padding: 8px;
      text-align: left;
    }
  </style>
</head>
<body>

<h1>Tables and Forms in HTML</h1>

<!-- Table Example -->
<h2>Table Example</h2>
<table>
  <thead>
    <tr>
      <th>Name</th>
      <th>Email</th>
      <th>Phone</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Sudin Rajbhandari</td>
      <td>sudin@gmail.com</td>
      <td>123-456-7890</td>
    </tr>
    <tr>
```



```

        <td>Luffy Shrestha</td>
        <td>luffy@gmail.com</td>
        <td>987-654-3210</td>
    </tr>
</tbody>
</table>

<!-- Form Example -->
<h2>Form Example</h2>
<form action="/submit-form" method="post">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" required>
    <br>

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

    <label for="phone">Phone:</label>
    <input type="tel" id="phone" name="phone" required>
    <br>

    <label for="message">Message:</label>
    <textarea id="message" name="message" rows="4" required></textarea>
    <br>

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

</body>
</html>

```

Output:

Tables and Forms in HTML

Table Example

Name	Email	Phone
Sudin Rajbhandari	sudin@gmail.com	123-456-7890
Luffy Shrestha	luffy@gmail.com	987-654-3210

Form Example

Name:
 Email:
 Phone:
 Message:

Lab 3

Objective: To Implement Styling of HTML using CSS

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Styling HTML with CSS</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 0;
      background-color: #f4f4f4;
    }

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

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

    nav a {
      color: white;
      text-decoration: none;
      margin: 0 15px;
    }

    main {
      display: flex;
      justify-content: space-between;
      padding: 20px;
    }

    .left-column, .right-column {
```

```
        flex-basis: 48%;
        background-color: white;
        padding: 20px;
        box-sizing: border-box;
        margin-bottom: 20px;
    }

    footer {
        background-color: #333;
        color: white;
        text-align: center;
        padding: 10px;
        position: fixed;
        bottom: 0;
        width: 100%;
    }
</style>
</head>
<body>
    <header>
        <h1>Sudin Rajbhandari</h1>
    </header>
    <nav>
        <a href="#">Home</a>
        <a href="#">About</a>
        <a href="#">Contact</a>
    </nav>

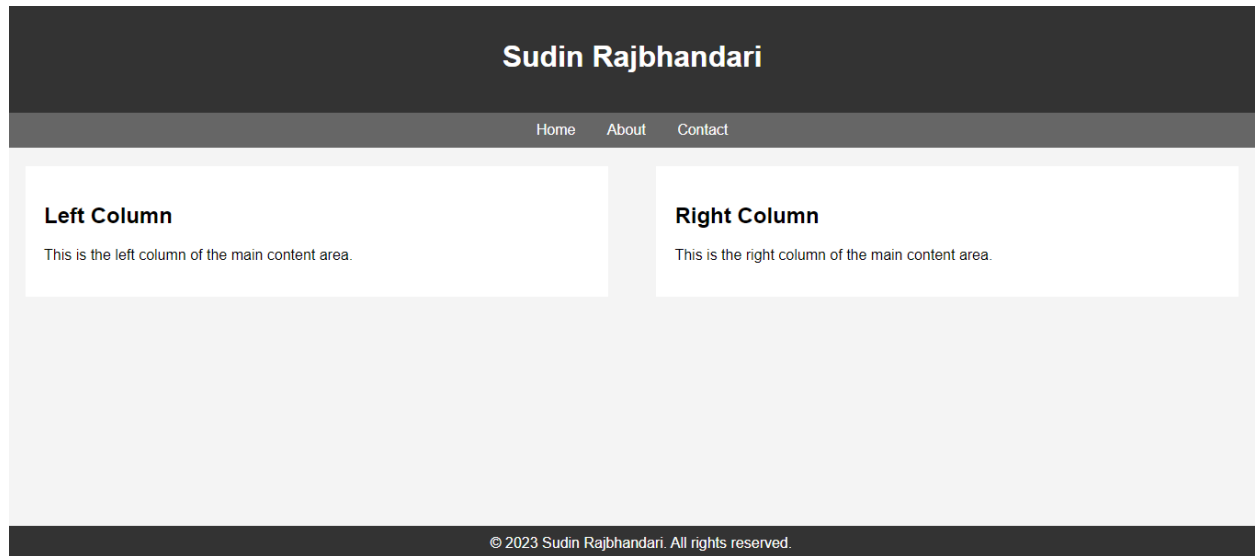
    <main>
        <div class="left-column">
            <h2>Left Column</h2>
            <p>This is the left column of the main content area.</p>
        </div>

        <div class="right-column">
            <h2>Right Column</h2>
            <p>This is the right column of the main content area.</p>
        </div>
    </main>

    <footer>
        &copy; 2023 Sudin Rajbhandari. All rights reserved.
    </footer>

</body>
</html>
```

Output:



Lab 4

Objective: Responsive Design and Use of Bootstrap

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Responsive Design with Bootstrap</title>

