EX.NO: 1 Design a webpage for your college containing descriptions of courses, departments, faculties, library, etc

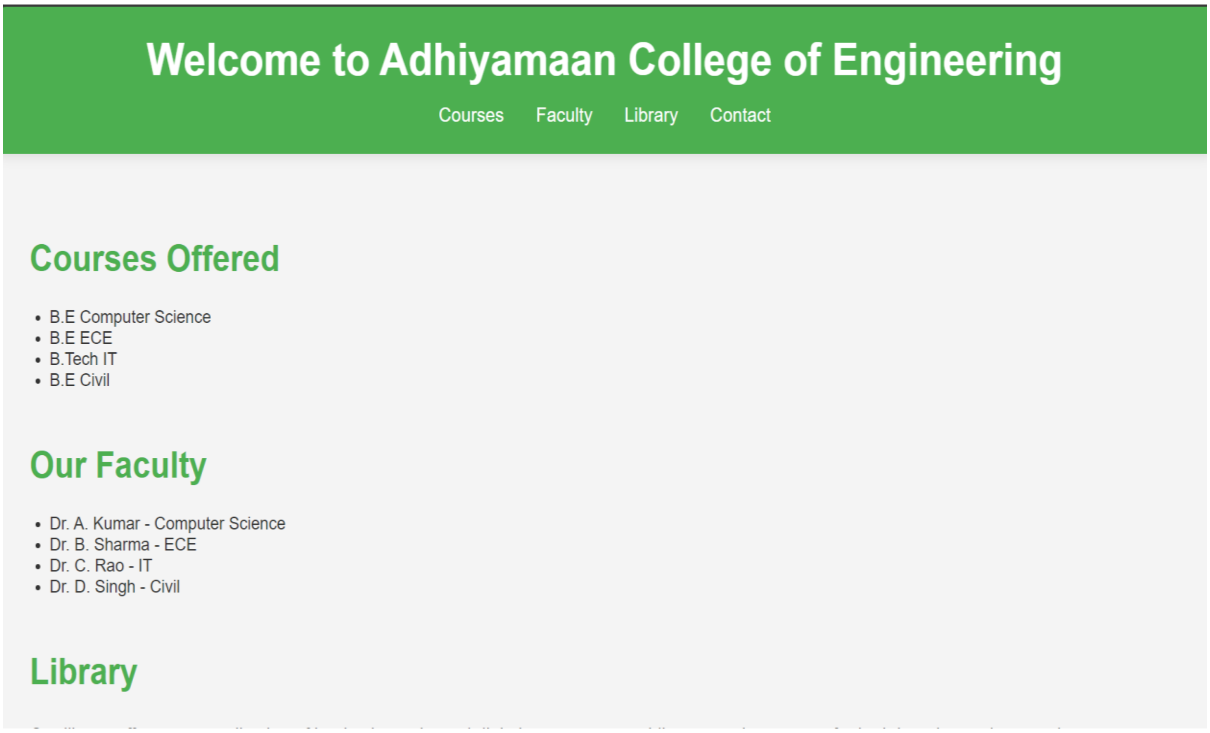
PROGRAM:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Adhiyamaan College of Engineering</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 0;
      background-color: #f4f4f4;
      color: #333;
    }
    header {
      background-color: #4CAF50;
      color: #fff;
      padding: 1.5rem;
      text-align: center;
      box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1);
    }
    header h1 {
      margin: 0;
      font-size: 2.5rem;
    }
    nav ul {
      list-style: none;
      padding: 0;
      margin: 1rem 0 0;
      display: flex;
      justify-content: center;
      gap: 2rem;
    }
    nav ul li {
      display: inline;
    }
    nav ul li a {
      color: #fff;
      text-decoration: none;
      font-size: 1.1rem;
      transition: color 0.3s ease;
    }
    nav ul li a:hover {
      color: #ddd;
    }
    main {
      padding: 3rem 2rem;
```

```
        max-width: 1200px;
        margin: 0 auto;
    }
    section {
        margin-bottom: 3rem;
    }
    h2 {
        font-size: 2rem;
        color: #4CAF50;
        margin-bottom: 1.5rem;
    }
    ul {
        list-style-type: disc;
        padding-left: 20px;
    }
    section#library p {
        font-size: 1.1rem;
        line-height: 1.6;
        color: #555;
    }
    footer {
        background-color: #4CAF50;
        color: #fff;
        padding: 2rem 1rem;
        text-align: center;
    }
    footer h2 {
        font-size: 1.8rem;
    }
    footer p {
        font-size: 1rem;
        margin: 0.5rem 0;
    }
    footer p:last-of-type {
        margin-bottom: 0;
    }
        media (max-width: 768px) {
        header h1 {
            font-size: 2rem;
        }
        nav ul {
            flex-direction: column;
            gap: 1rem;
        }
        nav ul li a {
            font-size: 1rem;
        }
        main {
            padding: 2rem 1rem;
        }
    }
</style>
```

