MASTER OF COMPUTER APPLICATIONS

(Web Technologies)- MCA 312

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1.

Create a web page with an appropriate image towards the left hand side of the page, when user clicks on the image another web page should open.

1st.html:

```
<!DOCTYPE html>
<html>
<body>
  <a href="file:///C:/Users/OM/Desktop/webtech/1st.a.html" target="_blank">
    <img src="file:///C:/Users/OM/Downloads/n.jpg" alt="Clickable image">
  </a>
</body>
</html>
```

1st.a.html:

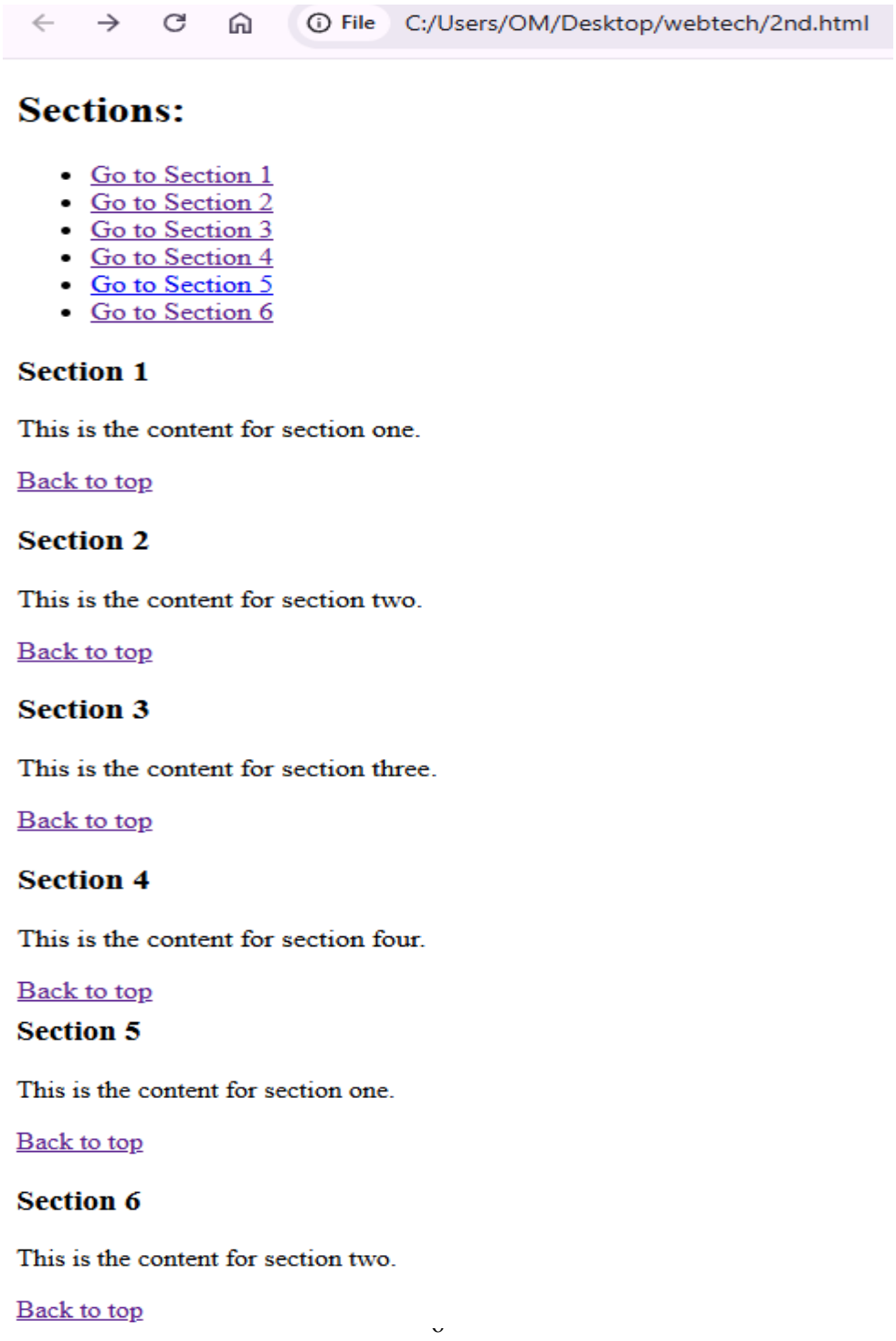
```
<html>
<body>
<h2>This webpage got opened after clicking on first webpage</h2>
</body>
</html>
```

2.

Create a web page for internal links, when the user clicks on different links on the web page it should go to the appropriate sections in the same page.

```
<!DOCTYPE html>
<html>
<body>
  <h2>Sections:</h2>
  <ul>
    <li><a href="#section1">Go to Section 1</a></li>
    <li><a href="#section2">Go to Section 2</a></li>
    <li><a href="#section3">Go to Section 3</a></li>
    <li><a href="#section4">Go to Section 4</a></li>
 <li><a href="#section5">Go to Section 5</a></li>
    <li><a href="#section6">Go to Section 6</a></li>
  </ul>

  <!-- Sections -->
  <h3 id="section1">Section 1</h3>
  <p>This is the content for section one.</p>
<a href="#top">Back to top</a>

  <h3 id="section2">Section 2</h3>
  <p>This is the content for section two.</p>
<a href="#top">Back to top</a>

  <h3 id="section3">Section 3</h3>
  <p>This is the content for section three.</p>
<a href="#top">Back to top</a>

  <h3 id="section4">Section 4</h3>
  <p>This is the content for section four.</p>
<a href="#top">Back to top</a>
```

```
 <h3 id="section5">Section 5</h3>
  <p>This is the content for section one.</p>
<a href="#top">Back to top</a>
  <h3 id="section6">Section 6</h3>
  <p>This is the content for section two.</p>
<a href="#top">Back to top</a>
</body>
</html>
```



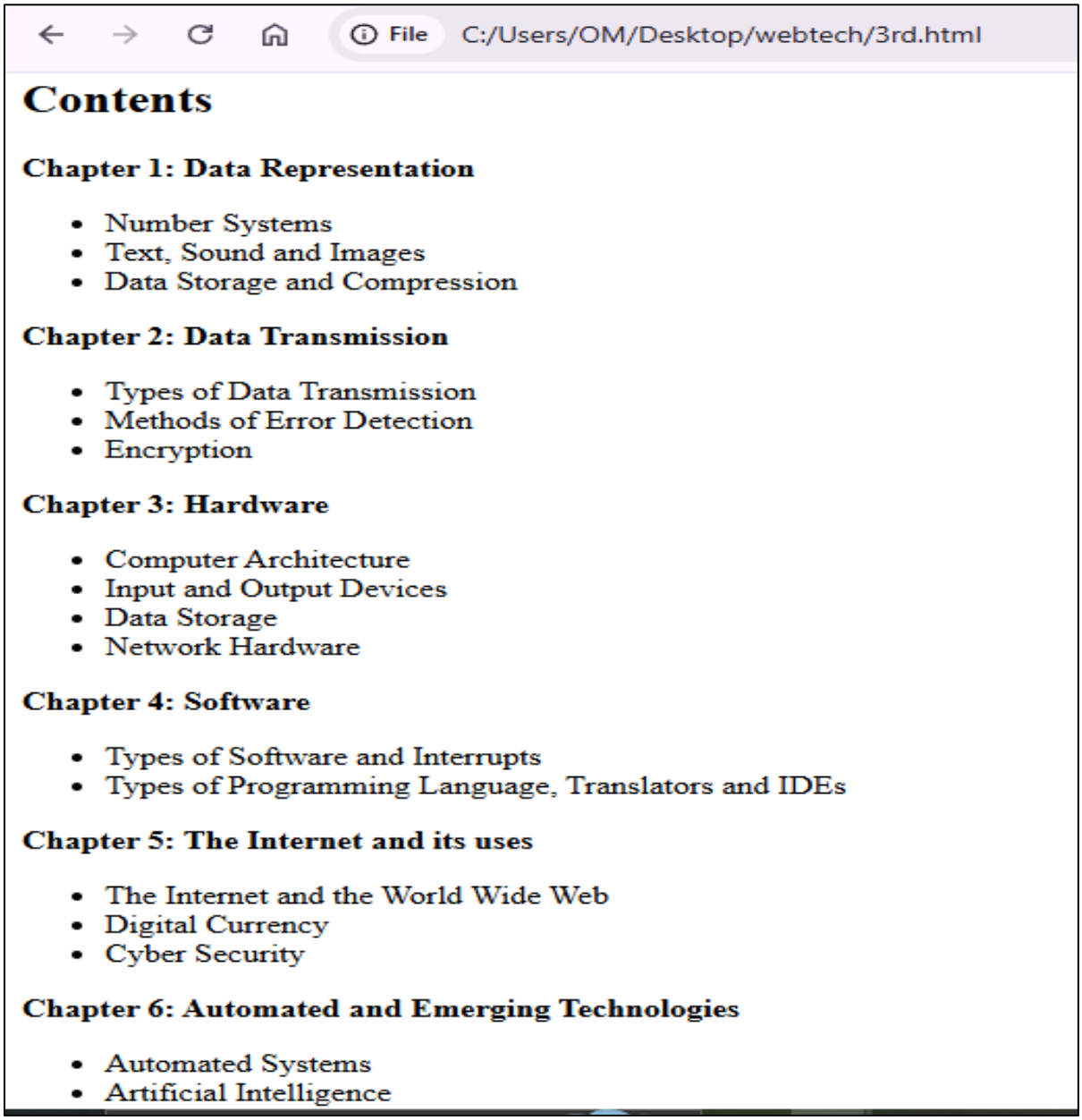
3.

Create a HTML document containing a nested list showing a content page of any book.

```
<!DOCTYPE html>
<html>
<body>
 <h2>Contents</h2>
  <li><b>Chapter 1: Data Representation</b>
   <ul>
    <li>Number Systems</li>
    <li>Text, Sound and Images</li>
    <li>Data Storage and Compression</li>
   </ul> </li>
  <li><b>Chapter 2: Data Transmission</b>
   <ul>
    <li>Types of Data Transmission</li>
    <li>Methods of Error Detection</li>
    <li>Encryption</li>
   </ul> </li>
  <li><b>Chapter 3: Hardware</b>
   <ul>
    <li>Computer Architecture</li>
    <li>Input and Output Devices</li>
    <li>Data Storage</li>
    <li>Network Hardware</li>
   </ul> </li>
  <li><b>Chapter 4: Software</b>
   <ul>
    <li>Types of Software and Interrupts</li>
    <li>Types of Programming Language, Translators and IDEs</li> </ul></li>
    <li><b>Chapter 5: The Internet and its uses</b>
    <ul><li>The Internet and the World Wide Web</li>
```

```
        <li>Digital Currency</li>
        <li>Cyber Security</li>
       </ul></li>
       <li><b>Chapter 6: Automated and Emerging Technologies</b>
       <ul><li>Automated Systems</li>
            <li>Artificial Intelligence</li>
        </ul></li>
</body>
</html>
```

OUTPUT:



4.

Create a table using HTML and CSS to show your class time table.

```
<html>
<head>
<link rel="stylesheet" href="styles.css">
</head>
<body>
<table border="2" cellpadding="10">
<tr>
<th colspan="8" class="rept"><center><font size="6">Department Of Computer Science Timetable w.e.f.25/08/2025</font></center></th></tr>
<tr>
<th class="ived">  </th>
<th class="cept"> 10-11 am</th>
<th class="cept">11-12 am</th><th class="cept"> 12-1pm</th>
<th class="cept">1-2pm</th><th class="cept">2-3pm</th>
<th class="cept">3-4pm</th><th class="cept">4-5pm</th></tr>
<tr>
<td class="cept">Monday</td>
<td class="nep"><center>Artificial Intelligence & Expert Systems</center></td>
<td class="pen"><center>Lab Work (R)</center></td>
<td class="epn"><center>Lab Work (Web Technology)</center></td><td class="ived"></td>
<td class="pne"><center>Data Mining Using R</center></td><td class="enp"><center>Information Security</center></td>
```

<td class="npe"> Web Technology </td></tr>

<tr>

<td class="cept">Tuesday</td>

<td class="nep"> Artificial Intelligence & Expert Systems </td>

<td class="pen"> Lab Work (R) </td>

<td class="epn">Lab Work (Web Technology)</td><td class="ived"></td>

<td class="pne">Data Mining Using R</td><td class="enp"> Information Security </td>

<td class="npe"> Web Technology </td></tr>

<tr>

<td class="cept">Wednesday</td><td class="ben"> Cloud Computing </td>

<td class="pen"> Lab Work (R) </td>

<td class="epn">Lab Work (Web Technology)</td><td class="ived"></td>

<td class="pne">Data Mining Using R</td><td class="enp"> Information Security </td>

<td class="npe"> Web Technology </td></tr>

<tr>

<td class="cept">Thursday</td><td class="ben"> Cloud Computing </td>

<td class="pen"> Lab Work (R) </td>

<td class="epn">Lab Work (Web Technology)</td><td class="ived"></td>

<td class="pne">Data Mining Using R</td><td class="enp"> Information Security </td>

<td class="npe"> Web Technology </td></tr>

<tr>

<td class="cept">Friday</td><td class="nep"> Artificial Intelligence & Expert Systems </td>

```
<td class="ben"><center>Cloud Computing</center></td>

<td class="pen"><center>Lab Work (R)</center></td><td class="ived"></td><td class="epn">Lab Work (Web Technology)</td>

<td class="ived">Games Period</td><td class="ived">Games Period 2.0</td></tr>

<tr>

<td class="cept">Saturday</td><td class="nep"><center>Artificial Intelligence & Expert Systems</center></td>

<td class="ben"><center>Cloud Computing</center></td>

<td class="pen"><center>Lab Work (R)</center></td><td class="ived"></td><td class="epn">Lab Work (Web Technology)</td>

<td class="ived">Games/Bunk</td><td class="ived">Bunk/Games  </td></tr>

</table>

</center>


</body>

</html>
```

styles.css:

```
td:empty{
border:none;
}
.nep{
 background-color:red;
 color: white;
}
.pen{
 background-color:black;
 color: white;
```

```
}
.epn{
 background-color:brown;
 color: white;
}
.pne{
 background-color:magenta;
 color: white;
}
.enp{
 background-color:blue;
 color: white;
}
.npe{
 background-color:grey;
 color: white;
}

.ben{
 background-color:goldenrod;
 color: white;
}
.cept{
background-color:green;
color:white;
}
.rept{
background-color:purple;
color:white;
}
.eel{
background-color:lightblue;
```

```
color:white;
}
.ived{
background-color:beige;
}
.table1, .table2 {
  display: inline-block;
  vertical-align: top;
  margin-right: 100px;
  cellpadding:15px;
}
```

OUTPUT:

Department Of Computer Science Timetable w.e.f.25/08/2025

	10-11 am	11-12 am	12-1pm	1-2pm	2-3pm	3-4pm	4-5pm
Monday	Artificial Intelligence & Expert Systems	Lab Work (R)	Lab Work (Web Technology)		Data Mining Using R	Information Security	Web Technology
Tuesday	Artificial Intelligence & Expert Systems	Lab Work (R)	Lab Work (Web Technology)		Data Mining Using R	Information Security	Web Technology
Wednesday	Cloud Computing	Lab Work (R)	Lab Work (Web Technology)		Data Mining Using R	Information Security	Web Technology
Thursday	Cloud Computing	Lab Work (R)	Lab Work (Web Technology)		Data Mining Using R	Information Security	Web Technology
Friday	Artificial Intelligence & Expert Systems	Cloud Computing	Lab Work (R)		Lab Work (Web Technology)	Games Period	Games Period 2.0
Saturday	Artificial Intelligence & Expert Systems	Cloud Computing	Lab Work (R)		Lab Work (Web Technology)	Games/Bunk	Bunk/Games

5.

WAP in html to design a Bio-Data

```
<!DOCTYPE html>
<html>
<body>
  <h2>Bio-Data</h2>
  <p><strong>Name:</strong> Taylor Betsy Ross Otto</p>
  <p><strong>Age:</strong> 21</p>
  <p><strong>Gender:</strong>Female</p>
  <p><strong>Father's Name:</strong> Mr. Greg Otto</p>
  <p><strong>Mother's Name:</strong> Mrs. Katie Otto</p>

  <p><strong>Contact Number:</strong> 123-456-7890</p>
  <p><strong>Email:</strong> robet21@gmail.com</p>
  <p><strong>Address:</strong> 54B Main Street, Westport, Connecticut,USA</p>

  <h2>Educational Qualification</h2>
<table border= "1" cellpadding="8" cellspacing="0">
<tr>
<th>Qualification</th>
<th>Board/ University</th>
<th>Year</th></tr>
<tr>
<td>12th</td>
```

```
<td>ICSE</td>
<td>2020</td></tr>
<tr>
<td>BTech(CS)</td>
<td>Oxford University</td>
<td>2024</td></tr>
<tr>
<td>MTech(CS)</td>
<td>HPU</td>
<td>2026</td></tr></table>
  <h2>Skills</h2>
  <ul>
    <li>Programming in C, Python.</li>
    <li>Web Development.</li>
  </ul>

  <h2>Interests</h2>
  <ul>
    <li>Gardening</li>
     <li>Writing </li>
  </ul>
<p><b> Date:</b>_____</p>
<p><b> Place:</b>_____</p>
</body>
</html>
```

OUTPUT:

Bio-Data

Name: Taylor Betsy Ross Otto

Age: 21

Gender: Female

Father's Name: Mr. Greg Otto

Mother's Name: Mrs. Katie Otto

Contact Number: 123-456-7890

Email: robet21@gmail.com

Address: 54B Main Street, Westport, Connecticut,USA

Educational Qualification

Qualification	Board/ University	Year
12th	ICSE	2020
BTech(CS)	Oxford University	2024
MTech(CS)	HPU	2026

Skills

- Programming in C, Python.
- Web Development.

Interests

- Gardening
- Writing

Date:_____

Place:_____

6.

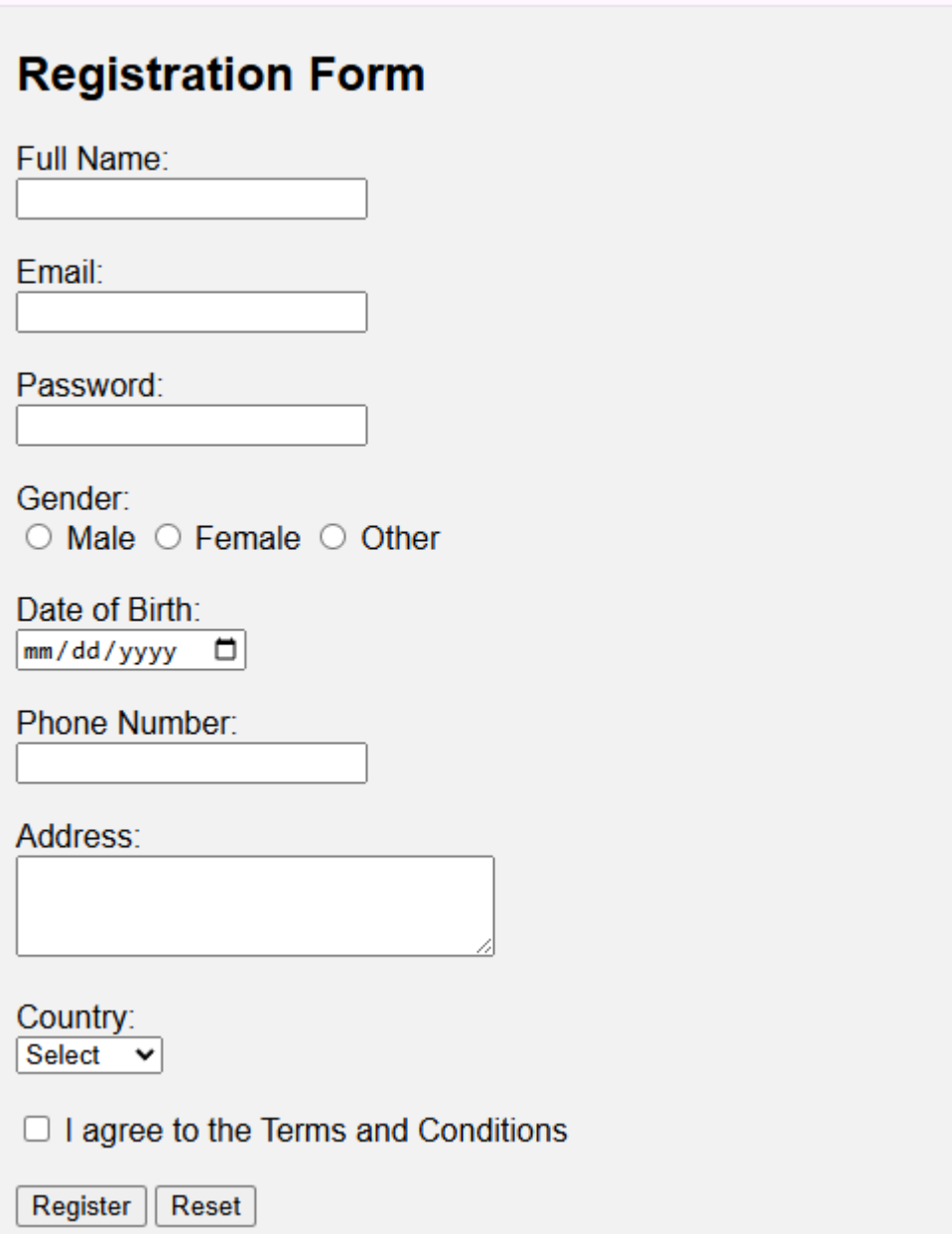
Write a HTML program to develop a static Registration Form.

```
<!DOCTYPE html>
<html>
<head>
   <title>Registration Form</title>
</head>
<body style="font-family: Arial; background-color: #f2f2f2;">
   <h2 style="text-align: center;">Registration Form</h2>
      <label>Full Name:</label><br>
      <input type="text" name="fullname" required><br><br>

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

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

      <label>Gender:</label><br>
      <input type="radio" name="gender" value="Male"> Male
      <input type="radio" name="gender" value="Female"> Female
      <input type="radio" name="gender" value="Other"> Other
      <br><br>
```

```
    <label>Date of Birth:</label><br>
    <input type="date" name="dob"><br><br>

    <label>Phone Number:</label><br>
    <input type="tel" name="phone"><br><br>

    <label>Address:</label><br>
    <textarea name="address" rows="3" cols="30"></textarea><br><br>

    <label>Country:</label><br>
    <select name="country">
      <option value="">Select</option>
      <option value="India">India</option>
      <option value="USA">USA</option>
      <option value="UK">UK</option>
      <option value="Australia">Australia</option>
    </select><br><br>

    <input type="checkbox" name="terms" required> I agree to the Terms and Conditions<br><br>

    <input type="submit" value="Register">
    <input type="reset" value="Reset">
  </form>
</body>
```

</html>

OUTPUT:


Registration Form
Full Name:
Email:
Password:
Gender:
Male
Female
Other
Date of Birth:
mm/dd/yyyy
Phone Number:
Address:
Country:
Select
I agree to the Terms and Conditions
Register
Reset

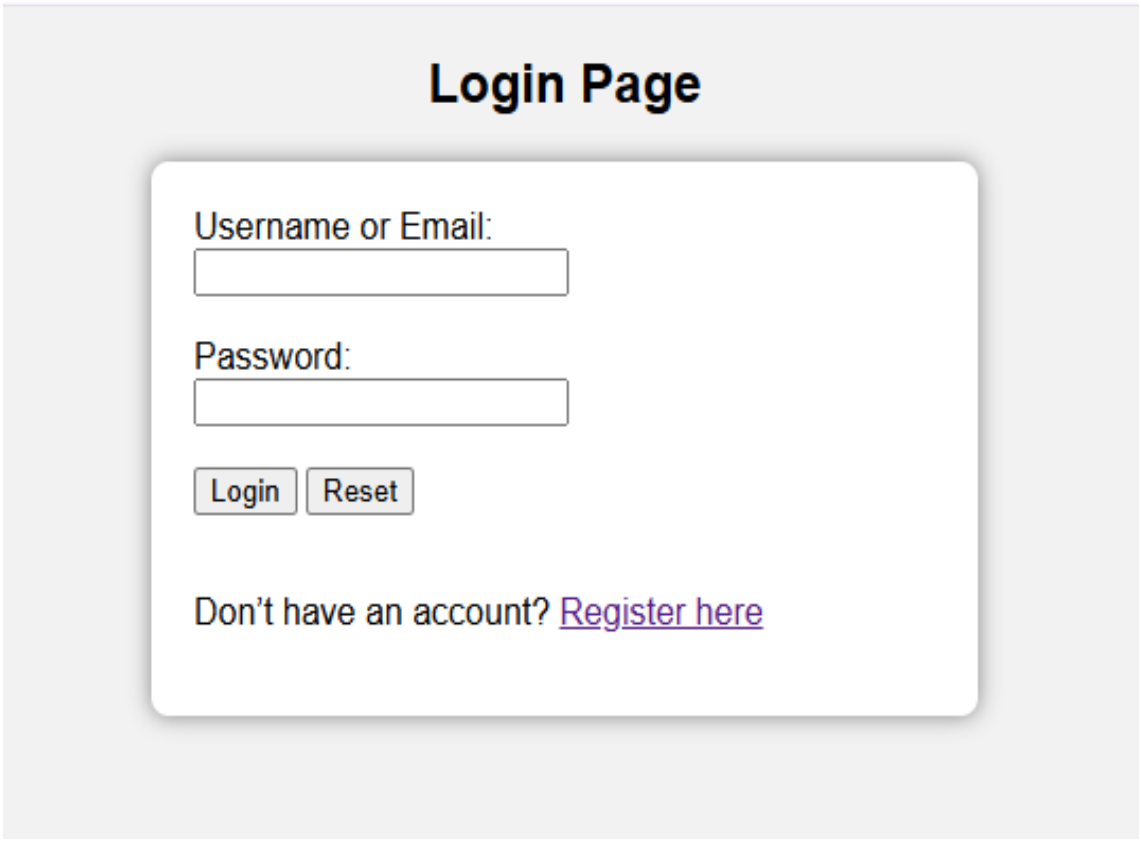
7.