  <!-- Bootstrap CSS -->
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
</head>
<body>

  <!-- Bootstrap Navbar -->
  <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>

  <!-- Bootstrap Jumbotron -->
  <div class="jumbotron jumbotron-fluid">
    <div class="container">
      <h1 class="display-4">Welcome to My Website</h1>
      <p class="lead">A simple and responsive website built with Bootstrap.</p>
    </div>
  </div>
</body>
</html>
```

```

    </div>
</div>

<!-- Bootstrap Container for Content -->
<div class="container">
  <div class="row">
    <!-- Main Content -->
    <div class="col-lg-8">
      <h2>Main Content Area</h2>
      <p>This is the main content area of the webpage. It adapts to different screen
sizes.</p>
    </div>

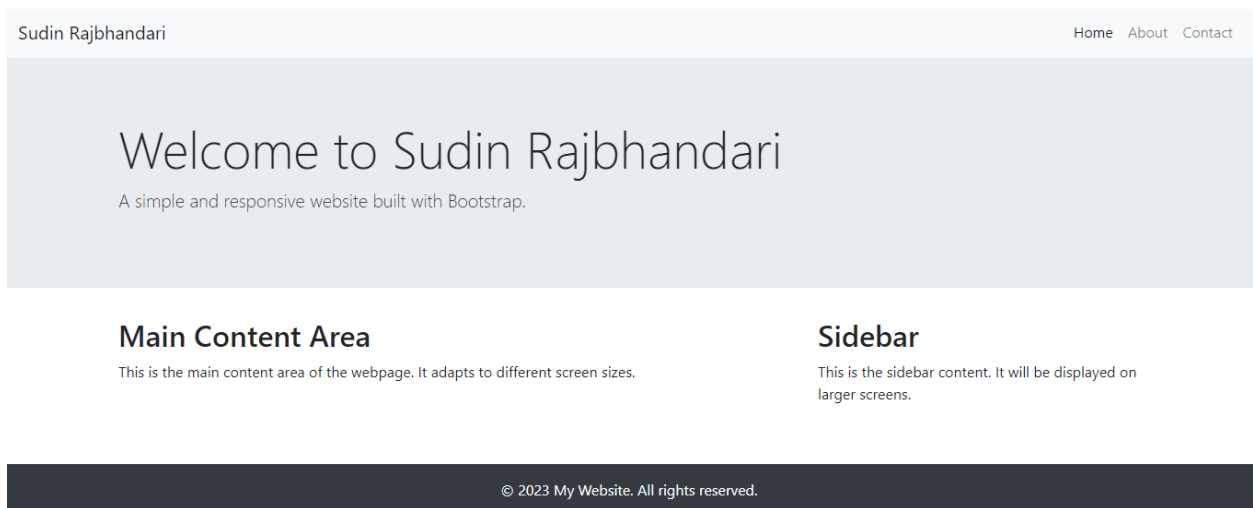
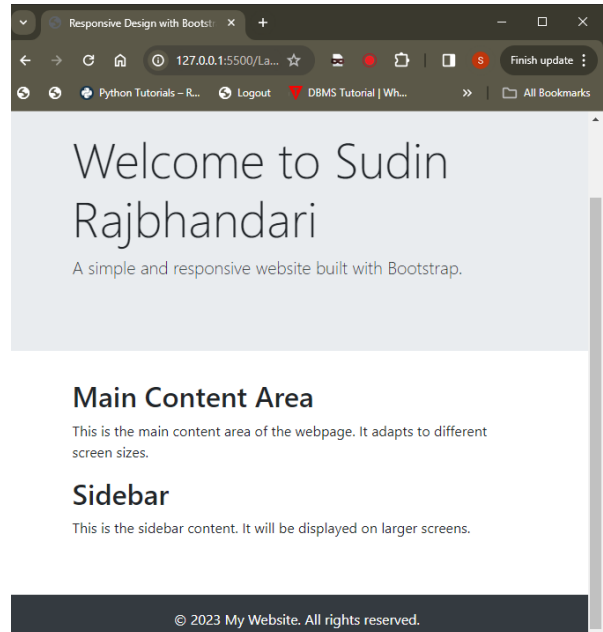
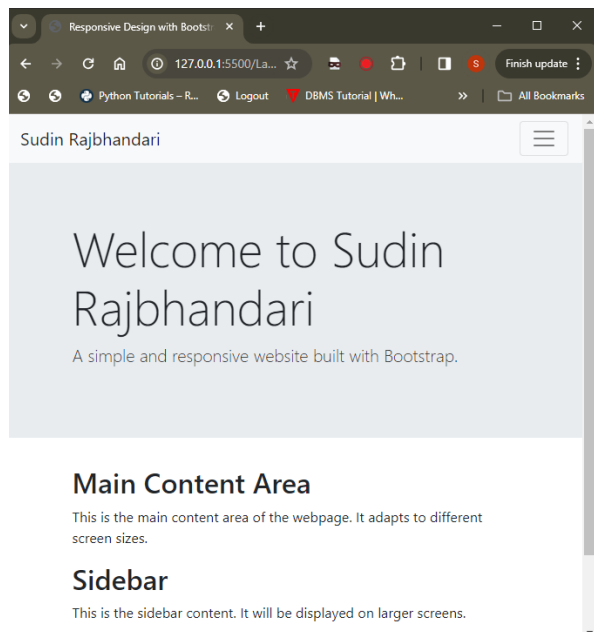
    <!-- Sidebar -->
    <div class="col-lg-4">
      <h2>Sidebar</h2>
      <p>This is the sidebar content. It will be displayed on larger screens.</p>
    </div>
  </div>
</div>

