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: Submitted to:

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Submission Date: January 1, 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

Introduction to HTML Elements and Attributes

```
<!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>
    <li>Ordered List Item 2</li>
    <li>Ordered List Item 3</li>
    <li>Ordered List Item 4</li>

</ol>

<!-- Image Element -->
<h2>Image Element</h2>
<img src="image.jpg" alt="Placeholder
Image" width="300" height="200">


</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
3. Ordered List Item 3
4. Ordered List Item 4

Image Element

Lab 2

Tables and Forms in HTML

```html
<!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>Pratik</td>
      <td>Pratik1@gmail.com</td>
      <td>9856475213</td>
    </tr>
    <tr>
    <td>Pratik Khadka</td>
```

```html
        <td>Pratikk23@gmail.com</td>
         <td>9658632547</td>
      </tr>
   </tbody>
</table>

<!-- Form Example -->
<h2>Form Example</h2>
<form action="/submit-form" method="post">
   <label for="name">Name:</label>
                <input type="text"><br>
                <label for="email">Email</label>
                <input type="email"><br>
                <label for="number">Age</label>
                <input type="number"><br>
                <label for="birthday">Birthday</label>
                <input type="date"><br>
                <p>Language you know</p>
                <label for="java">JAVA</label>
                <input type="checkbox">
                <br>
                <label for="java">C</label>
                <input type="checkbox">
                <br>
                <label for="java">Python</label>
                <input type="checkbox">
                <br>
                <p>
                        Gender
                </p>
                <label for="male">Male</label>
                <input type="radio"> <br>
                <label for="female">Female</label>
                <input type="radio"> <br>
                <label for="bloodgroup">Blood Group</label>
                <select id="dropdown">
                        <option>A+ve</option>
                        <option>A-ve</option>
                        <option>B+ve</option>
                        <option>B-ve</option>
```

```html
                <option>O+ve</option>
                <option>O-ve</option>
            </select><br>
            <label for="about">About</label>
            <textarea rows="4"></textarea><br>
            <label for="file">File</label>
            <input type="file"><br>
            <label for="phone">Phone</label>
            <input type="text"> <br>
            <label for="url">URL</label>
            <input type="url"> <br>
            <label for="color">Color</label>
            <input type="color"> <br>
            <label for="password">Password</label>
            <input type="password"> <br>
            <input type="reset">
            <input type="submit" value="Submit">
    </form>

</body>
</html>
```

Output:

Tables and Forms in HTML

Table Example

Name	Email	Phone
Pratik	Pratik1@gmail.com	9856475213
Pratik Khadka	Pratikk23@gmail.com	9658632547

Form Example

Name: [input]
Email [input]
Age [input]
Birthday [mm/dd/yyyy]

Language you know

JAVA ☐
C ☐
Python ☐

Gender

Male ○
Female ○
Blood Group [A+ve ▾]

About [textarea]
File [Choose File] No file chosen
Phone [input]
URL [input]

Color [■]
Password [input]
[Reset] [Submit]

Lab 3

To Implement Styling of HTML using CSS

```html
<!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: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
      margin: 0;
      padding: 0;
      background-color: #f0f0f0;
      color: #333;
    }

    header {
      background-color: #3498db;
      color: white;
      padding: 20px;
      text-align: center;
      border-bottom: 5px solid #2980b9;
    }

    nav {
      background-color: #555;
      color: white;
      padding: 10px;
      text-align: center;
    }

    nav a {
      color: white;
      text-decoration: none;
```

```css
      margin: 0 15px;
      transition: color 0.3s ease;
    }

    nav a:hover {
      color: #3498db;
    }

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

    .left-column,
    .right-column {
      flex-basis: 48%;
      background-color: #fff;
      padding: 20px;
      box-sizing: border-box;
      margin-bottom: 20px;
      border-radius: 5px;
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    }

    footer {
      background-color: #333;
      color: white;
      text-align: center;
      padding: 10px;
      position: fixed;
      bottom: 0;
      width: 100%;
      border-top: 5px solid #2980b9;
    }
  </style>
</head>
<body>
  <header>
    <h1>Pratik Khadka - Class of 2024</h1>
  </header>
  <nav>
    <a href="#">Home</a>
```