```html
</head>
<body>
    <header>
        <h1>Welcome to Adhiyamaan College of Engineering</h1>
        <nav>
            <ul>
                <li><a href="#courses">Courses</a></li>
                <li><a href="#faculty">Faculty</a></li>
                <li><a href="#library">Library</a></li>
                <li><a href="#contact">Contact</a></li>
            </ul>
        </nav>
    </header>
    <main>
        <section id="courses">
            <h2>Courses Offered</h2>
            <ul>
                <li>B.E Computer Science</li>
                <li>B.E ECE</li>
                <li>B.Tech IT</li>
                <li>B.E Civil</li>
            </ul>
        </section>
        <section id="faculty">
            <h2>Our Faculty</h2>
            <ul>
                <li>Dr. A. Kumar - Computer Science</li>
                <li>Dr. B. Sharma - ECE</li>
                <li>Dr. C. Rao - IT</li>
                <li>Dr. D. Singh - Civil</li>
            </ul>
        </section>
        <section id="library">
            <h2>Library</h2>
            <p>Our library offers a vast collection of books, journals, and digital resources, providing extensive support for both learning and research.</p>
        </section>
    </main>
    <footer>
        <section id="contact">
            <h2>Contact Us</h2>
            <p>Email: info@adhiyamaan.edu</p>
            <p>Phone: +91 12345 67890</p>
        </section>
    </footer>
</body>
</html>
```

OUTPUT:



Welcome to Adhiyamaan College of Engineering

Courses Offered

- B.E Computer Science
- B.E ECE
- B.Tech IT
- B.E Civil

Our Faculty

- Dr. A. Kumar - Computer Science
- Dr. B. Sharma - ECE
- Dr. C. Rao - IT
- Dr. D. Singh - Civil

Library

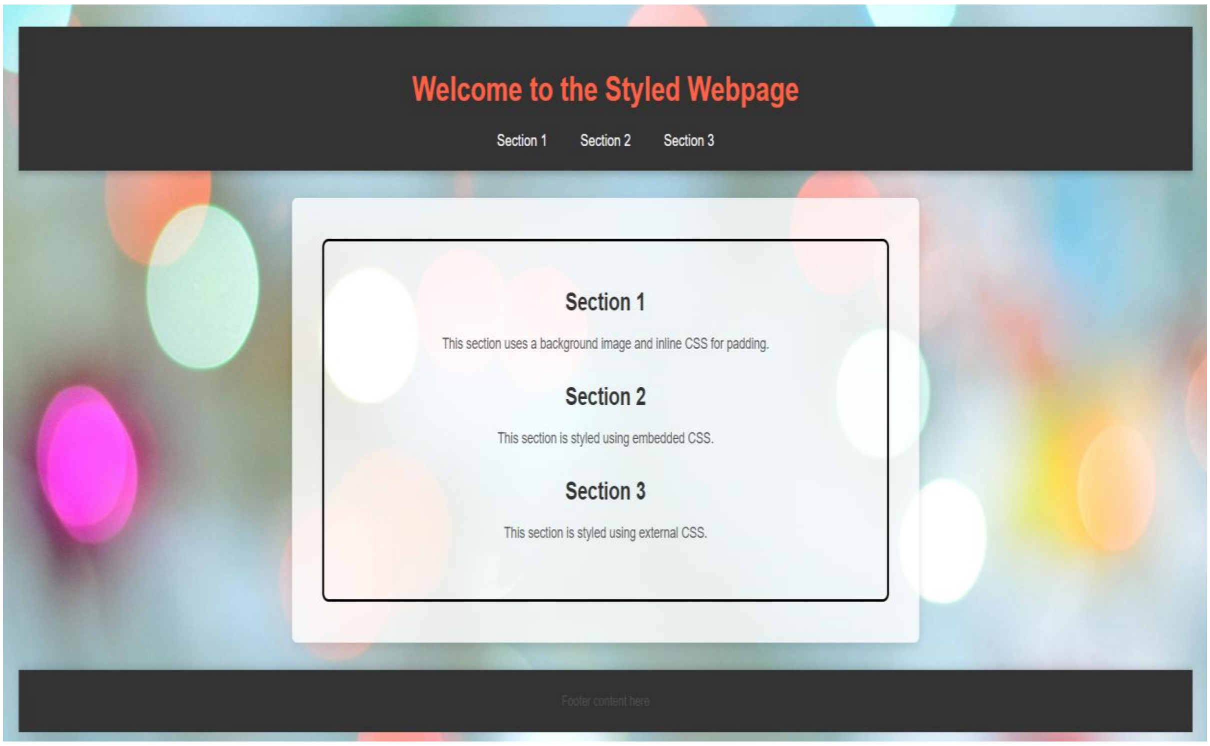
EX.NO: 2 Create a webpage and use inline, embedded, and external CSS to style various elements. Experiment with CSS3 features like background images, border images, colors, and shadows.

PROGRAM:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Styled Webpage</title>
    <link rel="stylesheet" href="styles.css"> <!-- External CSS link -->
    <style>
        /* Embedded CSS */
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
            text-align: center;
        }
        header {
            background-color: #333;
            color: #fff;
            padding: 1.5rem 0;
            text-align: center;
            box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);
        }
        nav ul {
            list-style: none;
            padding: 0;
            margin: 0;
        }
        nav ul li {
            display: inline;
            margin: 0 1.5rem;
        }
        nav ul li a {
            color: #fff;
            text-decoration: none;
            font-size: 1.2rem;
            transition: color 0.3s ease;
        }
        nav ul li a:hover {
            color: #ff6347;
        }
        main {
            padding: 3rem;
            background: rgba(255, 255, 255, 0.8);
            max-width: 900px;
            margin: 2rem auto;
            border-radius: 8px;
            box-shadow: 0 4px 12px rgba(0, 0, 0, 0.1);
        }
        section {
            margin-bottom: 2rem;
        }
        h2 {
            color: #333;
            font-size: 1.8rem;
            margin-bottom: 1rem;
        }
        p {
            font-size: 1.1rem;
            line-height: 1.6;
            color: #555;
        }
        footer {
            background-color: #333;
            color: #fff;
            text-align: center;
            padding: 1.5rem 0;
            margin-top: 2rem;
            box-shadow: 0 -4px 8px rgba(0, 0, 0, 0.1);
        }
        footer p {
            margin: 0;
            font-size: 1rem;
        }
    </style>
</head>
<body style="background-image: url('https://images.pexels.com/photos/255379/pexels-photo-255379.jpeg?cs=srgb&dl=pexels-padrinan-255379.jpg&fm=jpg'); background-size: cover; background-position: center; padding: 20px;">
    <header>
        <h1 style="color: #ff6347; font-size: 2.5rem;">Welcome to the Styled Webpage</h1>
        <nav>
            <ul>
                <li><a href="#section1">Section 1</a></li>
                <li><a href="#section2">Section 2</a></li>
                <li><a href="#section3">Section 3</a></li>
            </ul>
        </nav>
    </header>
    <main>
        <div style="border: 3px solid black; padding: 2rem; border-radius: 10px;">
            <section id="section1">
                <h2>Section 1</h2>
                <p>This section uses a background image and inline CSS for padding.</p>
            </section>
            <section id="section2">
                <h2>Section 2</h2>
                <p>This section is styled using embedded CSS.</p>
            </section>
            <section id="section3">
```

```
                <h2>Section 3</h2>
                <p>This section is styled using external CSS.</p>
            </section>
        </div>
    </main>
    <footer>
        <p>Footer content here</p>
    </footer>
</body>
</html>
```

OUTPUT:



Welcome to the Styled Webpage

Section 1

This section uses a background image and inline CSS for padding.

Section 2

This section is styled using embedded CSS.

Section 3

This section is styled using external CSS.

Footer content here

EX.NO: 3 Create a student registration form for job applications and validate the form fields using JavaScript.

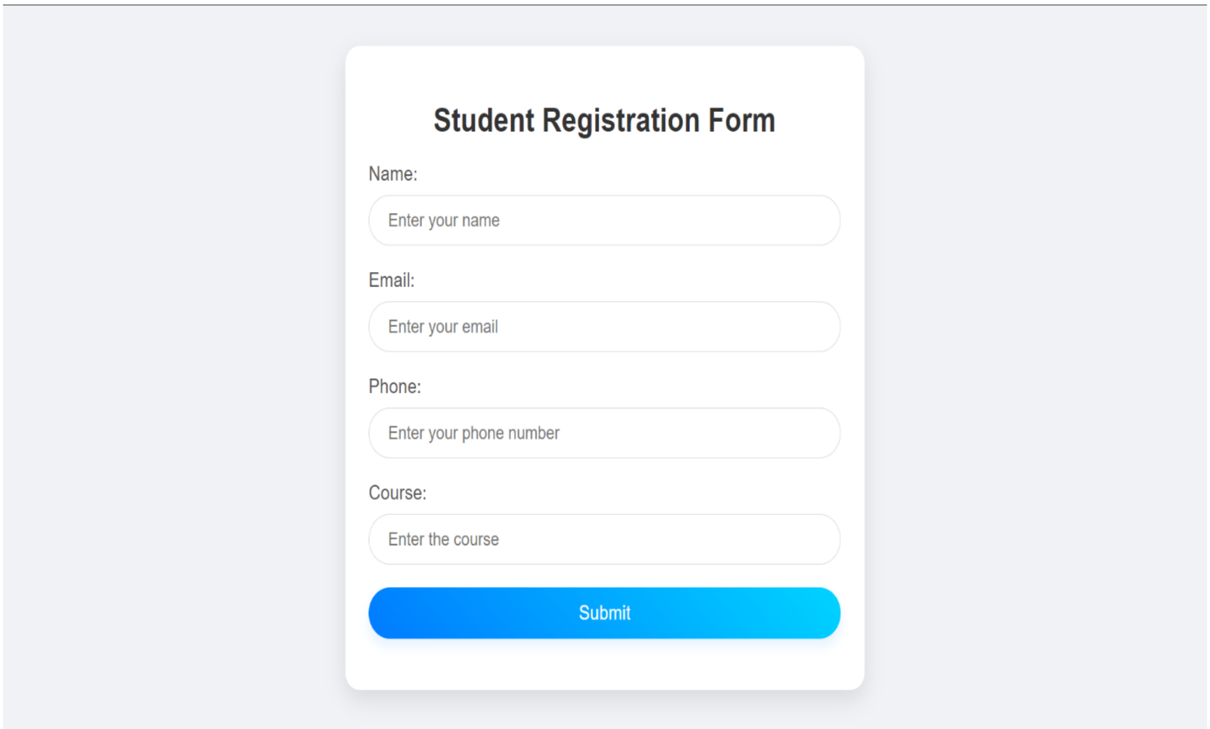
PROGRAM:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Student Registration Form</title>
  <style>
    body {
      font-family: 'Roboto', sans-serif;
      background-color: #f0f2f5;
      margin: 0;
      padding: 0;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
    }
    .container {
      max-width: 500px;
      width: 100%;
      margin: 20px;
      padding: 25px;
      background-color: #fff;
      border-radius: 15px;
      box-shadow: 0 8px 20px rgba(0, 0, 0, 0.1);
      transition: box-shadow 0.3s ease;
    }
    .container:hover {
      box-shadow: 0 12px 30px rgba(0, 0, 0, 0.2);
    }

    h2 {
      text-align: center;
      color: #333;
      font-size: 1.8rem;
      margin-bottom: 20px;
    }
    .form-group {
      margin-bottom: 20px;
      position: relative;
    }
    .form-group label {
      display: block;
      margin-bottom: 8px;
      font-size: 1.1rem;
      color: #555;
    }
    .form-group input {
        width: 100%;
        padding: 12px;
        padding-left: 20px;
        font-size: 1rem;
        color: #333;
        border: 1px solid #ddd;
        border-radius: 25px;
        box-sizing: border-box;
        outline: none;
        transition: border 0.3s ease;
    }
    .form-group input:focus {
        border: 1px solid #007BFF;
    }
    .form-group button {
        width: 100%;
        padding: 12px;
        font-size: 1.1rem;
        background: linear-gradient(45deg, #007BFF, #00D4FF);
        color: white;
        border: none;
        border-radius: 25px;
        cursor: pointer;
        box-shadow: 0 6px 10px rgba(0, 123, 255, 0.1);
        transition: background 0.3s ease, box-shadow 0.3s ease;
    }
    .form-group button:hover {
        background: linear-gradient(45deg, #0056b3, #00aaff);
        box-shadow: 0 8px 20px rgba(0, 123, 255, 0.2);
    }
    .error {
        color: red;
        font-size: 0.9em;
        margin-top: 5px;
    }
    /* Responsive design */
        media (max-width: 600px) {
        .container {
            padding: 20px;
        }
        h2 {
            font-size: 1.6rem;
        }
        .form-group input,
        .form-group button {
            font-size: 0.95rem;
            padding: 10px;
        }
    }
</style>
```

```
</head>
<body>
    <div class="container">
        <h2>Student Registration Form</h2>
        <form id="registrationForm">
            <div class="form-group">
                <label for="name">Name:</label>
                <input type="text" id="name" name="name" placeholder="Enter your name">
                <div class="error" id="nameError"></div>
            </div>
            <div class="form-group">
                <label for="email">Email:</label>
                <input type="email" id="email" name="email" placeholder="Enter your email">
                <div class="error" id="emailError"></div>
            </div>
            <div class="form-group">
                <label for="phone">Phone:</label>
                <input type="text" id="phone" name="phone" placeholder="Enter your phone
number">
                <div class="error" id="phoneError"></div>
            </div>
            <div class="form-group">
                <label for="course">Course:</label>
                <input type="text" id="course" name="course" placeholder="Enter the course">
                <div class="error" id="courseError"></div>
            </div>
            <div class="form-group">
                <button type="button" onclick="validateForm()">Submit</button>
            </div>
        </form>
    </div>

    <script>
        function validateForm() {
            let isValid = true;

            // Clear previous errors
            document.getElementById('nameError').innerText = '';
            document.getElementById('emailError').innerText = '';
            document.getElementById('phoneError').innerText = '';
            document.getElementById('courseError').innerText = '';

            // Validate Name
            const name = document.getElementById('name').value;
            if (name === '') {
                document.getElementById('nameError').innerText = 'Name is required';
                isValid = false;
            }
            // Validate Email
            const email = document.getElementById('email').value;
            const emailPattern = /^[^ ]+@[^ ]+\.[a-z]{2,3}$/;
            if (email === '') {
```

```
        document.getElementById('emailError').innerText = 'Email is required';
        isValid = false;
      } else if (!email.match(emailPattern)) {
        document.getElementById('emailError').innerText = 'Invalid email format';
        isValid = false;
      }
      // Validate Phone
      const phone = document.getElementById('phone').value;
      const phonePattern = /^[0-9]{10}$/;
      if (phone === '') {
        document.getElementById('phoneError').innerText = 'Phone number is required';
        isValid = false;
      } else if (!phone.match(phonePattern)) {
        document.getElementById('phoneError').innerText = 'Invalid phone number format';
        isValid = false;
      }
      // Validate Course
      const course = document.getElementById('course').value;
      if (course === '') {
        document.getElementById('courseError').innerText = 'Course is required';
        isValid = false;
      }
      if (isValid) {
        alert('Form submitted successfully!');
      }
    }
  </script>
</body>
</html>
```

OUTPUT:



Student Registration Form

Name:

Enter your name

Email:

Enter your email

Phone:

Enter your phone number

Course:

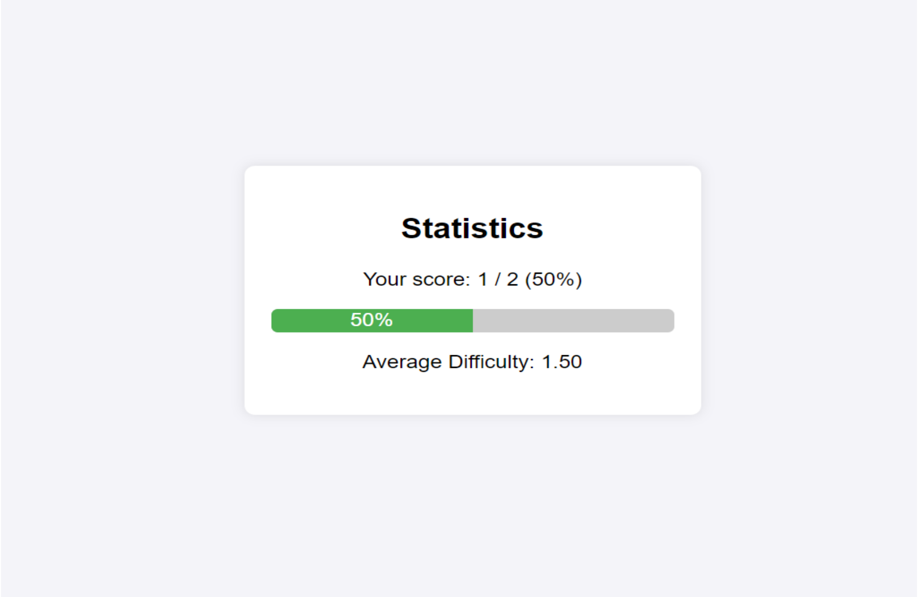
Enter the course

EX.NO: 4 Create a quiz program with adaptive questions along with statistical variations using JavaScript

PROGRAM:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Adaptive Quiz</title>
  <style>
    body { display: flex; justify-content: center; align-items: center; height: 100vh;
font-family: Arial; background: #f4f4f9; }
    .container { background: white; padding: 20px; text-align: center; border-radius:
8px; width: 300px; box-shadow: 0 0 10px rgba(0,0,0,0.1); }
    button { width: 100%; padding: 10px; margin: 5px 0; background-color: #5c67f2;
color: white; border: none; border-radius: 5px; cursor: pointer; }
    .progress-bar { background: #ccc; height: 20px; border-radius: 5px; overflow:
hidden; margin-top: 10px; }
    .progress { background: #4CAF50; height: 100%; width: 0; transition: width 0.5s;
color: white; text-align: center; }
  </style>
</head>
<body>
  <div class="container">
    <h2 id="question"></h2>
    <div id="choices"></div>
    <button id="next" style="display:none" onclick="next()">Next</button>
    <div id="result" style="display:none">
      <h2>Statistics</h2>
      <p id="score"></p>
      <div class="progress-bar"><div id="progress" class="progress"></div></div>
      <p id="difficulty"></p>
    </div>
  </div>

  <script>
    const qs = {
      easy: [{q: "2 + 2?", c: ["3", "4"], a: 1}, {q: "Capital of France?", c: ["Paris",
"London"], a: 0}],
      medium: [{q: "5 * 6?", c: ["30", "31"], a: 0}, {q: "'1984' author?", c: ["Orwell",
"Huxley"], a: 0}],
      hard: [{q: "√144?", c: ["12", "13"], a: 0}, {q: "Derivative of x²?", c: ["x", "2x"],
a: 1}]
    };

    let difficulty = "medium", idx = 0, score = 0, total = 0, difficultyScore = 0;
    function load() {
      const current = qs[difficulty][idx];
      document.getElementById("question").textContent = current.q;
      document.getElementById("choices").innerHTML = current.c.map((choice, i)

        `<button onclick="check(${i})">${choice}</button>`).join(");
      document.getElementById("next").style.display = "none";
    }

    function check(i) {
      const current = qs[difficulty][idx];
      if (i === current.a) {
        score++;
        difficulty = difficulty === "easy" ? "medium" : "hard";
      } else {
        difficulty = difficulty === "hard" ? "medium" : "easy";
      }
      difficultyScore += difficulty === "easy" ? 1 : difficulty === "medium" ? 2 : 3;
      total++;
      document.getElementById("next").style.display = "block";
    }

    function next() {
      idx++;
      if (idx >= qs[difficulty].length) showResults();
      else load();
    }

    function showResults() {
      document.querySelector(".container").innerHTML = `
        <h2>Statistics</h2>
        <p>Your score: ${score} / ${total} (${(score / total) * 100}%)</p>
        <div class="progress-bar"><div class="progress" style="width:${(score /
total) * 100}%">${(score / total) * 100}%</div></div>
        <p>Average Difficulty: ${(difficultyScore / total).toFixed(2)}</p>
      `;
    }

    load();
  </script>
</body>
</html>
```

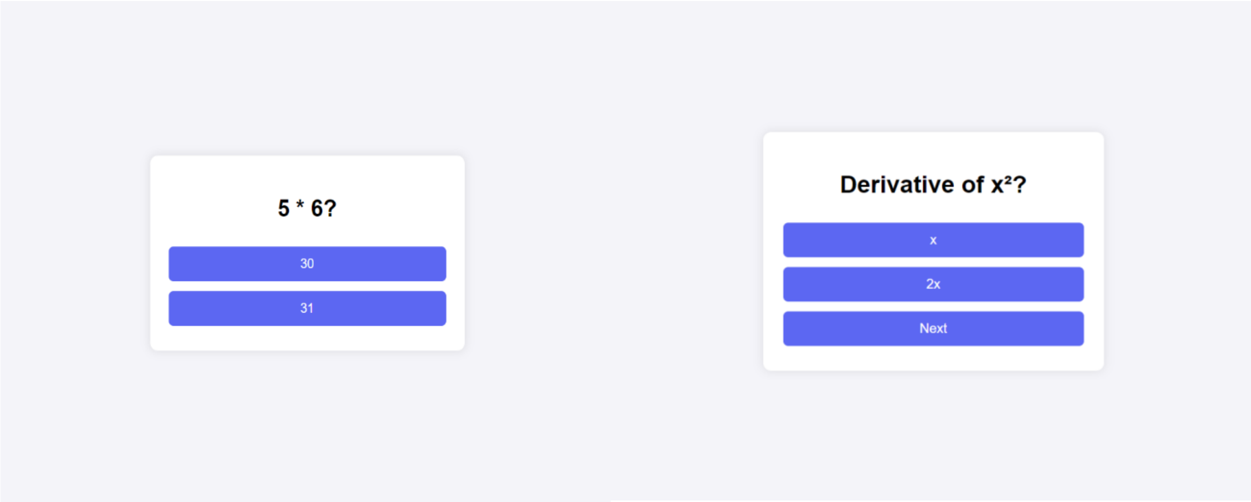
OUTPUT:



Statistics

Your score: 1 / 2 (50%)

Average Difficulty: 1.50



5 * 6?

Derivative of x²?

EX.NO: 5 Design a JSP to insert the details of the users who register through the registration page and store the details in to the database.

PROGRAM:

HTML:

```
<!DOCTYPE html>
<html>
<head>
  <title>Registration Page</title>
</head>
<body>
  <h2>User Registration Form</h2>
  <form action="registerAction.jsp" method="post">
    <label for="username">Username:</label>
    <input type="text" name="username" required><br><br>

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

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

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

JSP:

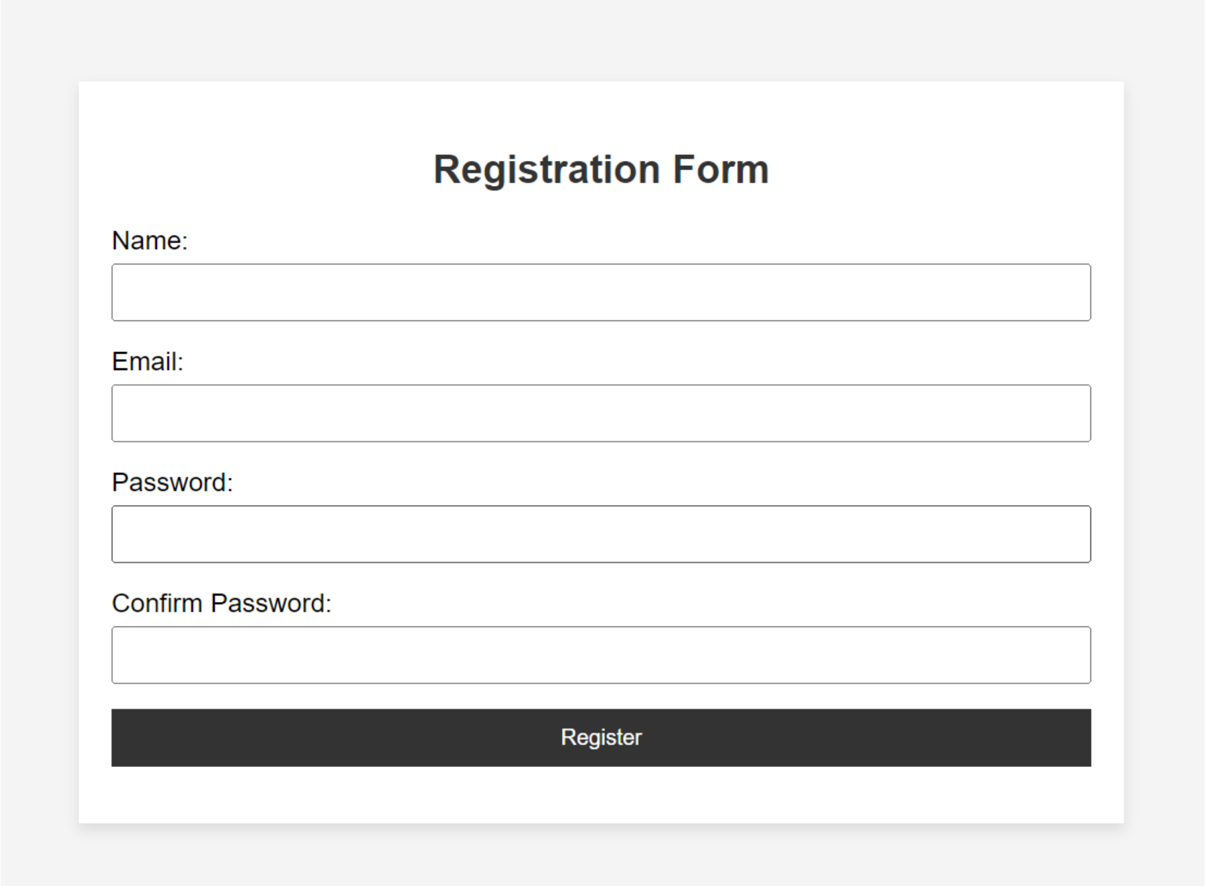
```
<%@ page import="java.sql.*" %>
<%@ page import="java.io.*" %>
<%
  // Fetching form data
  String username = request.getParameter("username");
  String email = request.getParameter("email");
  String password = request.getParameter("password");

  // Database connection setup
  String url = "jdbc:mysql://localhost:3306/UserDB"; // Adjust to your MySQL URL
and port
  String dbUsername = "root"; // Your MySQL root username
  String dbPassword = ""; // Your MySQL password

  Connection conn = null;
  PreparedStatement pstmt = null;

  try {
    // Load MySQL JDBC driver
```

```
        Class.forName("com.mysql.cj.jdbc.Driver");

        // Establish connection to MySQL database
        conn = DriverManager.getConnection(url, dbUsername, dbPassword);

        // SQL query to insert user details
        String query = "INSERT INTO Users (username, email, password) VALUES (?, ?,
?)";

        // Create prepared statement
        pstmt = conn.prepareStatement(query);
        pstmt.setString(1, username);
        pstmt.setString(2, email);
        pstmt.setString(3, password);

        // Execute the update
        int result = pstmt.executeUpdate();

        // Confirmation message
        if (result > 0) {
            out.println("<h3>Registration successful! Welcome, " + username + ".</h3>");
        } else {
            out.println("<h3>Registration failed. Please try again.</h3>");
        }
    } catch (Exception e) {
        out.println("<h3>Error: " + e.getMessage() + "</h3>");
    } finally {
        // Close the database connection
        try {
            if (pstmt != null) pstmt.close();
            if (conn != null) conn.close();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
%>
```

MYSQL:

```
CREATE DATABASE UserDB;

USE UserDB;

CREATE TABLE Users (
    id INT AUTO_INCREMENT PRIMARY KEY,
    username VARCHAR(50) NOT NULL,
    email VARCHAR(100) NOT NULL,
    password VARCHAR(50) NOT NULL
);
```

OUTPUT:



Registration Form

Name:

Email:

Password:

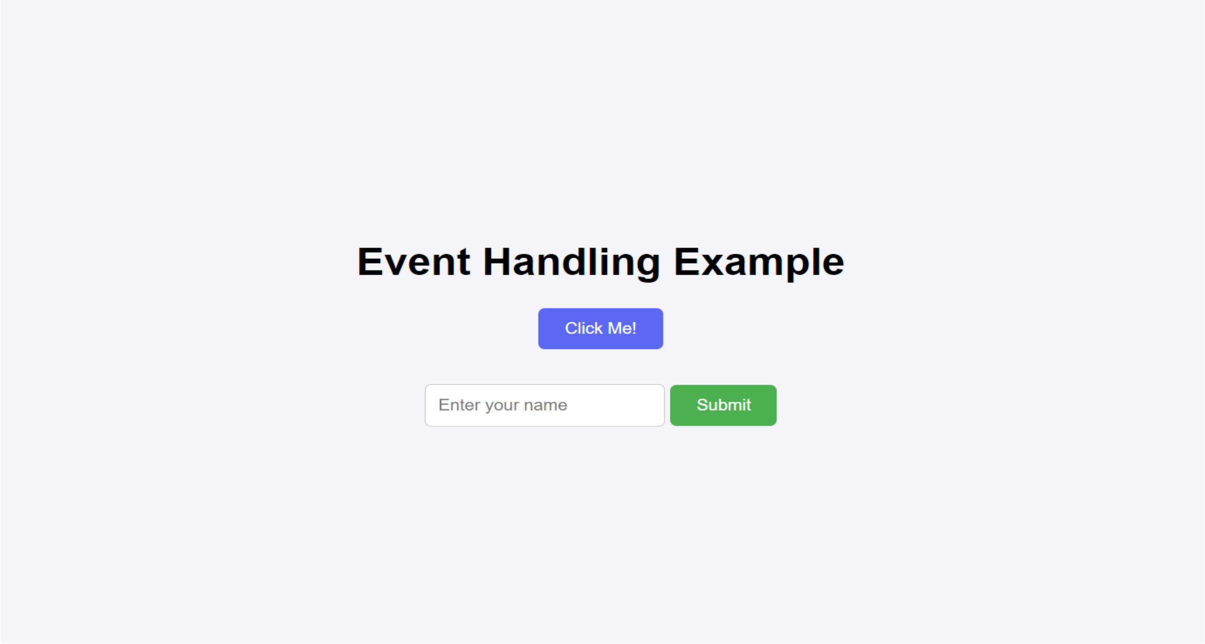
Confirm Password:

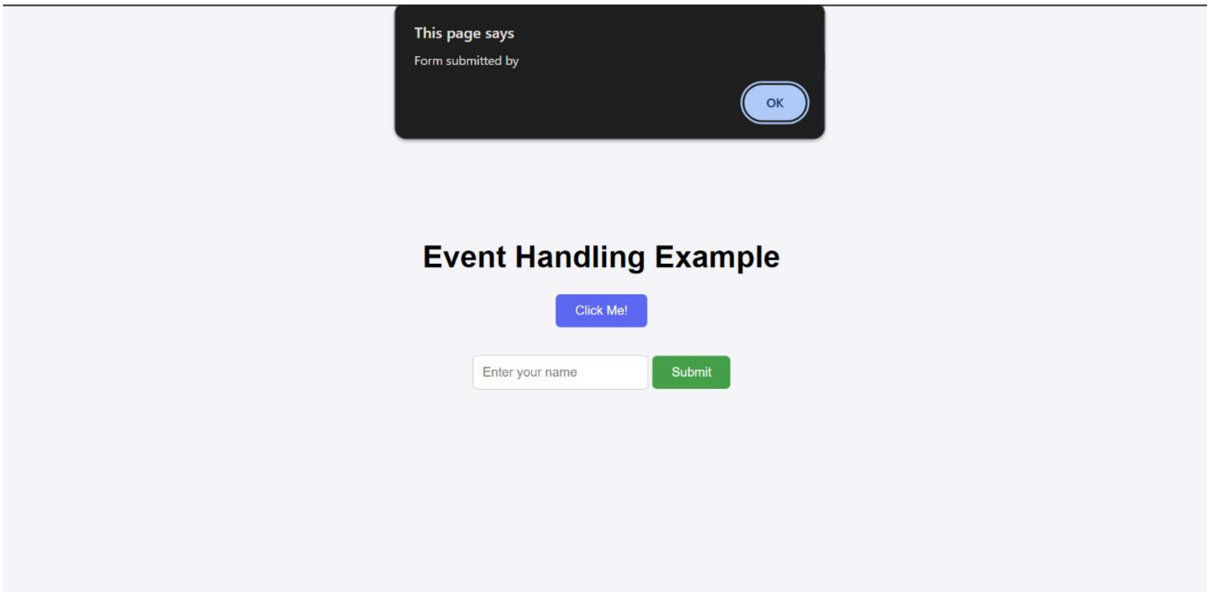
EX.NO: 6 Implement Event Handling in the web pages.

PROGRAM:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Event Handling Example</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            height: 100vh;
            background-color: #f4f4f9;
        }
        .container {
            text-align: center;
        }
        .btn {
            padding: 10px 20px;
            background-color: #5c67f2;
            color: white;
            border: none;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.2s;
        }
        .btn:hover {
            background-color: #7a85ff;
        }
        form {
            margin-top: 20px;
        }
        input[type="text"] {
            padding: 10px;
            margin: 10px 0;
            border: 1px solid #ccc;
            border-radius: 5px;

        input[type="submit"] {
            padding: 10px 20px;
            background-color: #4CAF50;
            color: white;
            border: none;
            border-radius: 5px;
            cursor: pointer;
        }
        input[type="submit"]:hover {
            background-color: #45a049;
        }
    </style>
</head>
<body>
    <div class="container">
        <h1>Event Handling Example</h1>
        <button class="btn" id="colorButton">Click Me!</button>
        <form id="myForm">
            <input type="text" id="name" name="name" placeholder="Enter your name">
            <input type="submit" value="Submit">
        </form>
    </div>

    <script>
        document.getElementById("colorButton").addEventListener("click", function() {
            this.style.backgroundColor = this.style.backgroundColor === "red" ? "#5c67f2" :
"red";
        });
        document.getElementById("myForm").addEventListener("submit", function(event) {
            event.preventDefault();
            alert("Form submitted by " + document.getElementById("name").value);
        });
    </script>
</body>
</html>
```

OUTPUT:




This page says

Form submitted by

EX.NO: 7 Create a simple widget (e.g., weather, stock ticker) using JSON data fetched from an API.

PROGRAM:

HTML:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Weather Widget</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<div class="weather-widget">
<h2>Weather in Your City</h2>
<input type="text" id="city-input" placeholder="Enter city name">
<button id="fetch-weather">Get Weather</button>
<div id="weather-info">
<h3 id="city-name"></h3>
<p id="temperature"></p>
<p id="description"></p>
</div>
</div>
<script src="script.js"></script>
</body>
</html>
```

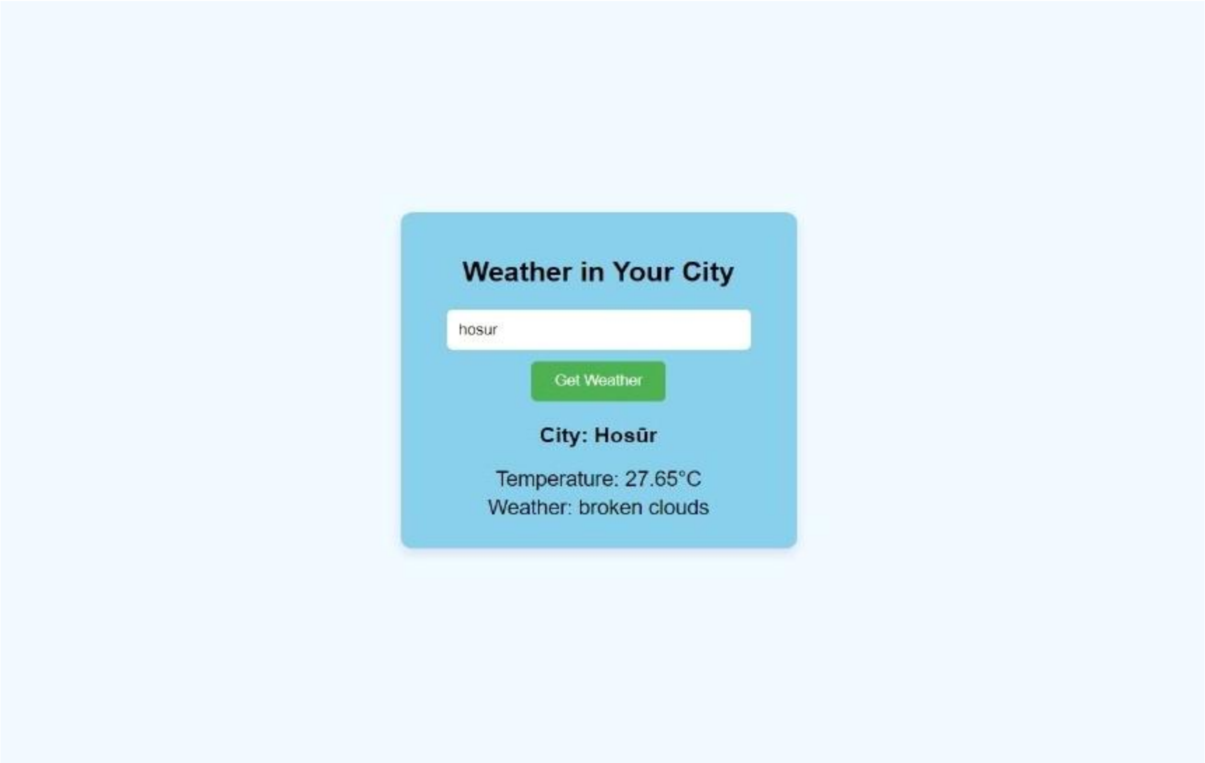
CSS:

```
  body {
  font-family: Arial, sans-serif;
  background-color: #f0f8ff;
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
  margin: 0;
}
.weather-widget {
  text-align: center;
  background-color: #87ceeb;
  padding: 20px;
  border-radius: 10px;
  box-shadow: 0 5px 10px rgba(0, 0, 0, 0.1);
  width: 300px;
}
#city-input {
  padding: 10px;
  width: 80%;
  margin-bottom: 10px;
  border: none;
  border-radius: 5px;
}
#fetch-weather {
  padding: 10px 20px;
  background-color: #4CAF50;
  color: white;
  border: none;
  border-radius: 5px;
  cursor: pointer;
}
#weather-info {
  margin-top: 20px;
}
#temperature, #description {
  font-size: 18px;
  margin: 5px 0;
}
```

JAVA SCRIPT:

```
document.getElementById("fetch-weather").addEventListener("click", function() {
  const city = document.getElementById("city-input").value;
  if (city) {
    fetchWeather(city);
  }
});
function fetchWeather(city) {
  const apiKey = '961a55ab7ed2af2bf001c2eaa2b82e17';  // Your actual API key
  const apiUrl =
`https://api.openweathermap.org/data/2.5/weather?q=${city}&appid=${apiKey}&units=metri
c`;
  fetch(apiUrl)
    .then(response => response.json())
    .then(data => {
      // Log the entire API response to see its structure
      console.log(data);
      if (data.cod === 200) {  // Make sure the API call is successful
        document.getElementById("city-name").innerText = `City: ${data.name}`;
        document.getElementById("temperature").innerText = `Temperature:
${data.main.temp}°C`;
        document.getElementById("description").innerText = `Weather:
${data.weather[0].description}`;
      } else {
        alert('City not found or invalid response!');
      }
    })
    .catch(error => {
      console.error('Error fetching weather data:', error);
    });
}
```

OUTPUT:



Weather in Your City

hosur

City: Hosūr

Temperature: 27.65°C

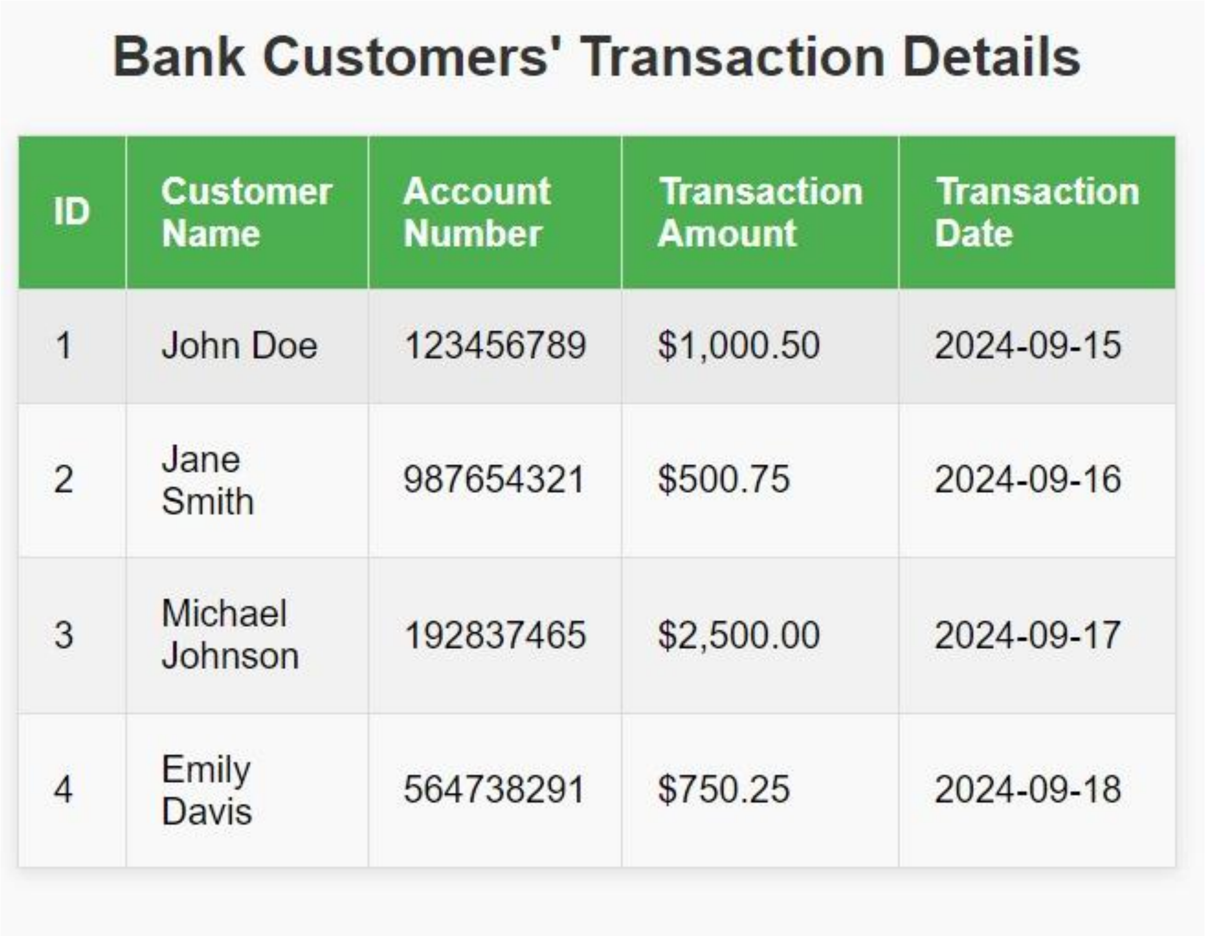
Weather: broken clouds

EX.NO: 8 JDBC connectivity to retrieve bank customers' transaction details.

PROGRAM:

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

public class Main {

    public static void main(String[] args) {
        // Database connection details
        String jdbcURL = "jdbc:mysql://localhost:3306/bank";
        String dbUser = "root";  // Default MySQL user in XAMPP
        String dbPassword = "";  // Default password is empty for XAMPP MySQL
        try {
            // 1. Load the MySQL JDBC Driver
            Class.forName("com.mysql.cj.jdbc.Driver");
            // 2. Establish the connection
            Connection connection = DriverManager.getConnection(jdbcURL, dbUser, dbPassword);
            // 3. Create a statement
            Statement statement = connection.createStatement();
            // 4. Query to get customer transactions
            String query = "SELECT * FROM transactions WHERE customer_id = 101";
            // 5. Execute the query
            ResultSet resultSet = statement.executeQuery(query);
            // 6. Process the result set
            System.out.println("Transaction Details for Customer ID 101:");
            while (resultSet.next()) {
                int id = resultSet.getInt("id");
                int customerId = resultSet.getInt("customer_id");
                double transactionAmount = resultSet.getDouble("transaction_amount");
                String transactionDate = resultSet.getString("transaction_date");
                String description = resultSet.getString("description");

                System.out.println("ID: " + id + ", Customer ID: " + customerId + ", Amount: " +
transactionAmount +
                        ", Date: " + transactionDate + ", Description: " + description);
            }

            // 7. Close the connection
            connection.close();
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

OUTPUT:



Bank Customers' Transaction Details

ID	Customer Name	Account Number	Transaction Amount	Transaction Date
1	John Doe	123456789	$1,000.50	2024-09-15
2	Jane Smith	987654321	$500.75	2024-09-16
3	Michael Johnson	192837465	$2,500.00	2024-09-17
4	Emily Davis	564738291	$750.25	2024-09-18

EX.NO: 9 Develop a PHP program to validate the fields of the Registration page

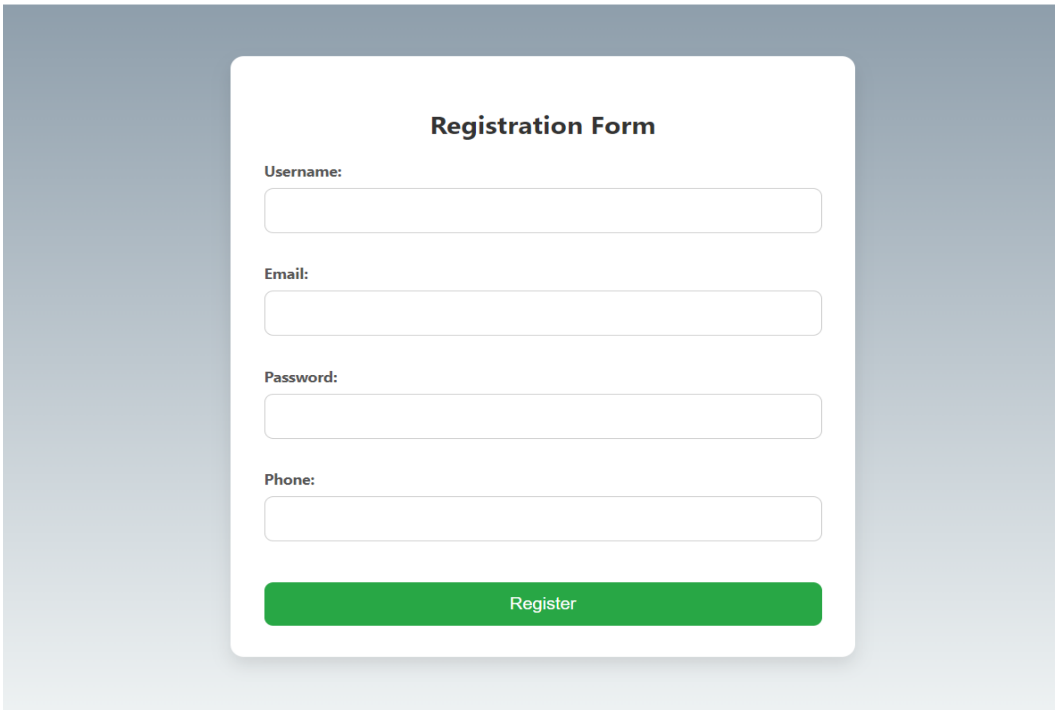
PROGRAM:

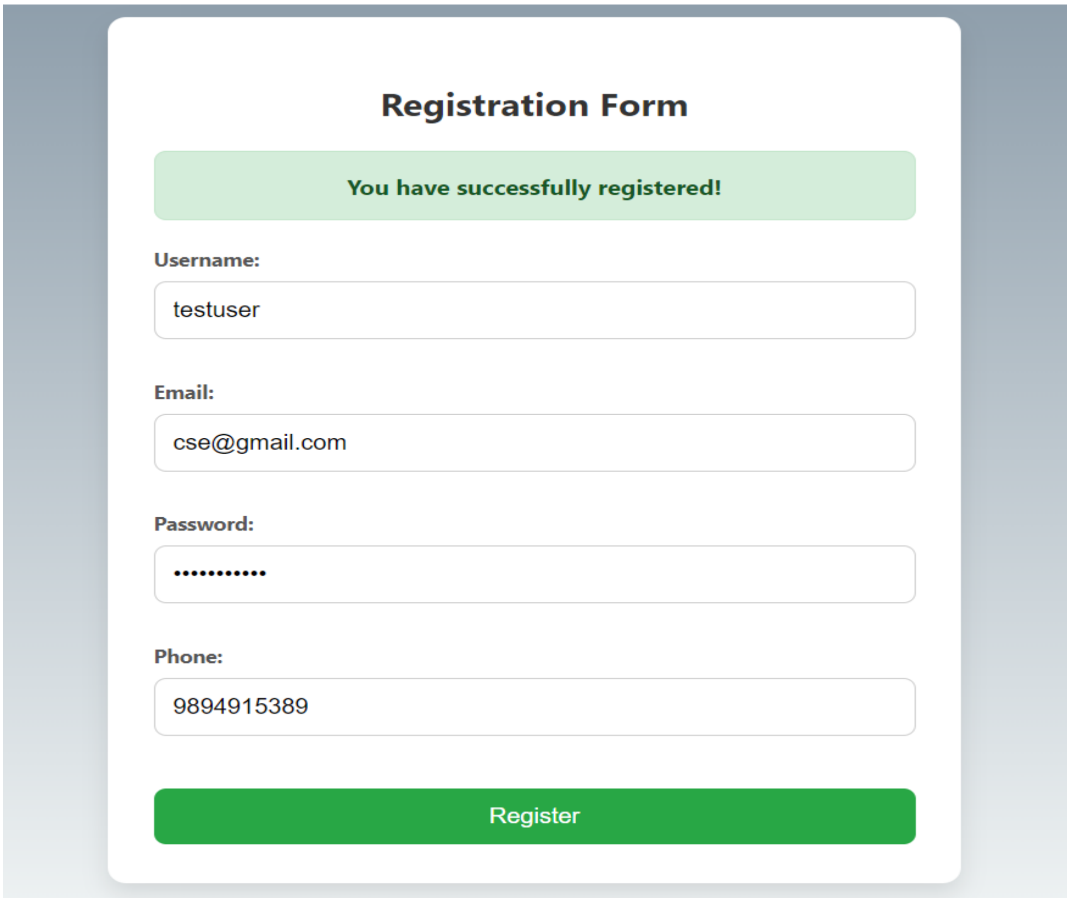
```
<?php
// PHP code remains unchanged from the previous example
// Initialize variables to store error messages and form inputs
$usernameErr = $emailErr = $passwordErr = $phoneErr = "";
$username = $email = $password = $phone = "";

// Check if the form is submitted
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    // Validate Username
    if (empty($_POST["username"])) {
        $usernameErr = "Username is required";
    } else {
        $username = test_input($_POST["username"]);
        if (!preg_match("/^[a-zA-Z-' ]*$/", $username)) {
            $usernameErr = "Only letters and spaces allowed";
        }
    }

    // Validate Email
    if (empty($_POST["email"])) {
        $emailErr = "Email is required";
    } else {
        $email = test_input($_POST["email"]);
        if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
            $emailErr = "Invalid email format";
        }
    }

    // Validate Password
    if (empty($_POST["password"])) {
        $passwordErr = "Password is required";
    } else {
        $password = test_input($_POST["password"]);
        if (strlen($password) < 8 || !preg_match("/[a-z]/i", $password) || !preg_match("/[0-9]/",
$password)) {
            $passwordErr = "Password must be at least 8 characters long, contain one letter and
one number";
        }
    }

    // Validate Phone
    if (empty($_POST["phone"])) {
        $phoneErr = "Phone number is required";
    } else {
        $phone = test_input($_POST["phone"]);
        if (!preg_match("/^[0-9]{10}$/", $phone)) {
            $phoneErr = "Invalid phone number. Must be 10 digits.";
        }
    }

    // If no errors, proceed to database insertion
    if (empty($usernameErr) && empty($emailErr) && empty($passwordErr) &&
empty($phoneErr)) {
        // Database connection
        $servername = "localhost";
        $username_db = "root"; // Default XAMPP MySQL username
        $password_db = ""; // Leave empty for default
        $dbname = "user_registration";

        // Create connection
        $conn = new mysqli($servername, $username_db, $password_db, $dbname);

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

        // Hash the password before saving it
        $hashed_password = password_hash($password, PASSWORD_DEFAULT);

        // Insert data into the database
        $sql = "INSERT INTO users (username, email, password, phone) VALUES
('$username', '$email', '$hashed_password', '$phone')";

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

        $conn->close();
    }
}

// Function to sanitize user input
function test_input($data) {
    $data = trim($data);
    $data = stripslashes($data);
    $data = htmlspecialchars($data);
    return $data;
}
?>

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

```
body {
    font-family: Arial, sans-serif;
    background-color: #f4f4f9;
    margin: 0;
    padding: 0;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
}
.container {
    background-color: #ffffff;
    padding: 20px;
    border-radius: 8px;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
    width: 100%;
    max-width: 500px;
}
h2 {
    text-align: center;
    color: #333;
}

form {
    display: flex;
    flex-direction: column;
}
label {
    margin-bottom: 8px;
    font-weight: bold;
    color: #333;
}

input[type="text"],
input[type="password"] {
    padding: 10px;
    margin-bottom: 12px;
    border: 1px solid #ddd;
    border-radius: 4px;
    font-size: 16px;
}

input[type="submit"] {
    padding: 10px;
    background-color: #007bff;
    border: none;
    border-radius: 4px;
    color: white;
    font-size: 16px;
    cursor: pointer;
    transition: background-color 0.3s;
}
```

```
        input[type="submit"]:hover {
            background-color: #0056b3;
        }

        .error-message {
            color: #e74c3c;
            font-size: 14px;
            margin: 10px 0;
        }

        .success-message {
            color: #2ecc71;
            font-size: 14px;
            margin: 10px 0;
        }
    </style>
</head>
<body>

<div class="container">
    <h2>Registration Form</h2>
    <form method="post" action="<?php echo
htmlspecialchars($_SERVER["PHP_SELF"]);?>">
        <label for="username">Username:</label>
        <input type="text" id="username" name="username" value="<?php echo $username;
?>">
        <span class="error-message"><?php echo $usernameErr; ?></span>

        <label for="email">Email:</label>
        <input type="text" id="email" name="email" value="<?php echo $email; ?>">
        <span class="error-message"><?php echo $emailErr; ?></span>

        <label for="password">Password:</label>
        <input type="password" id="password" name="password" value="<?php echo
$password; ?>">
        <span class="error-message"><?php echo $passwordErr; ?></span>

        <label for="phone">Phone:</label>
        <input type="text" id="phone" name="phone" value="<?php echo $phone; ?>">
        <span class="error-message"><?php echo $phoneErr; ?></span>

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

</body>
</html>
```

OUTPUT:





Registration Form

You have successfully registered!

Username: testuser

Email: cse@gmail.com

Password: •••••••••••

Phone: 9894915389