<!-- Bootstrap Footer -->
<footer class="bg-dark text-white text-center p-3 mt-5">
  &copy; 2023 My Website. All rights reserved.
</footer>

<!-- Bootstrap JS and Popper.js -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
<script
src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>
</body>
</html>

```

Output:



Lab 5

Objective: To Implement Javascript Concept

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Extended JavaScript Example</title>
</head>
<body>

  <h1> JavaScript Example</h1>

  <button id="myButton">Click Me!</button>

  <script>
    // JavaScript code

    // Variable declaration
    var clickCount = 0;

    // Function to be executed when the button is clicked
    function handleClick() {
      clickCount++;
      alert("Button Clicked! Click count: " + clickCount);

      // Condition: Change button text after 3 clicks
      if (clickCount === 3) {
        myButton.innerHTML = "Click Me Again!";
      }

      // DOM manipulation: Change background color after 5 clicks
      if (clickCount === 5) {
        document.body.style.backgroundColor = "#f0f0f0";
      }
    }

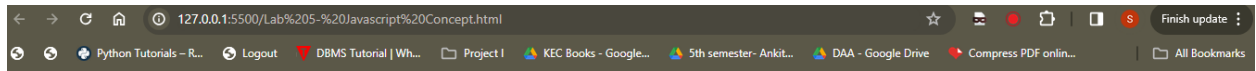
    // Get the button element by its ID
    var myButton = document.getElementById("myButton");

    // Attach a click event listener to the button
    myButton.addEventListener("click", handleClick);
  </script>
```



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

Output:



Extended JavaScript Example



JavaScript Example



Lab 6

Objective: To Implement JQuery

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>jQuery Form Example</title>

  <!-- Include jQuery library -->
  <script src="https://code.jquery.com/jquery-3.6.4.min.js"></script>

  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 20px;
    }

    label {
      display: block;
      margin-bottom: 8px;
    }

    input {
      width: 100%;
      padding: 8px;
      margin-bottom: 12px;
      box-sizing: border-box;
    }

    #result {
      margin-top: 20px;
      font-weight: bold;
    }
  </style>
</head>
<body>

  <h1>jQuery Form Example</h1>

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

```

<input type="text" id="name" placeholder="Enter your name">

<label for="email">Email:</label>
<input type="email" id="email" placeholder="Enter your email">

<label for="age">Age:</label>
<input type="number" id="age" placeholder="Enter your age">

<div id="result"></div>

<script>
    // jQuery code

    // jQuery ready function
    $(document).ready(function() {
        // Attach input event listeners
        $("#name, #email, #age").on("input", function() {
            // Get values from input fields
            var name = $("#name").val();
            var email = $("#email").val();
            var age = $("#age").val();

            // Update the result div
            $("#result").html("Name: " + name + "<br>Email: " + email + "<br>Age: " + age);
        });
    });
</script>

</body>
</html>

```

Output:

jQuery Form Example

Name:

Email:

Age:

Name: Sudin Rajbhandari
Email: sudin99r@gmail.com
Age:

Lab 7

Objective: To Implement AJAX

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>AJAX Example</title>

  <!-- Include jQuery library -->
  <script src="https://code.jquery.com/jquery-3.6.4.min.js"></script>

  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 20px;
    }

    #userInfo {
      margin-top: 20px;
    }
  </style>
</head>
<body>

  <h1>AJAX Example</h1>

  <button id="loadDataBtn">Load User Data</button>

  <div id="userInfo"></div>

  <script>
    // jQuery code

    // jQuery ready function
    $(document).ready(function() {
      // Attach click event listener to the button
      $("#loadDataBtn").click(function() {
        // Make AJAX request
        $.ajax({
          url: "https://jsonplaceholder.typicode.com/users/1", // Example JSON data endpoint
          method: "GET",
          dataType: "json",
```

```
        success: function(data) {
            // Update the content with the received data
            $("#userInfo").html(`
                <p>Name: ${data.name}</p>
                <p>Email: ${data.email}</p>
                <p>Phone: ${data.phone}</p>
            `);
        },
        error: function(xhr, status, error) {
            console.error("Error:", status, error);
        }
    });
});
</script>

</body>
</html>
```

Output:

AJAX Example

Load User Data

AJAX Example

Load User Data

Name: Leanne Graham

Email: Sincere@april.biz

Phone: 1-770-736-8031 x56442