```html
      <a href="#">About</a>
      <a href="#">Contact</a>
      <a href="#">Help and Support</a>
    </nav>

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

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

    <footer>
      &copy; 2022 Pratik. All rights reserved.
    </footer>
  </body>
</html>
```
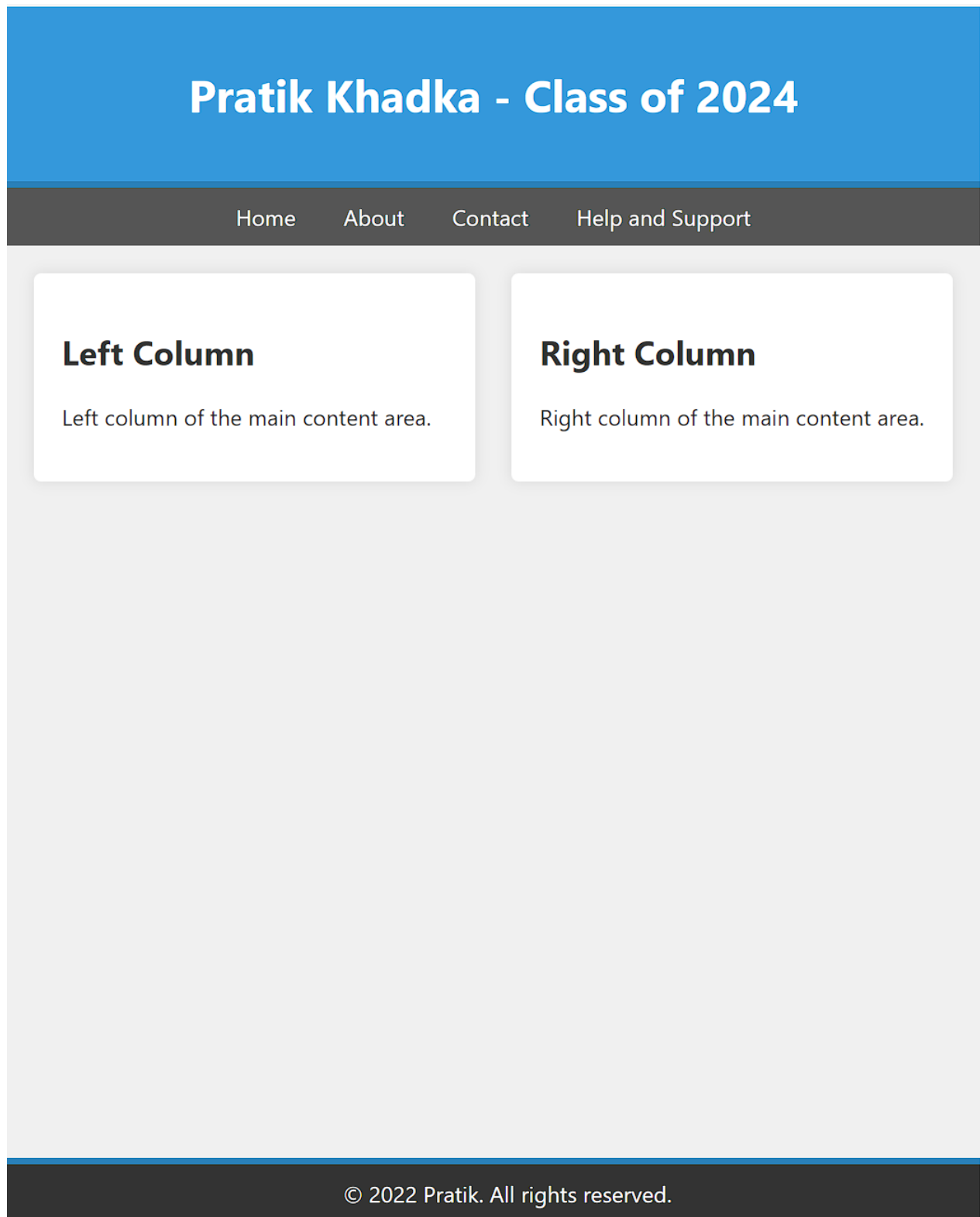
Output:

Pratik Khadka - Class of 2024

Home   About   Contact   Help and Support

Left Column

Left column of the main content area.

Right Column

Right column of the main content area.

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>Creative Hub</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="#">Creative Hub</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">
```

```html
          <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 Creative Hub</h1>