Write a HTML program to develop a static Login Page.

```
<!DOCTYPE html>
<html>
<head>
   <title>Login Page</title>
</head>
<body style="font-family: Arial; background-color: #f2f2f2;">
   <h2 style="text-align: center;">Login Page</h2>
<form action="#" method="post"
        style="width: 350px; margin: auto; background-color: white; padding: 20px;
              border-radius: 8px; box-shadow: 0 0 10px gray;">

      <label>Username or Email:</label><br>
      <input type="text" name="username" required><br><br>

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

      <input type="submit" value="Login">
      <input type="reset" value="Reset"><br><br>

      <p>Don’t have an account?
 <a href="file:///C:/Users/OM/Desktop/webtech/6th.html">Register here</a></p>
```

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

OUTPUT:



8.

Write code for demonstration of cascading stylesheets

a. Internal Stylesheets

b. External Stylesheets

c. Inline Stylesheets

```
<!DOCTYPE html>
<html>
<head>

 <!-- Internal -->
 <style>
  body {
   background-color: #f0f8ff;
   font-family: Arial, sans-serif;
  }

  h1 {
   color: darkblue;
  }

  p.internal {
   color: green;
   font-size: 18px;
  }
```

```
  </style>
  <!-- External -->
  <link rel="stylesheet" href="stylesz.css">
</head>
<body>
<h1>CSS Types</h1>

<p class="internal">Microwave cooks so do other hot things but coffee can not  included as it is hot but not equipment to be used to cook something.</p>
<p class="external">Blake says cadel can walk off.</p>

<!-- Inline -->
<p style="color: red; font-weight: bold;">
Anybody who has not walked a mile in my shoe has no right to comment !
</p>
</body>
</html>
```

stylez.css:

```
.external {
  color: blue;
  font-size: 16px;
  font-style: italic;
}
```

CSS Types

Microwave cooks so do other hot things but coffee can not included as it is hot but not equipment to be used to cook something.

Blake says cadel can walk off.

Anybody who has not walked a mile in my shoe has no right to comment !

9.

Write a javascript program for validating REGISTRATION FORM.

```
<!DOCTYPE html>
<html>
<head>
  <title>Registration Form Validation</title>
  <style>
    .error { color: red; }
  </style>
  <script>
    function validateForm() {
      const name = document.getElementById("name").value;
      const email = document.getElementById("email").value;
      const password = document.getElementById("password").value;
      const course = document.getElementById("course").value;
      const agree = document.getElementById("agree").checked;

      let isValid = true;

      // Clear previous error messages
      document.getElementById("name-error").textContent = "";
      document.getElementById("email-error").textContent = "";
      document.getElementById("password-error").textContent = "";
      document.getElementById("course-error").textContent = "";
```

```
document.getElementById("agree-error").textContent = "";

// Validate name
if (name === "" || /\d/.test(name)) {
  document.getElementById("name-error").textContent = "Enter your name";
  isValid = false;
}

// Validate email
if (email === "" || !email.includes("@") || !email.includes(".")) {
  document.getElementById("email-error").textContent = "Enter a valid email address.";
  isValid = false;
}

// Validate password
if (password === "" || password.length < 6) {
  document.getElementById("password-error").textContent = "Field cannot be empty ";
  isValid = false;
}

// Validate course selection
if (course === "") {
  document.getElementById("course-error").textContent = "Please select a course.";
  isValid = false;
}
```

```
    // Validate agreement checkbox
    if (!agree) {
      document.getElementById("agree-error").textContent = "You must agree to the terms.";
      isValid = false;
    }

    if (isValid) {
      alert("Form submitted successfully!");
      return true;
    } else {
      return false;
    }
  }
  </script>
</head>
<body>
  <h2>Registration Form</h2>
  <form onsubmit="return validateForm()">
    <label for="name">Name:</label><br>
    <input type="text" id="name" name="name"><br>
    <span id="name-error" class="error"></span><br>

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

```
    <span id="email-error" class="error"></span><br>

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

    <label for="course">Select Course:</label><br>
    <select id="course" name="course">
      <option value="">--Select--</option>
      <option value="cs">Computer Science</option>
      <option value="it">Information Technology</option>
      <option value="ece">Electronics</option>
    </select><br>
    <span id="course-error" class="error"></span><br>

    <input type="checkbox" id="agree" name="agree">
    <label for="agree">I agree to the terms and conditions</label><br>
    <span id="agree-error" class="error"></span><br>

    <input type="submit" value="Register">
  </form>
</body>
</html>
```

OUTPUT:

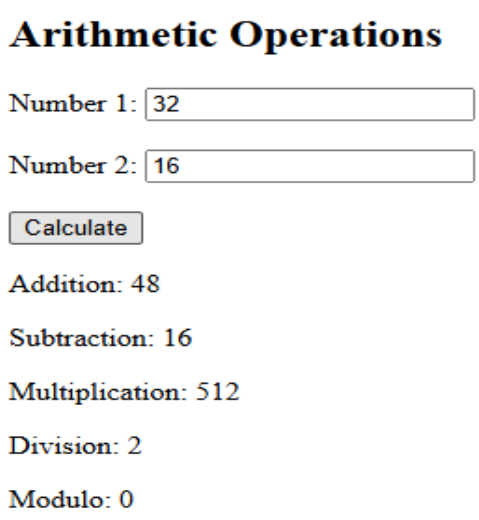

Registration Form
Name:
Enter your name
Email:
meghnagupta436@gmail.co
Password:
Select Course:
Computer Science
I agree to the terms and conditions
You must agree to the terms.
Register
This page says
Form submitted successfully!
OK

10.

Write a program in Java Script to Perform All Arithmetic Operation.

```
<!DOCTYPE html>
<html>
<head>
 <title>Arithmetic Operations in JavaScript</title>
 <script>
  function performOperations() {
   let num1 = parseFloat(document.getElementById("num1").value);
   let num2 = parseFloat(document.getElementById("num2").value);

   if (isNaN(num1) || isNaN(num2)) {
    alert("Please enter valid numbers.");
    return;
   }
   document.getElementById("resultAdd").innerText = "Addition: " + (num1 + num2);
   document.getElementById("resultSub").innerText = "Subtraction: " + (num1 - num2);
   document.getElementById("resultMul").innerText = "Multiplication: " + (num1 * num2);
   if (num2 !== 0) {
    document.getElementById("resultDiv").innerText = "Division: " + (num1 / num2);
    document.getElementById("resultMod").innerText = "Modulo: " + (num1 % num2);
   } else {
    document.getElementById("resultDiv").innerText = "Division: Cannot divide by zero";
```

```
        document.getElementById("resultMod").innerText = "Modulo: Cannot modulo by zero";
      }
    }
  </script>
</head>
<body>
  <h2>Arithmetic Operations</h2>
  <label>Number 1: <input type="text" id="num1"></label><br><br>
  <label>Number 2: <input type="text" id="num2"></label><br><br>
  <button onclick="performOperations()">Calculate</button>
  <p id="resultAdd"></p>
  <p id="resultSub"></p>
  <p id="resultMul"></p>
  <p id="resultDiv"></p>
  <p id="resultMod"></p>
</body>
</html>
```



11.

Create a program in Javascript that uses a recursive function to calculate the factorial of a number.

```
<!DOCTYPE html>
<html>
<body>

<h2>Factorial Calculator</h2>

<label for="numInput">Enter a non-negative integer:</label>
<input type="number" id="numInput" min="0" />
<button onclick="calculateFactorial()">Calculate</button>

<p>Factorial: <span id="result"></span></p>

<script>
  function factorial(n) {
    if (n === 0) return 1;
    return n * factorial(n - 1);
  }

  function calculateFactorial() {
    const input = document.getElementById('numInput').value;
    const number = parseInt(input);
```

```
  const resultElem = document.getElementById('result');


  if (isNaN(number) || number < 0) {
    resultElem.textContent = 'Please enter a valid non-negative integer';
  } else {
    const fact = factorial(number);
    resultElem.textContent = fact;
  }
 }
</script>


</body>
</html>
```

Factorial Calculator

Enter a non-negative integer: 5 Calculate

Factorial: 120

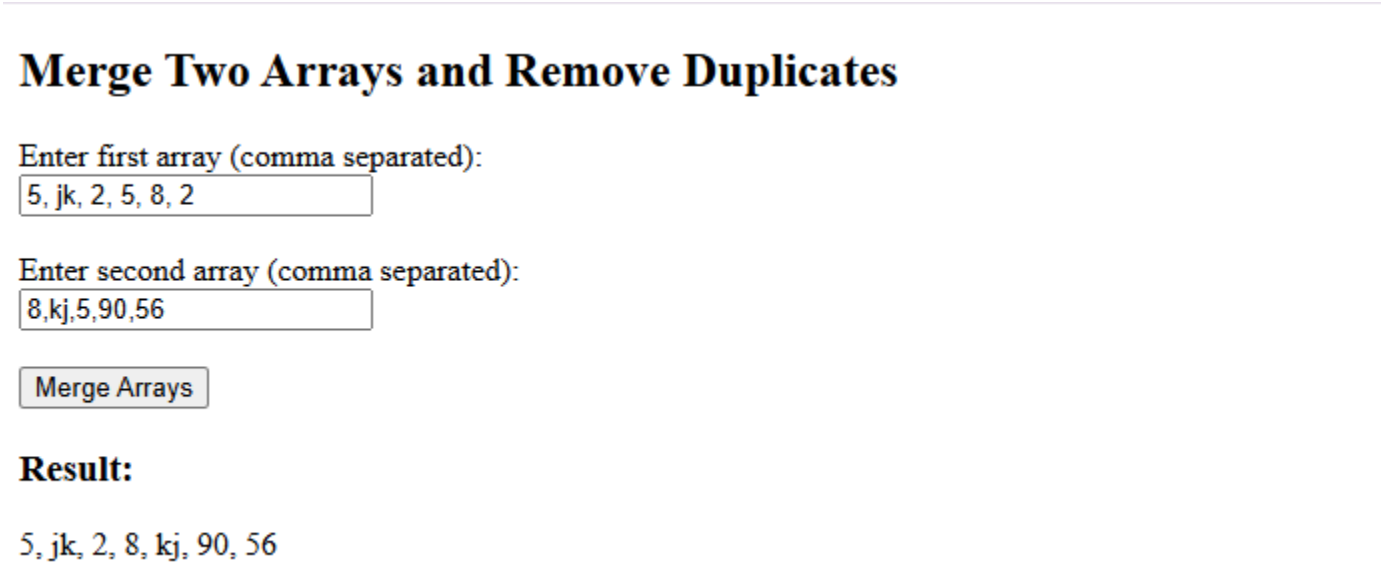
12.

Create a program in Javascript that merges two arrays and removes duplicate elements.

```
<!DOCTYPE html>
<html>
<body>

<h2>Merge Two Arrays and Remove Duplicates</h2>

<label>Enter first array (comma separated):</label><br>
<input type="text" id="array1Input" placeholder="e.g. 1,2,3"><br><br>

<label>Enter second array (comma separated):</label><br>
<input type="text" id="array2Input" placeholder="e.g. 3,4,5"><br><br>

<button onclick="mergeArrays()">Merge Arrays</button>

<h3>Result:</h3>
<p id="result"></p>

<script>
function mergeArrays() {
  const arr1 = document.getElementById('array1Input').value.split(',').map(item => item.trim());
  const arr2 = document.getElementById('array2Input').value.split(',').map(item => item.trim());
```

```
  // Merge arrays and remove duplicates using Set
  const merged = [...new Set([...arr1, ...arr2])];

  document.getElementById('result').textContent = merged.join(', ');
}
</script>

</body>
</html>
```

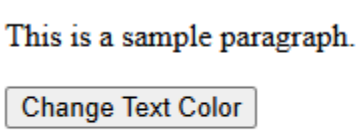
OUTPUT:

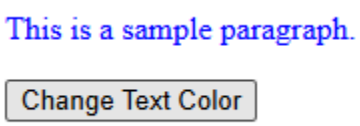


13.

Create a program in Javascript that changes the text color of a paragraph when a button is clicked.

```
<!DOCTYPE html>
<html>
<body>
<p id="myParagraph">This is a sample paragraph.</p>
<button onclick="changeTextColor()">Change Text Color</button>
<script>
function changeTextColor() {
  const para = document.getElementById('myParagraph');
  para.style.color = 'blue';  // Change the color to blue (you can choose any color)
}
</script>
</body>
</html>
```





14.

Create a form with fields (e.g., name, email, password) and validate user input when the form is submitted. Display error messages if the input is invalid.

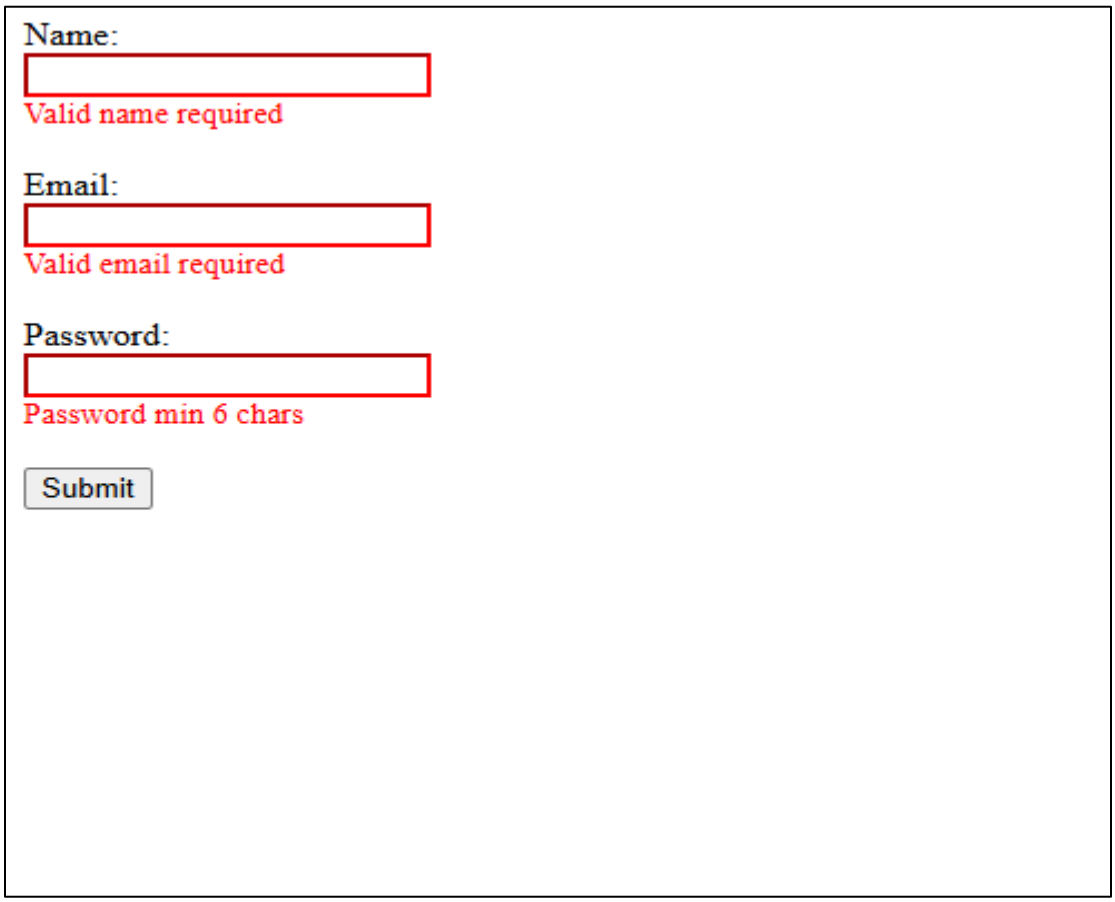
```
<!DOCTYPE html>
<html>
<head>
  <style>
    .error { color: red; font-size: 0.9em; }
    input.success { border-color: green; }
    input.error { border-color: red; }
  </style>
</head>
<body>

<form id="form" novalidate>
  <label>Name:</label><br>
  <input id="name" type="text"><div id="nameErr" class="error"></div><br>

  <label>Email:</label><br>
  <input id="email" type="email"><div id="emailErr" class="error"></div><br>

  <label>Password:</label><br>
  <input id="pass" type="password"><div id="passErr" class="error"></div><br>
```

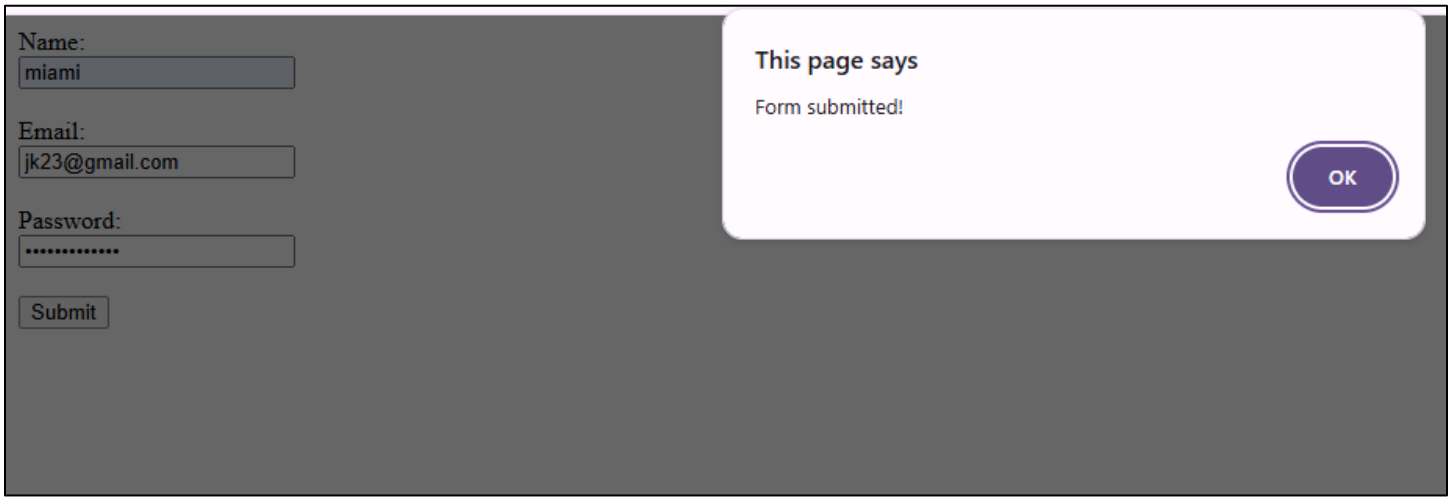
```
  <button type="submit">Submit</button>
</form>

<script>
const form = document.getElementById('form');
form.addEventListener('submit', e => {
  e.preventDefault();
  clearErrors();
  let valid = true;

  const name = form.name.value.trim();
  const email = form.email.value.trim();
  const pass = form.pass.value.trim();

  if (!name || /\d/.test(name)) {
    showError('nameErr', 'Valid name required');
    form.name.classList.add('error');
    valid = false;
  } else form.name.classList.add('success');

  const emailRegex = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
  if (!email || !emailRegex.test(email)) {
    showError('emailErr', 'Valid email required');
    form.email.classList.add('error');
    valid = false;
```

```
  } else form.email.classList.add('success');

  if (!pass || pass.length < 6) {
    showError('passErr', 'Password min 6 chars');
    form.pass.classList.add('error');
    valid = false;
  } else form.pass.classList.add('success');

  if (valid) alert('Form submitted!');
});

function showError(id, msg) {
  document.getElementById(id).textContent = msg;
}

function clearErrors() {
  ['nameErr','emailErr','passErr'].forEach(id => {
    document.getElementById(id).textContent = '';
  });
  ['name','email','pass'].forEach(id => {
    form[id].classList.remove('error','success');
  });
}
</script>
```

```
</body>

</html>
```

OUTPUT:





15.

Create a PHP program for login page with sql connection.

db.html:

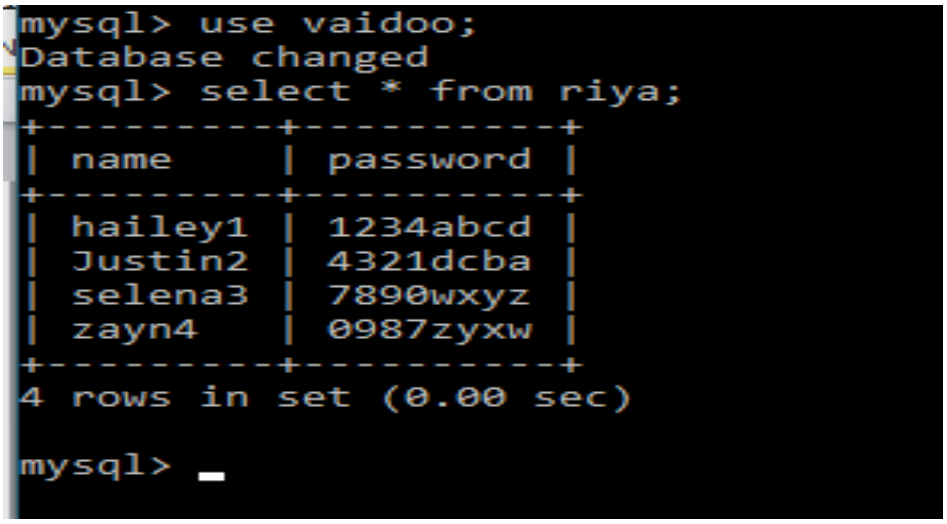
```
<!DOCTYPE html>
<html>
<body>
<form action="sql.php" method="post">
<br><center><table border=2" bordercolor="red">
<tr>
<td>
<table> <tr font face="white">
<th colspan="2" bgcolor="crimson" align="center">
<h3>LOGIN FORM</th></tr>
<tr><th align="left">UserName</th>
<td><input type="text" name="u">
</td>
</tr>
<tr><th align="left">Password</th>
<td><input type="password" name="p">
</td> </tr>
<tr align="center"><br><td><input type="submit" value=" LOGIN "></td>
<td><input type="reset" value=" CLEAR ">
</td> </tr>
```

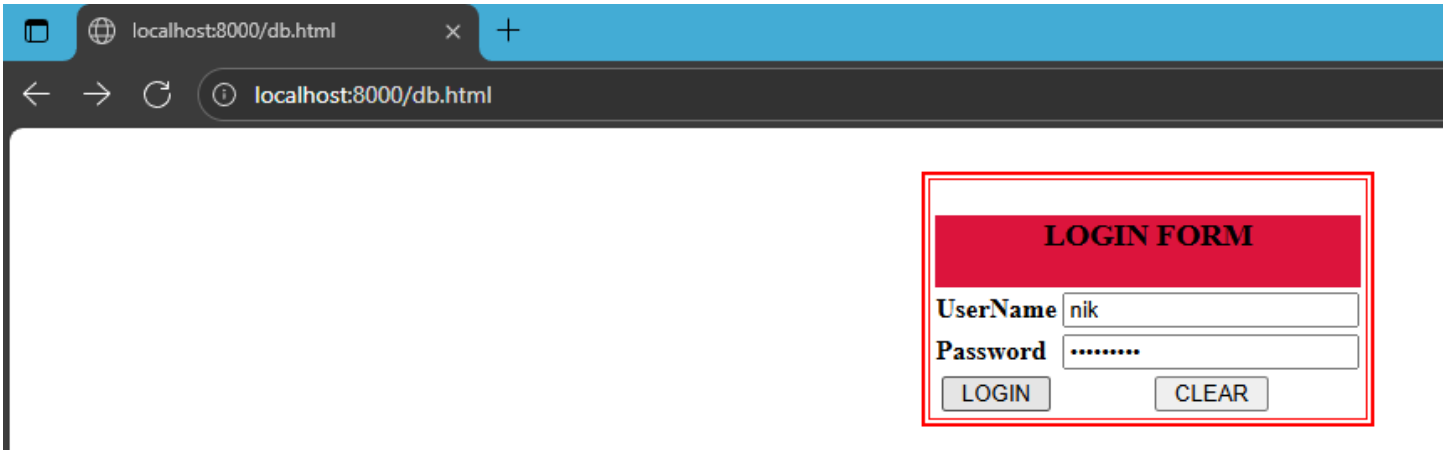
```
</table>
</td>
</tr> </table>
</center>
</form>
</body>
</html>
```

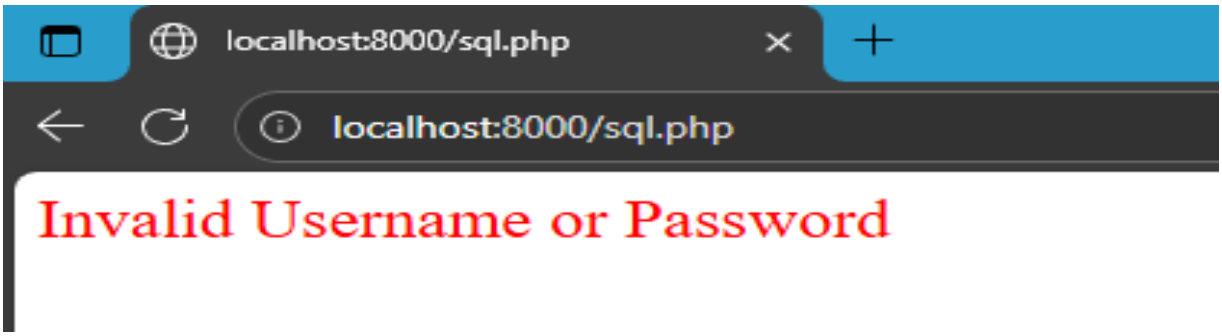
sql.php:

```
<?php
$un = $_POST['u'];
$pd = $_POST['p'];
$con = 0;

// Create connection using mysqli
$conn = new mysqli("localhost", "root", "nik@123N", "vaidoo");
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Select all users
$sql = "SELECT name, password FROM riya";
$result = $conn->query($sql);
```

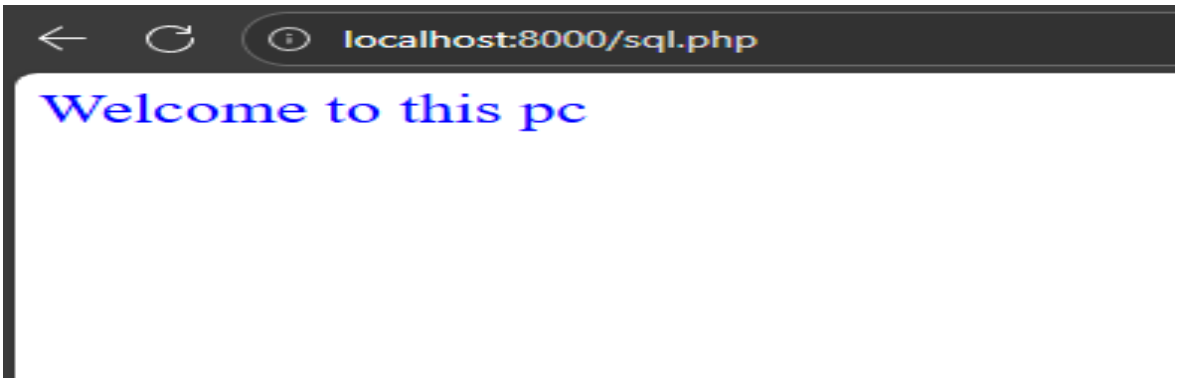
```
if ($result->num_rows > 0) {
    while ($row = $result->fetch_assoc()) {
        if ($un == $row["name"] && $pd == $row["password"]) {
            $con = 1;
            break;
        }
    }
}

if ($con == 1) {
    echo "<font color='blue' size='5' align='center'>Welcome to this pc</font>";
} else {
    echo "<font color='red' size='5' align='center'>Invalid Username or Password</font>";
}

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




localhost:8000/db.html
localhost:8000/db.html
LOGIN FORM
UserName
nik
Password
LOGIN
CLEAR


localhost:8000/sql.php
localhost:8000/sql.php
Invalid Username or Password


LOGIN FORM
UserName
zayn4
Password
LOGIN
CLEAR


localhost:8000/sql.php
Welcome to this pc

16.

Write a PHP program for creating and manipulating

a) Indexed array

b) Associative array

c) Multidimensional array

a) Indexed Array:

```
<!DOCTYPE html>
<html>
<body>
    <h2>Indexed Array Manipulation</h2>
    <?php
    // Creating an indexed array
    $name = array("Devi", "Fabiola", "Eleanor", "Trent");

    // Adding a new name
    $name[] = "Paxton";

    // Display first name
    echo "<p>First name: <b>" . $name[0] . "</b></p>";

    // Display all name
    echo "<p>All name:</p><ul>";
```

```
    for ($i = 0; $i < count($name); $i++) {
        echo "<li>" . $name[$i] . "</li>";
    }
    echo "</ul>";
    ?>
</body>
</html>
```

Indexed Array Manipulation

First name: **Devi**

All name:

- Devi
- Fabiola
- Eleanor
- Trent
- Paxton

b) Associative Array:

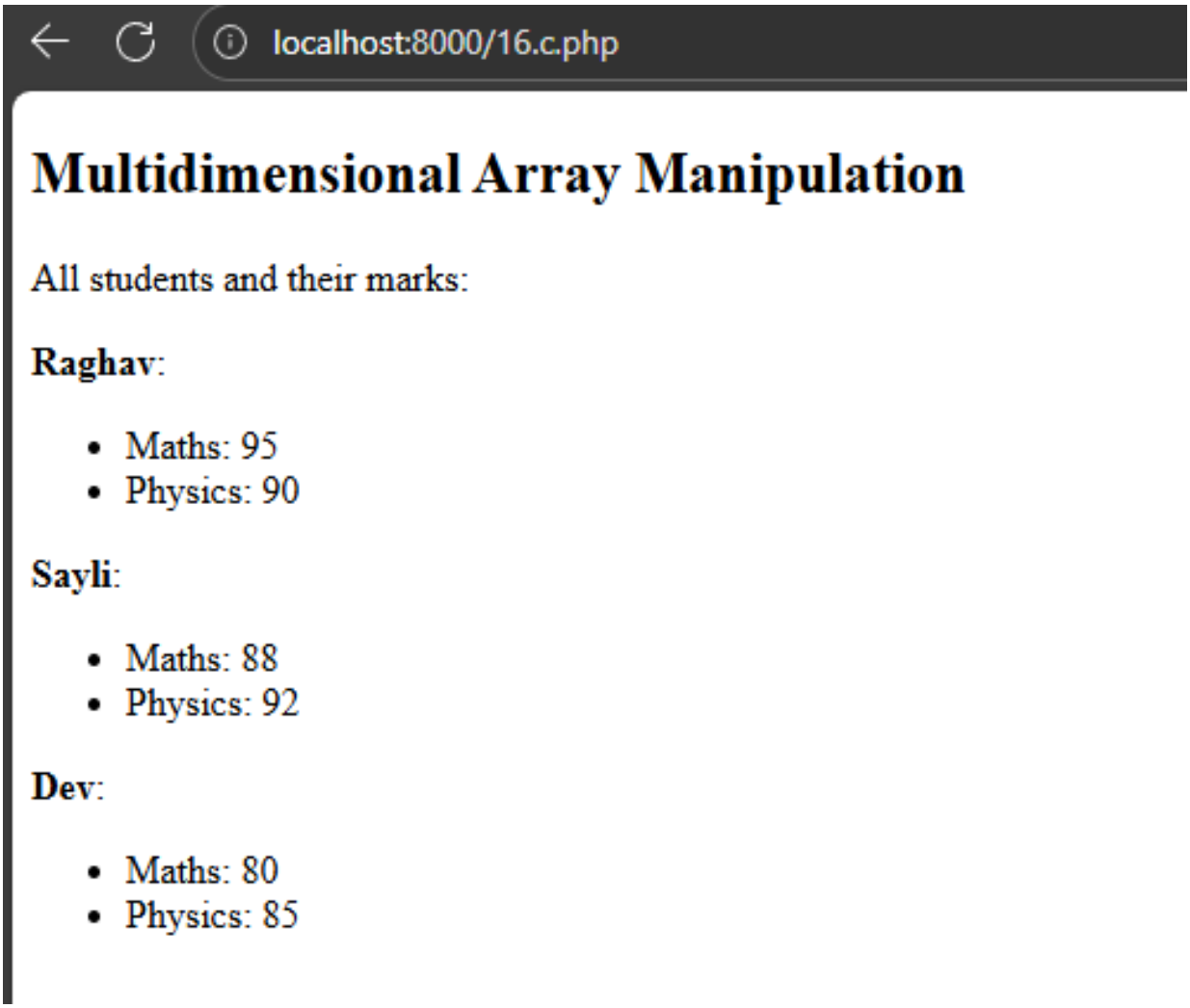
```
<!DOCTYPE html>
<html>
<head>
    <title>PHP Associative Array Example</title>
</head>
<body>
    <h2>Associative Array Manipulation</h2>
    <?php
    // Creating an associative array
```

```
    $person = array(
        "name" => "Paresh",
        "age" => 23,
        "city" => "New York"
    );

    // Modifying age
    $person["age"] = 24;

    // Adding profession
    $person["profession"] = "Cook";

    // Display person's name
    echo "<p>Name: <b>" . $person["name"] . "</b></p>";

    // Display all details
    echo "<p>Person details:</p><ul>";
    foreach ($person as $key => $value) {
        echo "<li>" . ucfirst($key) . ": " . $value . "</li>";
    }
    echo "</ul>";
    ?>
</body>
</html>
```

c) Multidimensional Array:

```
<!DOCTYPE html>
<html>
<head>
   <title>PHP Multidimensional Array Example</title>
</head>
<body>
   <h2>Multidimensional Array Manipulation</h2>
   <?php
   // Creating a multidimensional array of student marks
   $students = array(
      "Raghav" => array("Maths" => 95, "Physics" => 90),
      "Sayli" => array("Maths" => 88, "Physics" => 92)
   );

   // Adding a new student
   $students["Dev"] = array("Maths" => 80, "Physics" => 85);



   // Display all students and marks
   echo "<p>All students and their marks:</p>";
   foreach ($students as $name => $subjects) {
      echo "<strong>" . $name . "</strong>:<ul>";
      foreach ($subjects as $subject => $marks) {
         echo "<li>" . $subject . ": " . $marks . "</li>";
```

```
        }
        echo "</ul>";
    }
    ?>
</body>
</html>
```



17.

Develop a simple PHP application to –

a) Enter data into database

b) Retrieve and present data from database

SQL :

```
CREATE DATABASE simpledb;
USE simpledb;

CREATE TABLE users (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(50),
  email VARCHAR(50)
);
```

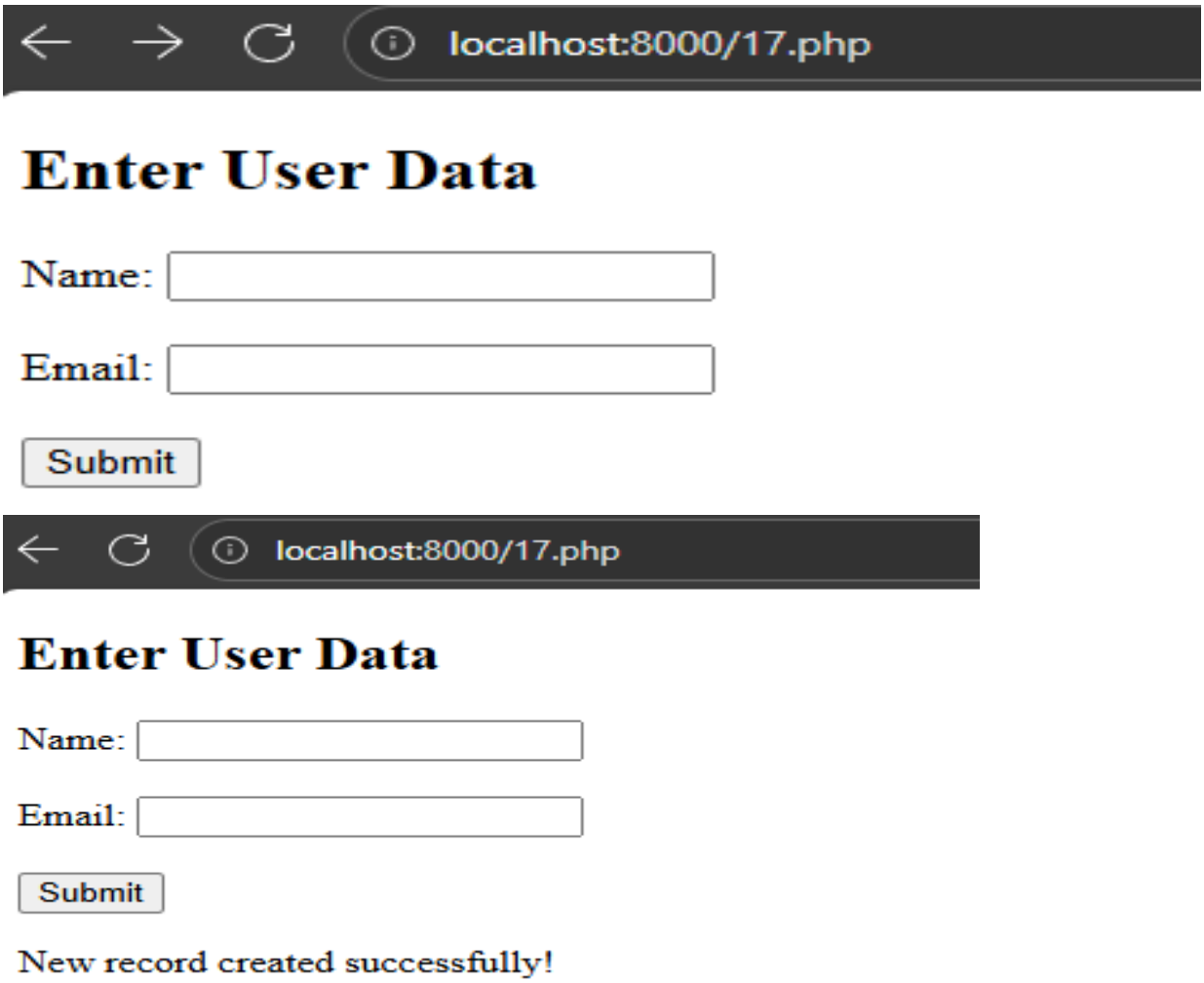
a)

```
<!DOCTYPE html>
<html>
<head>
    <title>Insert Data into Database</title>
</head>
<body>
    <h2>Enter User Data</h2>
    <form method="post">
        Name: <input type="text" name="name" required><br><br>
        Email: <input type="email" name="email" required><br><br>
        <input type="submit" value="Submit">
```

```
</form>

<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    // Connect to MySQL database
    $conn = new mysqli("localhost", "root", "nik@123N", "simpledb");

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

    $name = $conn->real_escape_string($_POST['name']);
    $email = $conn->real_escape_string($_POST['email']);

    // Insert data into users table
    $sql = "INSERT INTO users (name, email) VALUES ('$name', '$email')";

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

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

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

OUTPUT:

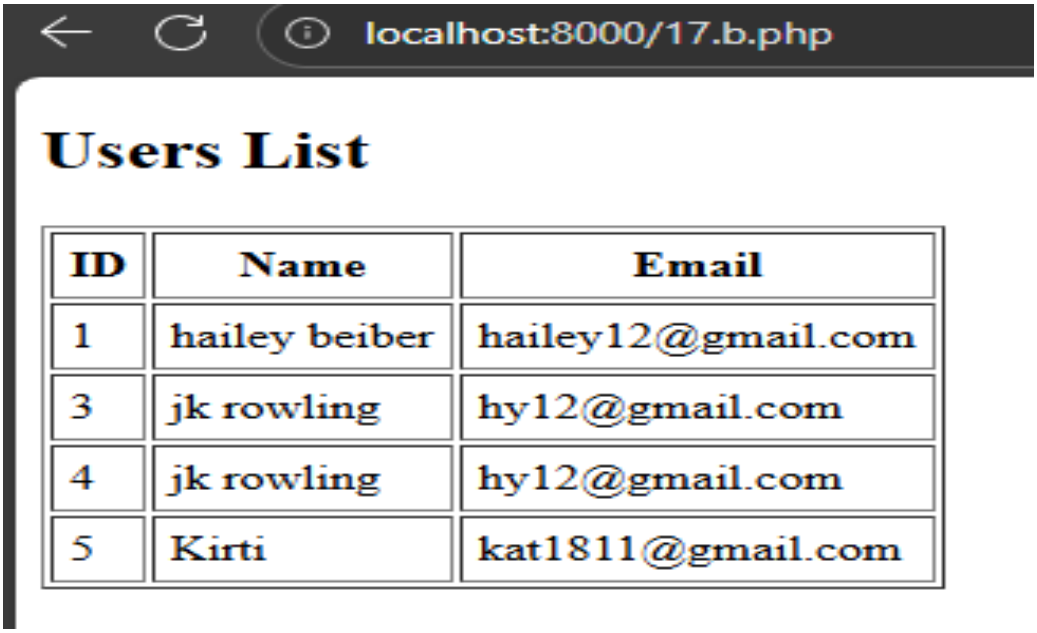


b)

```
<!DOCTYPE html>
<html>
<head>
    <title>View Data from Database</title>
</head>
```

```
<body>
    <h2>Users List</h2>

    <?php
    // Connect to MySQL database
    $conn = new mysqli("localhost", "root", "nik@123N", "simpledb");

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

    // Select all data
    $sql = "SELECT id, name, email FROM users";
    $result = $conn->query($sql);
    if ($result->num_rows > 0) {
         echo"<table border='1'
cellpadding='5'><tr><th>ID</th><th>Name</th><th>Email</th></tr>";
        while ($row = $result->fetch_assoc()) {
            echo "<tr><td>" . $row["id"] . "</td><td>" . htmlspecialchars($row["name"]) .
"</td><td>" . htmlspecialchars($row["email"]) . "</td></tr>";
        }
        echo "</table>";
    } else {
        echo "No records found.";
    }
```

```
    $conn->close();
    ?>
</body>
</html>
```



18.

Develop a simple PHP application to Update and Delete table data from database.

SQL :

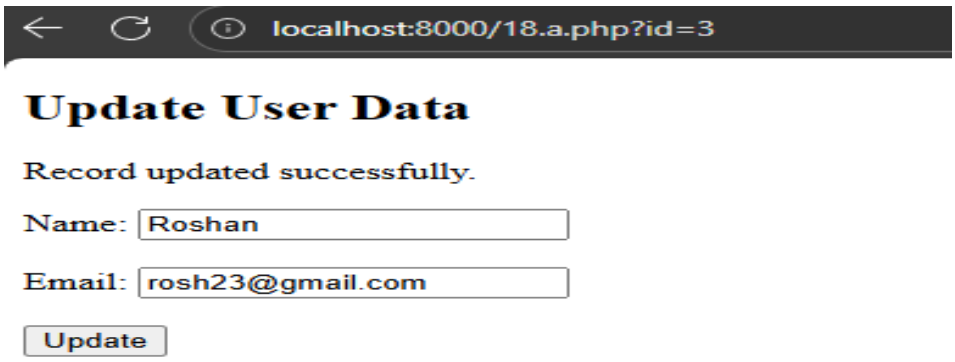
```
CREATE DATABASE simpledb;
USE simpledb;

CREATE TABLE users (
 id INT AUTO_INCREMENT PRIMARY KEY,
 name VARCHAR(50),
 email VARCHAR(50)
);
```

a) Update:

```
<!DOCTYPE html>
<html>
<head>
    <title>Update User Data</title>
</head>
<body>
    <h2>Update User Data</h2>

    <?php
    // Connect to MySQL database
    $conn = new mysqli("localhost", "root", "nik@123N", "simpledb");
```

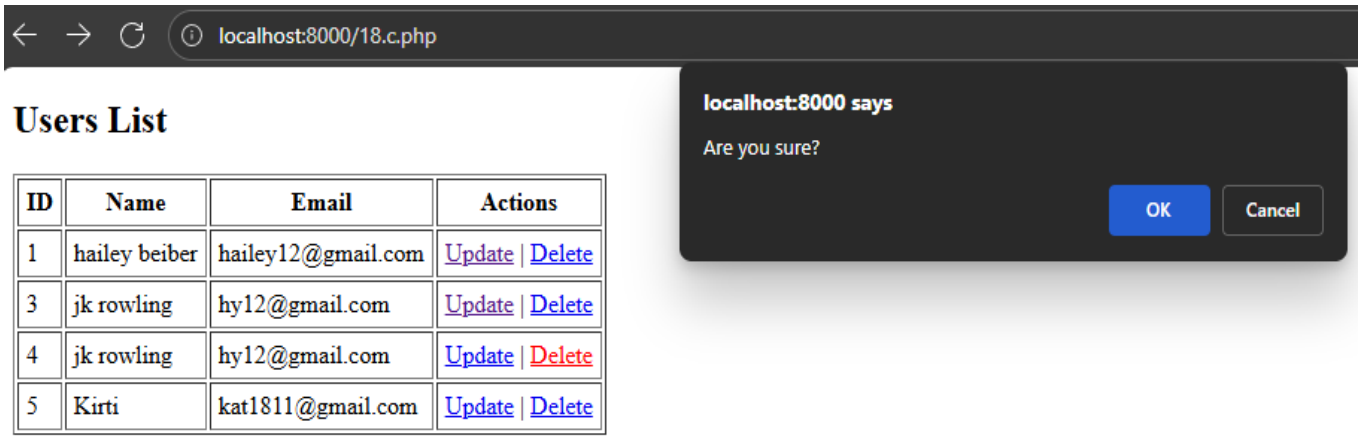
```
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Check if form is submitted for update
if (isset($_POST['update'])) {
    $id = intval($_POST['id']);
    $name = $conn->real_escape_string($_POST['name']);
    $email = $conn->real_escape_string($_POST['email']);

    $sql = "UPDATE users SET name='$name', email='$email' WHERE id=$id";
    if ($conn->query($sql) === TRUE) {
        echo "<p>Record updated successfully.</p>";
    } else {
        echo "Error updating record: " . $conn->error;
    }
}

// If id is passed via GET, show the form with data to edit
if (isset($_GET['id'])) {
    $id = intval($_GET['id']);
    $result = $conn->query("SELECT * FROM users WHERE id=$id");
    if ($result->num_rows == 1) {
        $row = $result->fetch_assoc();
?>
```

```
    <form method="post">
        <input type="hidden" name="id" value="<?php echo $row['id']; ?>">
        Name: <input type="text" name="name" value="<?php echo
htmlspecialchars($row['name']); ?>" required><br><br>
        Email: <input type="email" name="email" value="<?php echo
htmlspecialchars($row['email']); ?>" required><br><br>
        <input type="submit" name="update" value="Update">
    </form>
    <?php
        } else {
            echo "No record found with that ID.";
        }
    } else {
        echo "No user selected to update.";
    }

    $conn->close();
    ?>
</body>
</html>
```



b) Delete:

```
<?php
$conn = new mysqli("localhost", "root", "nik@123N", "simpledb");
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

if (isset($_GET['id'])) {
    $id = intval($_GET['id']);
    $sql = "DELETE FROM users WHERE id=$id";

    if ($conn->query($sql) === TRUE) {
        // Redirect back to view page after deletion
        header("Location: 18.c.php");
        exit();
    } else {
        echo "Error deleting record: " . $conn->error;
    }
} else {
    echo "No ID specified.";
}

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



c) View:

```
<!DOCTYPE html>
<html>
<head>
    <title>View Users</title>
</head>
<body>
    <h2>Users List</h2>

    <?php
    $conn = new mysqli("localhost", "root", "nik@123N", "simpledb");
    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

    $sql = "SELECT * FROM users";
    $result = $conn->query($sql);
```

```
    if ($result->num_rows > 0) {
        echo "<table border='1' cellpadding='5'><tr><th>ID</th><th>Name</th><th>Email</th><th>Actions</th></tr>";
        while ($row = $result->fetch_assoc()) {
            echo "<tr><td>" . $row["id"] . "</td>";
            echo "<td>" . htmlspecialchars($row["name"]) . "</td>";
            echo "<td>" . htmlspecialchars($row["email"]) . "</td>";
            echo "<td>
                    <a href='18.a.php?id=" . $row["id"] . "'>Update</a> |
                    <a href='18.b.php?id=" . $row["id"] . "' onclick='return confirm(\"Are you sure?\");'>Delete</a>
                  </td></tr>";
        }
        echo "</table>";
    } else {
        echo "No records found.";
    }

    $conn->close();
    ?>
</body>
</html>
```

OUTPUT:

Users List

ID	Name	Email	Actions
1	hailey beiber	hailey12@gmail.com	Update | Delete
3	jk rowling	hy12@gmail.com	Update | Delete
4	jk rowling	hy12@gmail.com	Update | Delete
5	Kirti	kat1811@gmail.com	Update | Delete

After updating and deleting:

Users List

ID	Name	Email	Actions
1	hailey beiber	hailey12@gmail.com	Update | Delete
3	Roshan	rosh23@gmail.com	Update | Delete
5	Kirti	kat1811@gmail.com	Update | Delete

19.

Write simple PHP program to set cookies and read it.

```
<!DOCTYPE html>
<html>
<body>
<?php
$cookie_name = "userFavoriteLanguage";
$cookie_value = "Python with AI & Automation";
// Set the cookie for whole website, expires in 7 days
setcookie($cookie_name, $cookie_value, time() + (7 * 24 * 60 * 60), "/");

if (!isset($_COOKIE[$cookie_name])) {
   echo "Cookie '{$cookie_name}' is not set yet. Refresh after setting it.";
} else {
   echo "Welcome back! Your favorite coding language is <strong>" . htmlspecialchars($_COOKIE[$cookie_name]) . "</strong>.";
}
?>
</body>
</html>
```

OUTPUT:

Welcome back! Your favorite coding language is **Python with AI & Automation**.

20.

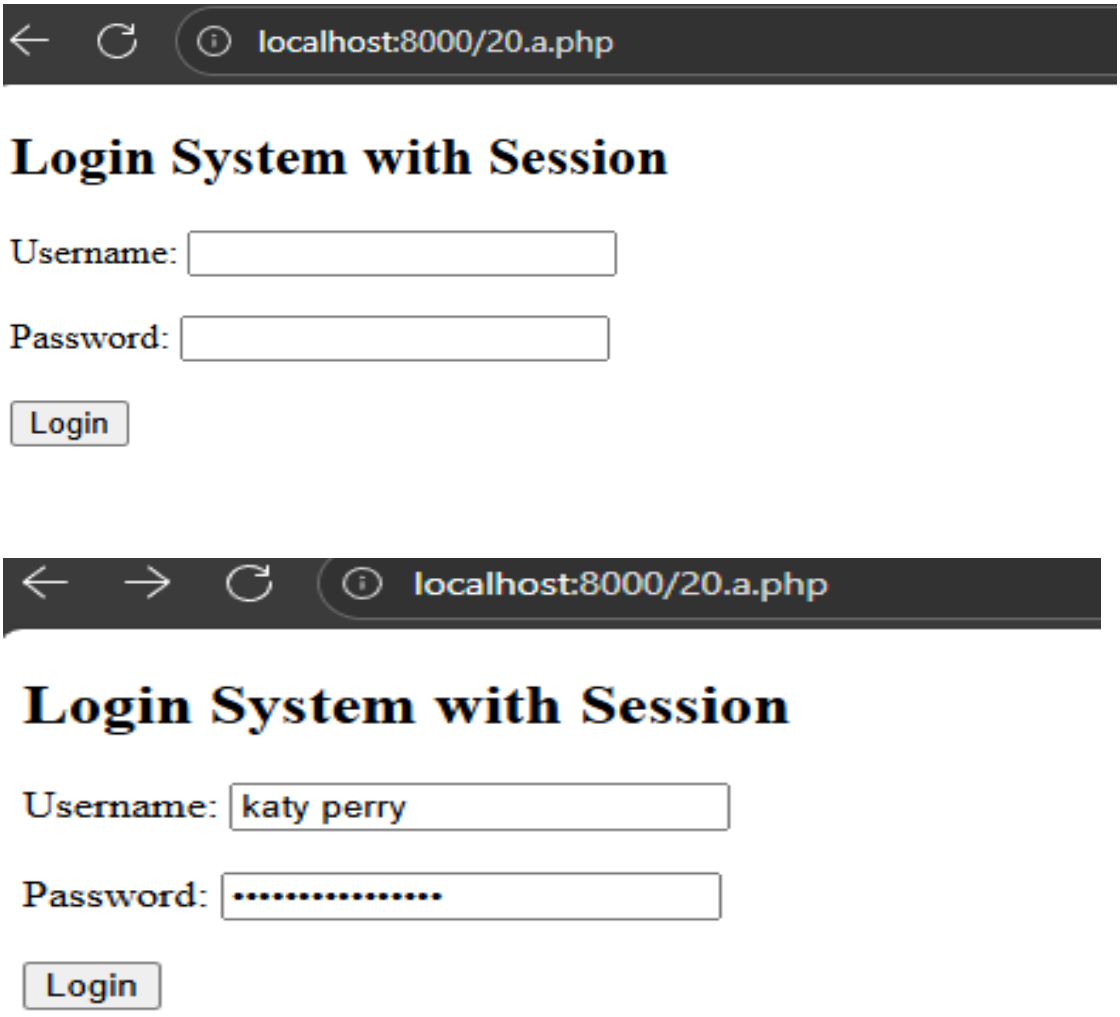
Create a PHP page for login system using session.

a)

```
<?php
session_start();

if (isset($_SESSION['user'])) {
    header("Location: 20.b.php");
    exit;
}

$error = "";

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $username = $_POST['username'] ?? "";
    $password = $_POST['password'] ?? "";

    // Dummy user data for demonstration
    $valid_username = "katy perry";
    $valid_password = "secretsuperstar1";  // In real apps, use hashed passwords

    if ($username === $valid_username && $password === $valid_password) {
        $_SESSION['user'] = $username;
```

```
        header("Location: 20.b.php");
        exit;
    } else {
        $error = "Invalid username or password!";
    }
}
?>

<!DOCTYPE html>
<html>
<head>
    <title>Login</title>
</head>
<body>
    <h2>Login System with Session</h2>
    <?php if ($error) { echo "<p style='color:red;'>$error</p>"; } ?>

    <form method="post">
        Username: <input type="text" name="username" required><br><br>
        Password: <input type="password" name="password" required><br><br>
        <input type="submit" value="Login">
    </form>
</body>
</html>
```

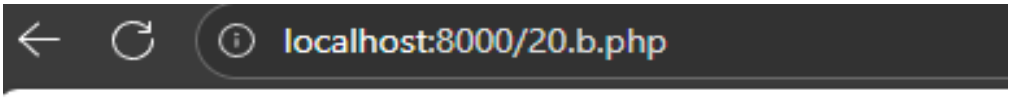
OUTPUT:



b)

```
<?php
session_start();


if (!isset($_SESSION['user'])) {
    header("Location: 20.a.php");
    exit;
```

```
}

$username = htmlspecialchars($_SESSION['user']);
?>

<!DOCTYPE html>
<html>
<head>
    <title>Welcome</title>
</head>
<body>
    <h2>Welcome, <?php echo $username; ?>!</h2>
    <p>You have successfully logged in.</p>
    <a href="20.c.php">Logout</a>
</body>
</html>
```



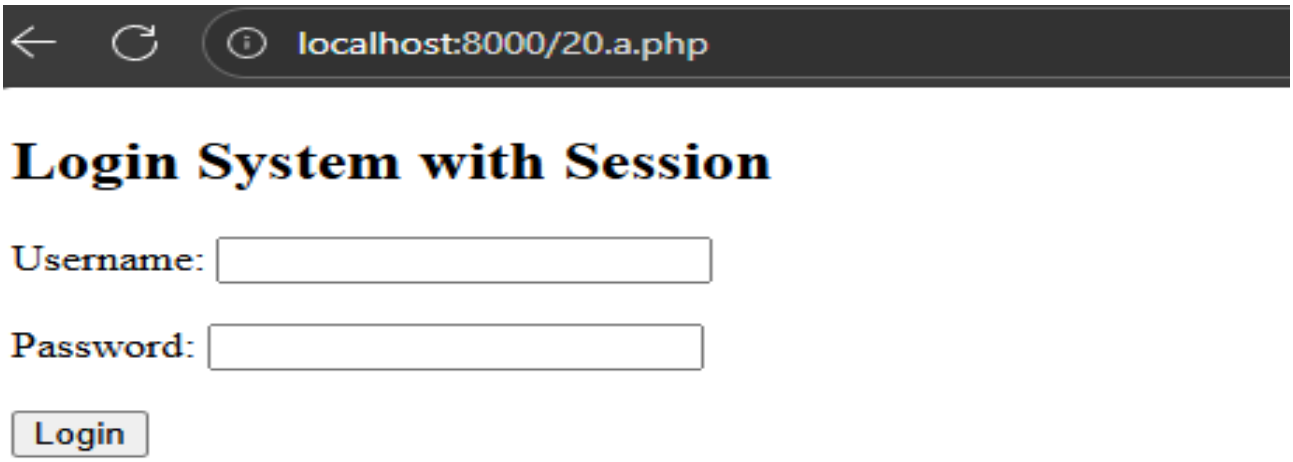
Welcome, katy perry!

You have successfully logged in.

Logout

c)

```
<?php
session_start();
session_unset();
session_destroy();
header("Location: 20.a.php");
exit;
?>
```



21.

Create student registration form using text box, check box, radio button, select, submit button and display the values entered by the user in new PHP page.

register.php:

```
<!DOCTYPE html>
<html>
<head>
   <title>Student Registration Form</title>
</head>
<body>
   <h2>Student Registration Form</h2>
   <form method="post" action="display.php">
      <label for="name">Name:</label><br>
      <input type="text" name="name" id="name" required><br><br>

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

      <label>Gender:</label><br>
      <input type="radio" id="male" name="gender" value="Male" required>
      <label for="male">Male</label><br>
      <input type="radio" id="female" name="gender" value="Female" required>
```

```
    <label for="female">Female</label><br><br>

    <label>Hobbies:</label><br>
    <input type="checkbox" id="sports" name="hobbies[]" value="Sports">
    <label for="sports">Sports</label><br>
    <input type="checkbox" id="reading" name="hobbies[]" value="Reading">
    <label for="reading">Reading</label><br>
    <input type="checkbox" id="music" name="hobbies[]" value="Music">
    <label for="music">Music</label><br><br>

    <label for="course">Course:</label><br>
    <select id="course" name="course" required>
      <option value="">--Select a course--</option>
      <option value="Computer Science">Computer Science</option>
      <option value="Mathematics">Mathematics</option>
      <option value="Physics">Physics</option>
    </select><br><br>

    <input type="submit" value="Register">
  </form>
</body>
</html>
```

Student Registration Form

Name:

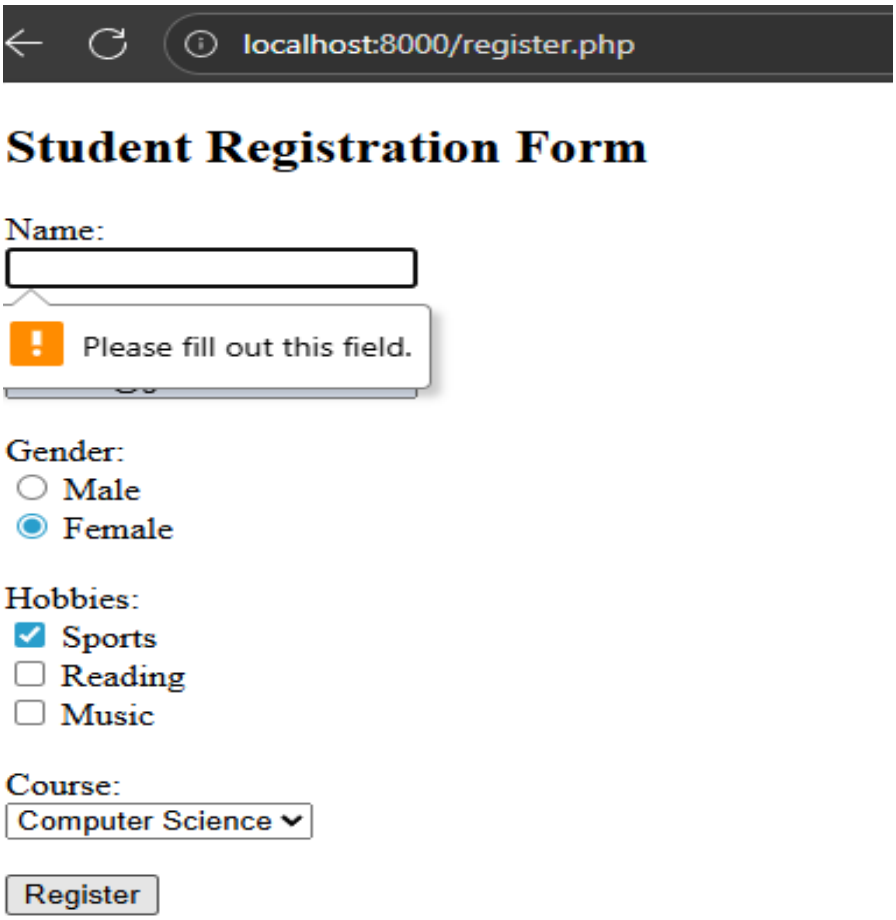
Email:

Gender:
- Male
- Female

Hobbies:
- Sports
- Reading
- Music

Course:
--Select a course--

Register



display.php:

```
<!DOCTYPE html>
<html>
<head>
    <title>Registration Details</title>
</head>
<body>
    <h2>Your Registration Details</h2>

    <?php
    if ($_SERVER["REQUEST_METHOD"] == "POST") {
        $name = htmlspecialchars($_POST['name']);
        $email = htmlspecialchars($_POST['email']);
        $gender = htmlspecialchars($_POST['gender']);
```

```
    $course = htmlspecialchars($_POST['course']);

    echo "<p><strong>Name:</strong> $name</p>";
    echo "<p><strong>Email:</strong> $email</p>";
    echo "<p><strong>Gender:</strong> $gender</p>";

    if (!empty($_POST['hobbies'])) {
        $hobbies = $_POST['hobbies'];
        // Sanitize each hobby value
        $hobbies = array_map('htmlspecialchars', $hobbies);
        echo "<p><strong>Hobbies:</strong> " . implode(", ", $hobbies) . "</p>";
    } else {
        echo "<p><strong>Hobbies:</strong> None selected</p>";
    }
    echo "<p><strong>Course:</strong> $course</p>";
} else {
    echo "<p>No data received.</p>";
}
?>
</body>
</html>
```

Your Registration Details

Name: Roshan

Email: rosh23@gmail.com

Gender: Female

Hobbies: Sports

Course: Computer Science

22.

Create a PHP program to demonstrate Cross Join

sql:

```
create database testdb;
use testdb;
```

cross join:

```
<?php
$servername = "localhost";
$username = "root";
$password = "nik@!23N";
$database = "testdb";

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

// Create colors table if not exists
$conn->query("CREATE TABLE IF NOT EXISTS colors (
    id INT PRIMARY KEY,
    color_name VARCHAR(20)
)");
```

```
// Create shapes table if not exists
$conn->query("CREATE TABLE IF NOT EXISTS shapes (
    id INT PRIMARY KEY,
    shape_name VARCHAR(20)
)");

// Insert sample values if not already present
$conn->query("INSERT IGNORE INTO colors (id, color_name) VALUES
    (1, 'Red'), (2, 'Green'), (3, 'Blue')");

$conn->query("INSERT IGNORE INTO shapes (id, shape_name) VALUES
    (1, 'Circle'), (2, 'Square')");

// CROSS JOIN query
$sql = "SELECT colors.color_name, shapes.shape_name
        FROM colors
        CROSS JOIN shapes";

$result = $conn->query($sql);

echo "<h2>CROSS JOIN Result</h2>";
if ($result && $result->num_rows > 0) {
    echo "<table border='1' cellpadding='5'><tr><th>Color</th><th>Shape</th></tr>";
    while ($row = $result->fetch_assoc()) {
```

```
        echo "<tr><td>" . htmlspecialchars($row['color_name']) . "</td><td>" . htmlspecialchars($row['shape_name']) . "</td></tr>";
    }
    echo "</table>";
} else {
    echo "No results found or query error: " . $conn->error;
}

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

CROSS JOIN Result

Color	Shape
Red	Square
Red	Circle
Green	Square
Green	Circle
Blue	Square
Blue	Circle

23.

Create a simple XML file to store book information, including title, author, and publication year.

```
<?xml version="1.0" encoding="UTF-8"?>

<books xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="books.xsd">

   <book>

      <h3> The Bravehearts</h3>

      <author>Rachna Bisht Rawat</author><br>

      <isbn>81-7371-146-1</isbn><br>

      <publisher>Penguin Random House India</publisher><br>

      <edition>1st</edition><br>

      <price>180</price><br>

   </book>

<book>

       <h3>The Concise Laws of Human Nature</h3>

      <author>Robert Greene</author><br>

      <isbn>58-9402-236-1</isbn><br>

      <publisher>Penguin Books</publisher><br>

      <edition>1st</edition><br>

      <price>620</price>

   </book>

</books>
```

.xsd:

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
   xmlns:xs="http://www.w3.org/2001/XMLSchema">
   <xs:element name="books">
      <xs:complexType>
         <xs:sequence>
            <xs:element name="title" type="xs:string" />
            <xs:element name="author" type="xs:string" />
            <xs:element name="isbn" type="xs:string" />
            <xs:element name="publisher" type="xs:string" />
            <xs:element name="edition" type="xs:string" />
            <xs:element name="price" type="xs:decimal" />
         </xs:sequence>
      </xs:complexType>
   </xs:element>
</xs:schema>
```

The Bravehearts

Rachna Bisht Rawat
81-7371-146-1
Penguin Random House India
1st
180

The Concise Laws of Human Nature

Robert Greene
58-9402-236-1
Penguin Books
1st
620

24.

Create a form (e.g., user registration or login) that submits data using AJAX and displays success or error messages without reloading the page.

index.html:

```
<!DOCTYPE html>
<html>
<head>


 <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
 <style>
  #emailError {
    color: red;
    font-size: 0.9em;
    margin-top: -10px;
    margin-bottom: 10px;
  }
  #message {
    margin-top: 10px;
  }
 </style>
</head>
<body>
 <h2>Register</h2>
 <form id="registrationForm" novalidate>
```

```
  <label>Name:</label><br>
  <input type="text" id="name" name="name" required><br><br>

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

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

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

<div id="message"></div>

<script>
$(document).ready(function(){
  $("#registrationForm").submit(function(event){
    event.preventDefault();

    $("#message").html("");
    $("#emailError").text("");

    var email = $("#email").val().trim();
    var name = $("#name").val().trim();
```

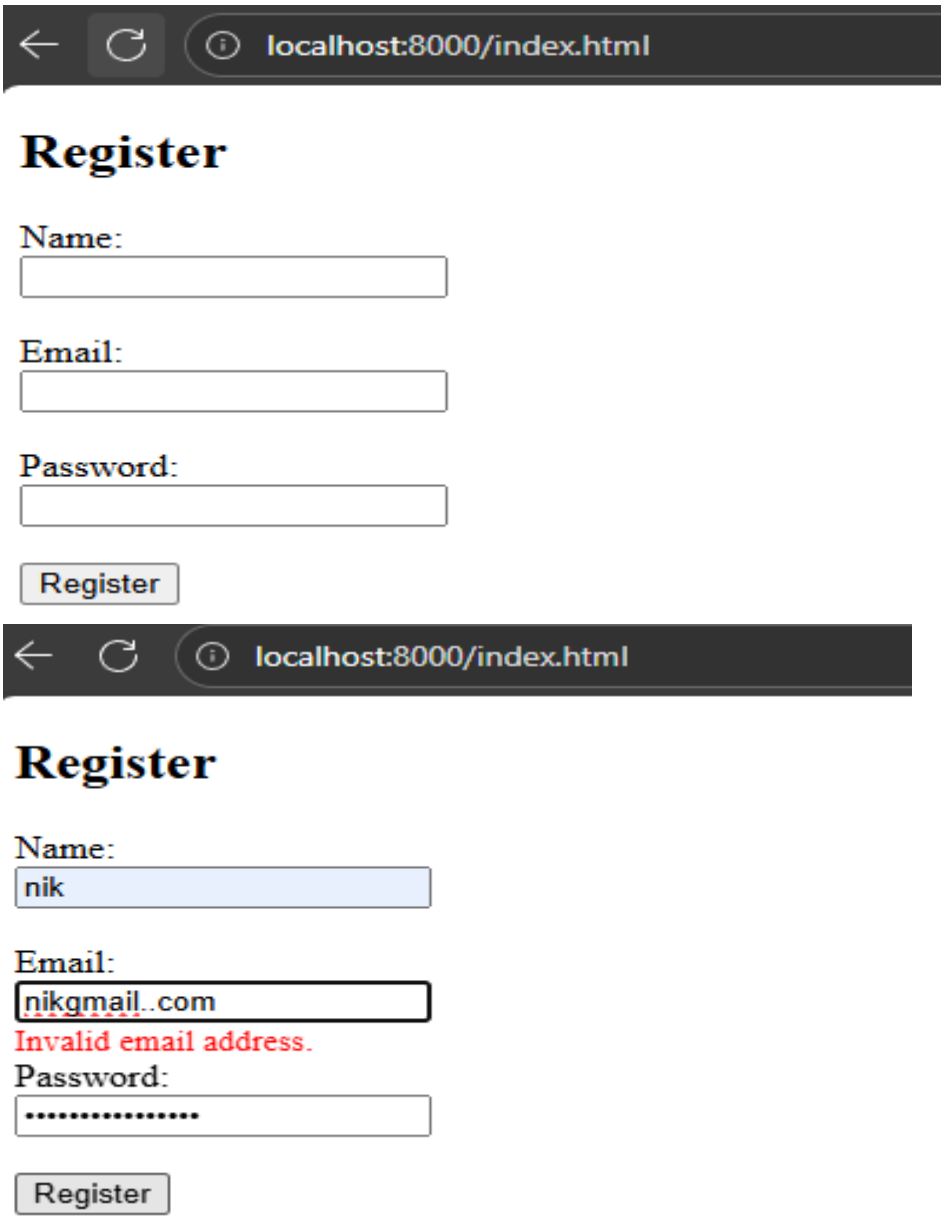
```
var password = $("#password").val();

var emailPattern = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;

if (!emailPattern.test(email)) {
  $("#emailError").text("Invalid email address.");
  $("#email").focus();
  return;
}

$.ajax({
  type: "POST",
  url: "process_registration.php",
  data: { name: name, email: email, password: password },
  dataType: "json",
  success: function(response) {
    if(response.success) {
      $("#message").html("<span style='color:green'>" + response.message + "</span>");
      $("#registrationForm")[0].reset();
    } else {
      $("#message").html("<span style='color:red'>" + response.message + "</span>");
    }
  },
  error: function(xhr, status, error){
    $("#message").html("<span style='color:red'>AJAX error: " + error + "</span>");
```

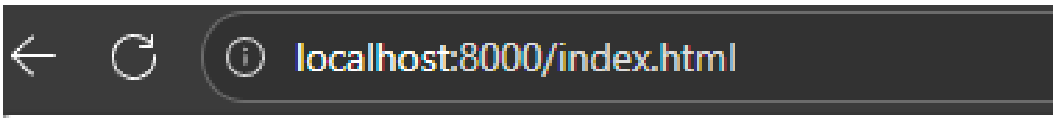
```
        console.log("AJAX error details:", status, xhr.responseText);
      }
    });
  });
});
</script>
</body>
</html>
```

process_registration.php:

```
<?php
header('Content-Type: application/json');

$name = $_POST['name'] ?? '';
$email = $_POST['email'] ?? '';
$password = $_POST['password'] ?? '';

if (empty($name) || empty($email) || empty($password)) {
  echo json_encode(['success' => false, 'message' => 'Please fill in all fields.']);
  exit;
}

if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
  echo json_encode(['success' => false, 'message' => 'Invalid email address.']);
```

```
  exit;
}

// Here you can add code to save user info in a database

echo json_encode(['success' => true, 'message' => 'Registration successful!']);
```





Register

Name:

Email:

Password:

Register

Registration successful!