      <p class="lead">Discover the endless possibilities of this imaginative and responsive
website.</p>
    </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>Primary content area of the webpage. It adapts to various screen sizes.</p>
      </div>

      <!-- Sidebar -->
```

```html
      <div class="col-lg-4">

        <h2>Explore More</h2>

        <p>This is the additional content area. It's visible on larger screens.</p>

      </div>

    </div>

  </div>


  <!-- Bootstrap Footer -->

  <footer class="bg-dark text-white text-center p-3 mt-5">

    &copy; 2023 Pratik Khadka. 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>
```
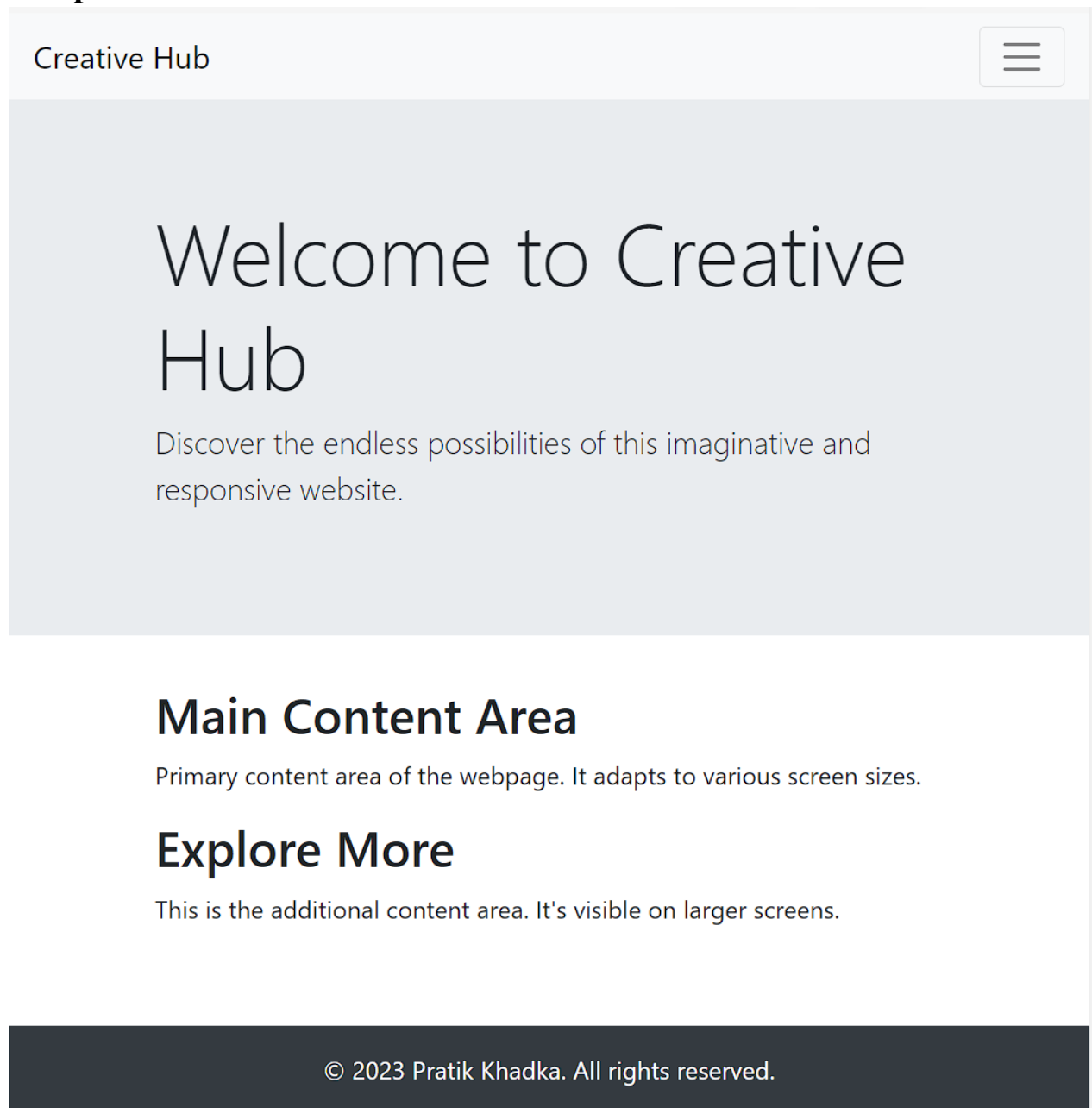
Output:

Creative Hub ☰

Welcome to Creative Hub

Discover the endless possibilities of this imaginative and responsive website.

Main Content Area

Primary content area of the webpage. It adapts to various screen sizes.

Explore More

This is the additional content area. It's visible on larger screens.

Lab 5

Objective: To Implement Javascript Concept **Source Code:**

```html
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Interactive JavaScript Demo</title>
  <style>
    body {
      font-family: 'Arial', sans-serif;
      text-align: center;
      background-color: #f8f8f8;
    }

    h1 {
      color: #333;
    }

    button {
      padding: 10px 20px;
      font-size: 16px;
      background-color: #4CAF50;
      color: white;
      border: none;
      cursor: pointer;
```

```
            transition: background-color 0.3s
ease;
        }


        button:hover {
            background-color: #45a049;
        }
    </style>
</head>


<body>


    <h1>Interactive JavaScript Demo</h1>


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


    <script>
        // JavaScript code


        // Variable declaration
        var clickCounter = 0;


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


            // Change button text after 3 clicks
            if (clickCounter === 3) {
                interactiveButton.innerHTML =
"Click Me Again!";
```

```
        }

        // Change background color after 5
clicks

        if (clickCounter === 5) {

document.body.style.backgroundColor =
"#e6f7ff";

        }
    }


    // Get the button element by its ID

    var interactiveButton =
document.getElementById("interactiveButt
on");


    // Attach a click event listener to the
button

interactiveButton.addEventListener("click",
handleButtonClick);
    </script>
</body>

</html>
```

Output:

An embedded page at app.onecompiler.com says	NEW HTML ⌄ RUN ▶
Button Clicked! Click count: 1	
OK	**Interactive JavaScript Demo**
	Click Me!

An embedded page at app.onecompiler.com says	NEW HTML ⌄ RUN ▶
Button Clicked! Click count: 2	
OK	**Interactive JavaScript Demo**
	Click Me!

An embedded page at app.onecompiler.com says	NEW HTML ⌄ RUN ▶
Button Clicked! Click count: 3	
OK	**Interactive JavaScript Demo**
	Click Me!

Lab 6

Objective: To Implement Jquery

Source Code:

```html
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Interactive Form with jQuery</title>

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

  <style>
    body {
      font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
      margin: 20px;
      background-color: #f9f9f9;
    }

    h1 {
      color: #333;
    }

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

```css
      color: #555;
    }

    input {
      width: 100%;
      padding: 10px;
      margin-bottom: 16px;
      box-sizing: border-box;
    }

    #result {
      margin-top: 20px;
      font-weight: bold;
      color: #333;
    }
  </style>
</head>

<body>
  <h1>Interactive Form with jQuery</h1>
  <label for="yourName">Your Name:</label>
  <input type="text" id="yourName" placeholder="Enter your name">

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

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

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

<script>
  // jQuery code

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

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

</html>
```

Output:

Interactive Form with jQuery

Your Name:

Pratik Khadka

Your Email:

Pratikkhadka23@gmail.com

Your Age:

23

Name: Pratik Khadka
Email: Pratikkhadka23@gmail.com
Age: 23

Lab 7

Objective: To Implement AJAX

Source Code:

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport"
content="width=device-width, initial-
scale=1.0">
    <title>Dynamic User Info</title>

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

    <style>
        body {
            font-family: 'Segoe UI', Tahoma,
Geneva, Verdana, sans-serif;
            margin: 20px;
            background-color: #f5f5f5;
        }

        h1 {
            color: #333;
            text-align: center;
        }

        #loadDataBtn {
            padding: 10px 20px;
```

```css
        font-size: 16px;

        background-color: #3498db;

        color: white;

        border: none;

        cursor: pointer;

        transition: background-color 0.3s
ease;

    }


    #loadDataBtn:hover {

        background-color: #2980b9;

    }


    #userInfo {

        margin-top: 20px;

        padding: 20px;

        background-color: #fff;

        box-shadow: 0 0 10px rgba(0, 0, 0,
0.1);

        border-radius: 8px;

    }


    p {

        margin: 10px 0;

        color: #555;

    }
  </style>
</head>

<body>

  <h1>Dynamic User Info(AJAX
EXAMPLE) </h1>
```

```html
<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 to a different URL for user data
      $.ajax({
        url: "https://jsonplaceholder.typicode.com/todos/1", // Change the endpoint as needed
        method: "GET",
        dataType: "json",
        success: function (data) {
          // Update the content with the received data
          $("#userInfo").html(`
            <p>User ID: ${data.userId}</p>
            <p>Title: ${data.title}</p>
            <p>Completed: ${data.completed ? 'Yes' : 'No'}</p>
          `);
        },
        error: function (xhr, status, error) {
```

```
                console.error("Error:",
status, error);
                }
            });
        });
    });
  </script>


</body>


</html>
```

Output:

Lab 8

Objective: Handling PHP CRUD operation using Database

Source Code:

```php
<?php
$servername = "localhost";
$username = "your_username";
$password = "your_password";
$dbname = "crud_example";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// CRUD operations

// Create
if ($_SERVER["REQUEST_METHOD"] == "POST" && isset($_POST["create"])) {
    $name = $_POST["name"];
    $email = $_POST["email"];

    $sql = "INSERT INTO users (name, email) VALUES ('$name', '$email')";

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

// Read
$sql = "SELECT id, name, email FROM users";
$result = $conn->query($sql);

// Update
if ($_SERVER["REQUEST_METHOD"] == "POST" && isset($_POST["update"])) {
    $id = $_POST["id"];
    $name = $_POST["name"];
```

```php
    $email = $_POST["email"];

    $sql = "UPDATE users SET name='$name', email='$email' WHERE id=$id";

    if ($conn->query($sql) === TRUE) {
      echo "Record updated successfully";
    } else {
      echo "Error updating record: " . $conn->error;
    }
}

// Delete
if ($_SERVER["REQUEST_METHOD"] == "GET" && isset($_GET["delete"])) {
    $id = $_GET["delete"];

    $sql = "DELETE FROM users WHERE id=$id";

    if ($conn->query($sql) === TRUE) {
      echo "Record deleted successfully";
    } else {
      echo "Error deleting record: " . $conn->error;
    }
}

// Edit
if ($_SERVER["REQUEST_METHOD"] == "GET" && isset($_GET["edit"])) {
    $id = $_GET["edit"];

    $sql = "SELECT id, name, email FROM users WHERE id=$id";
    $result = $conn->query($sql);

    if ($result->num_rows == 1) {
      $row = $result->fetch_assoc();
      $editName = $row["name"];
      $editEmail = $row["email"];
    } else {
      echo "User not found";
    }
}

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

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

<!-- Create form -->
<form method="post" action="<?php echo $_SERVER["PHP_SELF"]; ?>">
    <label for="name">Name:</label>
    <input type="text" name="name" required>
    <label for="email">Email:</label>
    <input type="email" name="email" required>
    <button type="submit" name="create">Create</button>
</form>

<!-- Read data -->
<?php
if ($result->num_rows > 0) {
    echo "<h2>User List</h2>";
    echo "<ul>";
    while ($row = $result->fetch_assoc()) {
        echo "<li>{$row['name']} - {$row['email']}
            <a href=\"{$_SERVER['PHP_SELF']}?delete={$row['id']}\">Delete</a>
            <a href=\"{$_SERVER['PHP_SELF']}?edit={$row['id']}\">Edit</a></li>";
    }
    echo "</ul>";
} else {
    echo "No users found";
}
?>

<!-- Edit form -->
<?php if (isset($editName) && isset($editEmail)) : ?>
    <h2>Edit User</h2>
    <form method="post" action="<?php echo $_SERVER["PHP_SELF"]; ?>">
        <input type="hidden" name="id" value="<?php echo $id; ?>">
        <label for="name">Name:</label>
        <input type="text" name="name" value="<?php echo $editName; ?>" required>
        <label for="email">Email:</label>
        <input type="email" name="email" value="<?php echo $editEmail; ?>" required>
```
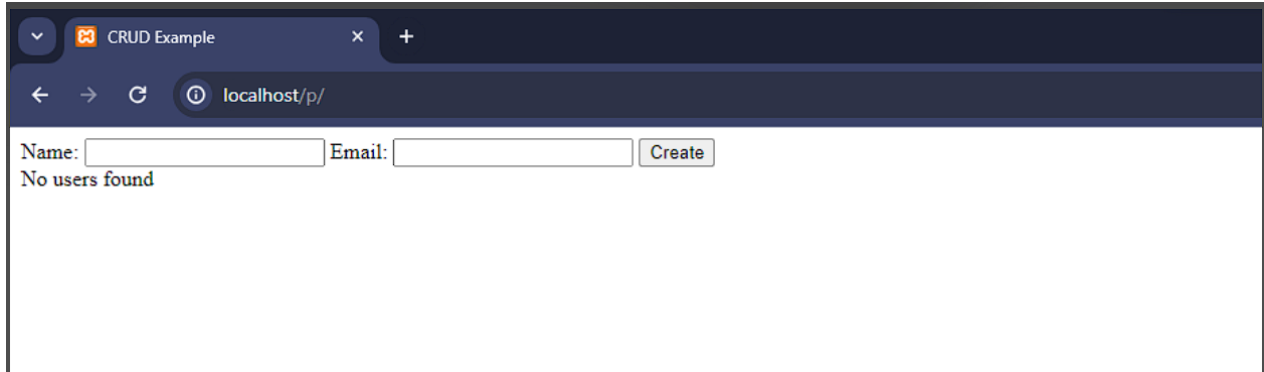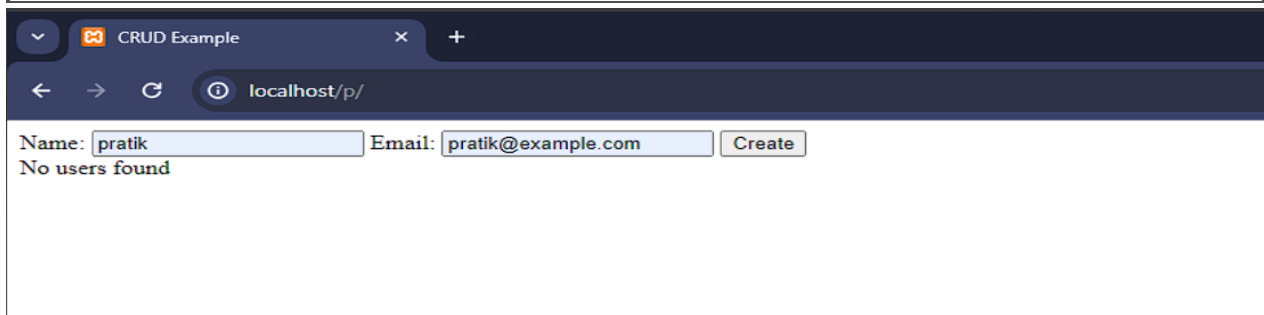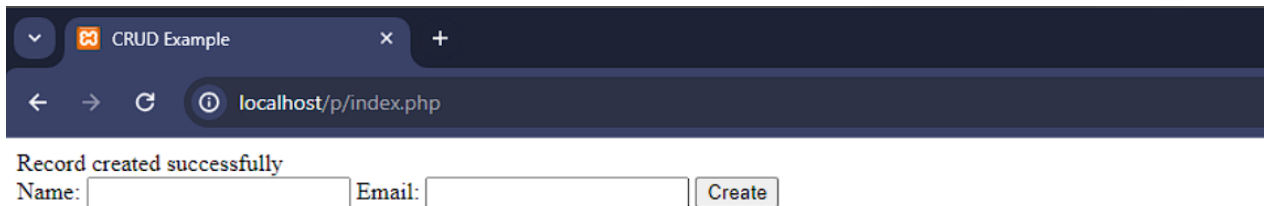
```
            <button type="submit" name="update">Update</button>
    </form>
<?php endif; ?>


</body>
</html>
```

Output: