

Problem A1: Design a simple webpage using only HTML tags for Computer Science and Engineering Department of your institute or college where <head><title><body> and divisional tag like <div><table> should be used as needed.

Source Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Computer Science and Engineering - IST</title>
</head>
<body>
  <div>
    <h1>Computer Science and Engineering Department</h1>
    <h2>Institute of Science and Technology</h2>
  </div>

  <div>
    <h3>About the Department</h3>
    <p>The CSE Department at IST offers quality education and research opportunities
in computer science, software development, and emerging technologies.</p>
  </div>

  <div>
    <h3>Courses Offered</h3>
    <ul>
      <li>Bachelor of Science in Computer Science and Engineering</li>
      <li>Master of Science in Computer Science</li>
      <li>Diploma in Information Technology</li>
    </ul>
  </div>
```

```
<div>
  <h3>Faculty Members</h3>
  <table border="1">
    <tr>
      <th>Name</th>
      <th>Designation</th>
    </tr>
    <tr>
      <td>Ditee Yasmeen</td>
      <td>Professor & Head of the CSE Department</td>
    </tr>
    <tr>
      <td>Lutfi Habiba</td>
      <td>Lecturer</td>
    </tr>
  </table>
</div>
```

```
<div>
  <h3>Contact Information</h3>
  <p>Email: <span>info@ist.edu.bd</span></p>
  <p>Phone: <span>+88 02-55029353</span></p>
</div>
</body>
</html>
```

Output:

Computer Science and Engineering Department

Institute of Science and Technology

About the Department

The CSE Department at IST offers quality education and research opportunities in computer science, software development, and emerging technologies.

Courses Offered

- Bachelor of Science in Computer Science and Engineering
- Master of Science in Computer Science
- Diploma in Information Technology

Faculty Members

Name	Designation
Ditee Yasmeen	Professor & Head of the CSE Department
Lutfi Habiba	Lecturer

Contact Information

Email: info@ist.edu.bd

Phone: +88 02-55029353

Problem A2: Using text links design a simple website to navigate between different pages (minimum two pages and one page must contain an image link and another page contain 2x3 table).

Source Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Computer Science and Engineering - IST</title>
</head>
<body>
  <div>
    <h1>Computer Science and Engineering Department</h1>
    <h2>Institute of Science and Technology</h2>
  </div>

  <div>
    <h3>Navigation</h3>
    <p>
      <a href="/A2/index.html">Home</a> |
      <a href="/A2/faculty.html">Faculty</a>
    </p>
  </div>

  <div>
    <h3>About the Department</h3>
    <p>The CSE Department at IST offers quality education and research opportunities
in computer science, software development, and emerging technologies.</p>
  </div>
```

```
<div>
  <h3>Courses Offered</h3>
  <ul>
    <li>Bachelor of Science in Computer Science and Engineering</li>
    <li>Master of Science in Computer Science</li>
    <li>Diploma in Information Technology</li>
  </ul>
</div>
```

```
<div>
  <h3>Image Link</h3>
  <a href="/A2/faculty.html">
    
  </a>
</div>
```

```
<div>
  <h3>Contact Information</h3>
  <p>Email: <span>info@istcse.edu</span></p>
  <p>Phone: <span>+123 456 7890</span></p>
</div>
</body>
</html>
```

Faculty.html

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

```
<body>
  <div>
    <h1>Faculty Members</h1>
    <p><a href="index.html">Back to Home</a></p>
  </div>

  <div>
    <h3>Our Faculty</h3>
    <table border="1">
      <tr>
        <th>Name</th>
        <th>Designation</th>
        <th>Email</th>
      </tr>
      <tr>
        <td>Ditee Yasmeen</td>
        <td>Professor & Head</td>
        <td>ditee@ist.edu</td>
      </tr>
      <tr>
        <td>Saleh Muhammad Maruf</td>
        <td>Assistant Professor</td>
        <td>maruf@ist.edu</td>
      </tr>
      <tr>
        <td>Lutfi Habiba</td>
        <td>Lecturer</td>
        <td>lutfi@ist.edu</td>
      </tr>
    </table>
  </div>
</body>
</html>
```

Output:

Computer Science and Engineering Department

Institute of Science and Technology

Navigation

[Home](#) | [Faculty](#)

About the Department

The CSE Department at IST offers quality education and research opportunities in computer science, software development, and emerging technologies.

Courses Offered

- Bachelor of Science in Computer Science and Engineering
- Master of Science in Computer Science
- Diploma in Information Technology

Image Link



Contact Information

Email: info@istcse.edu

Phone: +123 456 7890

Faculty Members

[Back to Home](#)

Our Faculty

Name	Designation	Email
Ditee Yasmeen	Professor & Head	ditee@ist.edu
Saleh Muhammad Maruf	Assistant Professor	maruf@ist.edu
Lutfi Habiba	Lecturer	lutfi@ist.edu

Problem B1: Design a simple website using CSS containing formatted text, forms, tables and link styles. (Must use three ways of inserting CSS external, internal and inline style).

Source Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>CSE Department</title>
  <link rel="stylesheet" href="/B1/style.css"> <!-- External CSS -->

  <style>
    /* Internal CSS - Styling the table */
    table {
      width: 80%;
      border-collapse: collapse;
      margin: 20px 0;
    }
    th, td {
      border: 1px solid #333;
      padding: 10px;
      text-align: center;
    }
    th {
      background-color: #007BFF;
      color: white;
    }
  </style>
</head>
<body>
```



```
<header>
  <h1 style="color: orange; text-align: center;">Welcome to the CSE
Department</h1> <!-- Inline CSS -->
</header>

<nav>
  <a href="index.html">Home</a> |
  <a href="/B1/contact.html">Contact Us</a>
</nav>

<section>
  <h2>About Our Department</h2>
  <p>The Computer Science and Engineering Department offers cutting-edge
education in computing and technology.</p>
</section>

<section>
  <h2>Faculty Members</h2>
  <table>
    <tr>
      <th>Name</th>
      <th>Designation</th>
      <th>Email</th>
    </tr>
    <tr>
      <td>Ditee Yasmeen</td>
      <td>Professor & Head</td>
      <td>ditee@ist.edu</td>
    </tr>
    <tr>
      <td>Saleh Muhammad Maruf</td>
      <td>Assistant Professor</td>
      <td>maruf@ist.edu</td>
    </tr>
```

```
<tr>
  <td>Lutfi Habiba</td>
  <td>Lecturer</td>
  <td>lutfi@ist.edu</td>
</tr>
</table>
</section>

<footer>
  <p>&copy; 2025 CSE Department. All rights reserved.</p>
</footer>

</body>
</html>
```

Contact.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Contact Us</title>
  <link rel="stylesheet" href="/B1/style.css">
</head>
<body>

  <header>
    <h1>Contact Us</h1>
  </header>

  <nav>
    <a href="index.html">Home</a> |
    <a href="contact.html">Contact Us</a>
  </nav>
```

```
<section>
  <h2>Get in Touch</h2>
  <form>
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" required><br><br>

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

    <label for="message">Message:</label><br>
    <textarea id="message" name="message" rows="5"></textarea><br><br>

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

<footer>
  <p>&copy; 2025 CSE Department. All rights reserved.</p>
</footer>

</body>
</html>
```

Style.css

```
/* External CSS for general styling */
body {
  font-family: Arial, sans-serif;
  margin: 20px;
  background-color: #f4f4f4;
}

header {
  text-align: center;
```

```
background-color: #007BFF;  
color: white;  
padding: 10px;  
border-radius: 5px;  
}
```

```
nav {  
    text-align: center;  
    margin: 15px 0;  
}
```

```
nav a {  
    text-decoration: none;  
    color: #007BFF;  
    font-weight: bold;  
    margin: 0 15px;  
}
```

```
nav a:hover {  
    color: orange;  
}
```

```
section {  
    background: white;  
    padding: 20px;  
    margin: 20px auto;  
    width: 80%;  
    border-radius: 5px;  
    box-shadow: 2px 2px 10px rgba(0, 0, 0, 0.1);  
}
```

```
footer {  
    text-align: center;  
    padding: 10px;  
    background-color: #007BFF;
```

```
color: white;
margin-top: 20px;
}
```

Output:

Welcome to the CSE Department

[Home](#) | [Contact Us](#)

About Our Department

The Computer Science and Engineering Department offers cutting-edge education in computing and technology.

Faculty Members

Name	Designation	Email
Ditee Yasmeen	Professor & Head	ditee@ist.edu
Saleh Muhammad Maruf	Assistant Professor	maruf@ist.edu
Lutfi Habiba	Lecturer	lutfi@ist.edu

© 2025 CSE Department. All rights reserved.

Contact Us

[Home](#) | [Contact Us](#)

Get in Touch

Name:

Email:

Message:

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Problem B2: Using CSS menu, design a website to navigate between different pages. (Minimum three pages and each page must contain heading, paragraph, text formatting tags and mouse over links to back homepage)

Source Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Home - CSE Department</title>
  <link rel="stylesheet" href="/B2/styles.css">
</head>
<body>

  <header>
    <h1>Welcome to the CSE Department</h1>
  </header>

  <nav>
    <ul>
      <li><a href="/B2/index.html">Home</a></li>
      <li><a href="/B2/about.html">About Us</a></li>
      <li><a href="/B2/contact.html">Contact</a></li>
    </ul>
  </nav>

  <section>
    <h2>Introduction</h2>
    <p><b>The Computer Science and Engineering Department</b> provides high-
quality education and research opportunities.</p>
```

<p>Explore our courses, faculty, and contact details using the menu above.</p>
</section>

<footer>
 <p>© 2025 CSE Department. All rights reserved.</p>
</footer>

</body>
</html>

About.html

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <meta charset="UTF-8">  
  <meta name="viewport" content="width=device-width, initial-scale=1.0">  
  <title>About Us - CSE Department</title>  
  <link rel="stylesheet" href="/B2/styles.css">  
</head>  
<body>
```

```
  <header>  
    <h1>About Our Department</h1>  
  </header>
```

```
  <nav>  
    <ul>  
      <li><a href="/B2/index.html">Home</a></li>  
      <li><a href="/B2/about.html">About Us</a></li>  
      <li><a href="/B2/contact.html">Contact</a></li>  
    </ul>  
  </nav>
```

```
<section>
```

<h2>Who We Are</h2>

<p><i>The CSE department</i> focuses on cutting-edge research and practical knowledge.</p>

<p>We offer a range of courses and certifications in software development, AI, and cybersecurity.</p>

</section>

<p>Back to Home</p>

<footer>

<p>© 2025 CSE Department. All rights reserved.</p>

</footer>

</body>

</html>

Contact.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Contact Us - CSE Department</title>

<link rel="stylesheet" href="/B2/styles.css">

</head>

<body>

<header>

<h1>Contact Us</h1>

</header>

<nav>

Home


```
    <li><a href="/B2/about.html">About Us</a></li>
    <li><a href="/B2/contact.html">Contact</a></li>
</ul>
</nav>
```

```
<section>
  <h2>Get in Touch</h2>
  <p>For inquiries, reach out to us at:</p>
  <p><b>Email:</b> info@ist.edu.bd</p>
  <p><b>Phone:</b> +88 02-55029353</p>
</section>
```

```
<p><a href="/B2/index.html" class="back-link">Back to Home</a></p>
```

```
<footer>
  <p>&copy; 2025 CSE Department. All rights reserved.</p>
</footer>
```

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

Output:

Welcome to the CSE Department

[Home](#)[About Us](#)[Contact](#)

Introduction

The **Computer Science and Engineering Department** provides high-quality education and research opportunities. Explore our courses, faculty, and contact details using the menu above.

© 2025 CSE Department. All rights reserved.

About Our Department

[Home](#)[About Us](#)[Contact](#)

Who We Are

The *CSE department* focuses on cutting-edge research and practical knowledge. We offer a range of **courses and certifications** in software development, AI, and cybersecurity.

[Back to Home](#)

© 2025 CSE Department. All rights reserved.

Contact Us

[Home](#)[About Us](#)[Contact](#)

Get in Touch

For inquiries, reach out to us at:
Email: info@ist.edu.bd
Phone: +88 02-55029353

[Back to Home](#)

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Problem C1: Design a form that contains text fields, text area, check boxes, multiple checkboxes, radio buttons, list boxes, password fields, submit button, reset buttons and store the value of this form into MySQL database and show the stored information into another page using PHP program.

Source Code:

MySQL database query

```
CREATE DATABASE IF NOT EXISTS form_data;
```

```
USE form_data;
```

```
CREATE TABLE IF NOT EXISTS users (  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    full_name VARCHAR(255) NOT NULL,  
    email VARCHAR(255) NOT NULL UNIQUE,  
    password VARCHAR(255) NOT NULL,  
    gender ENUM('Male', 'Female', 'Other') NOT NULL,  
    interests TEXT NOT NULL,  
    country VARCHAR(50) NOT NULL,  
    comments TEXT NOT NULL  
);
```

Index.php

```
<?php  
// Database Connection  
$servername = "localhost";  
$username = "root"; // Default MySQL username  
$password = ""; // Default password (leave empty for XAMPP)  
$dbname = "form_data";
```

```

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

// Handling Form Submission
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $full_name = $_POST["full_name"];
    $email = $_POST["email"];
    $password = password_hash($_POST["password"], PASSWORD_BCRYPT); // Encrypt
password
    $gender = $_POST["gender"];
    $interests = implode(" ", $_POST["interests"]); // Convert array to string
    $country = $_POST["country"];
    $comments = $_POST["comments"];

    $sql = "INSERT INTO users (full_name, email, password, gender, interests, country,
comments)
        VALUES ('$full_name', '$email', '$password', '$gender', '$interests', '$country',
'$comments')";

    if ($conn->query($sql) === TRUE) {
        echo "<p style='color:green; text-align:center;'>Data successfully saved!</p>";
    } else {
        echo "Error: " . $conn->error;
    }
}
?>

```

```

<!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>

```

</head>

<body>

<h2>User Registration Form</h2>

<form action="" method="POST">

<label>Full Name:</label>

<input type="text" name="full_name" required>

<label>Email:</label>

<input type="email" name="email" required>

<label>Password:</label>

<input type="password" name="password" required>

<label>Gender:</label>

<input type="radio" name="gender" value="Male" required> Male

<input type="radio" name="gender" value="Female"> Female

<input type="radio" name="gender" value="Other"> Other

<label>Interests:</label>

<input type="checkbox" name="interests[]" value="Programming"> Programming

<input type="checkbox" name="interests[]" value="Gaming"> Gaming

<input type="checkbox" name="interests[]" value="Reading"> Reading

<label>Country:</label>

<select name="country" required>

<option value="USA">USA</option>

<option value="UK">UK</option>

<option value="Canada">Canada</option>

<option value="India">India</option>

<option value="Bangladesh">Bangladesh</option>

</select>

```
<label>Comments:</label>
<textarea name="comments" rows="4" required></textarea>
```

```
<div class="buttons">
    <button type="submit">Submit</button>
    <button type="reset">Reset</button>
</div>
</form>
```

```
<br>
<a href="/web_lab/C1/view.php">View Submitted Data</a>
```

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

View.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "form_data";

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

// Fetch data from the database
$sql = "SELECT full_name, email, gender, interests, country, comments, created_at
FROM users ORDER BY created_at DESC";
$result = $conn->query($sql);
```

```
// Count total submissions
$total_submissions = $result->num_rows;
?>
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>View Submitted Forms</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      background-color: #f4f4f4;
    }
    h2 {
      color: #333;
    }
    table {
      width: 90%;
      margin: 20px auto;
      border-collapse: collapse;
      background: white;
      box-shadow: 2px 2px 10px rgba(0, 0, 0, 0.1);
    }
    th, td {
      border: 1px solid black;
      padding: 10px;
      text-align: center;
    }
    th {
      background-color: #007BFF;
      color: white;
    }
  </style>
```

```
tr:nth-child(even) {
    background-color: #f2f2f2;
}
.summary {
    margin-top: 10px;
    font-size: 18px;
    font-weight: bold;
    color: green;
}
.back-link {
    display: block;
    margin-top: 20px;
    text-decoration: none;
    font-size: 18px;
    background-color: #007BFF;
    color: white;
    padding: 10px 20px;
    border-radius: 5px;
}
.back-link:hover {
    background-color: #0056b3;
}
</style>
</head>
<body>
```

```
<h2>Stored User Data</h2>
```

```
<p class="summary">Total Submissions: <strong><?php echo $total_submissions;
?></strong></p>
```

```
<table>
```

```
<tr>
```

```
<th>Full Name</th>
```

```
<th>Email</th>
```

```
<th>Gender</th>
```



```
<th>Interests</th>
<th>Country</th>
<th>Comments</th>
<th>Submitted On</th>
</tr>
```

```
<?php
if ($total_submissions > 0) {
    while ($row = $result->fetch_assoc()) {
        echo "<tr>
            <td>".$row["full_name"]."</td>
            <td>".$row["email"]."</td>
            <td>".$row["gender"]."</td>
            <td>".$row["interests"]."</td>
            <td>".$row["country"]."</td>
            <td>".$row["comments"]."</td>
            <td>".$row["created_at"]."</td>
        </tr>";
    }
} else {
    echo "<tr><td colspan='7'>No data found</td></tr>";
}
$conn->close();
?>
```

```
</table>
```

```
<a class="back-link" href="/web_lab/C1/index.php">Back to Home</a>
```

```
</body>
```

```
</html>
```

Output:

User Registration Form

Full Name: Email: Password: Gender:
 ☐ Male ☐ Female ☐ Other

Interests:
 ☐ Programming ☐ Gaming ☐ Reading

Country: Comments:

[View Submitted Data](#)

Stored User Data						
Total Submissions: 1						
Full Name	Email	Gender	Interests	Country	Comments	Submitted On
MD Ashanul Islam	ashanu2021@gmail.com	Male	Gaming	Bangladesh	test	2025-03-19 02:04:15

Back to Home

Problem C2: Design a webpage that collects student information and subject marks and stores the information and marks to MySQL database. Show the results in grading (GPA) system to another page using php program.

Source Code:

MySQL database query

```
CREATE DATABASE student_records;
```

```
USE student_records;
```

```
CREATE TABLE students (  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(100),  
    roll_number VARCHAR(50),  
    subject1 INT,  
    subject2 INT,  
    subject3 INT,  
    subject4 INT,  
    subject5 INT  
);
```

Submit.php

```
<?php  
$servername = "localhost";  
$username = "root";  
$password = "";  
$dbname = "student_records";  
  
// Create connection  
$conn = new mysqli($servername, $username, $password, $dbname);
```

```

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

$successMessage = ""; // Variable to store success message

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $name = $_POST['name'];
    $roll_number = $_POST['roll_number'];
    $subject1 = $_POST['subject1'];
    $subject2 = $_POST['subject2'];
    $subject3 = $_POST['subject3'];
    $subject4 = $_POST['subject4'];
    $subject5 = $_POST['subject5'];

    $sql = "INSERT INTO students (name, roll_number, subject1, subject2, subject3,
subject4, subject5)
        VALUES ('$name', '$roll_number', '$subject1', '$subject2', '$subject3', '$subject4',
'$subject5')";

    if ($conn->query($sql) === TRUE) {
        $successMessage = "New record created successfully. <a
href='view_results.php'>View Results</a>";
    } else {
        $successMessage = "Error: " . $sql . "<br>" . $conn->error;
    }
}

$conn->close();
?>

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

```

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Student Information</title>
</head>
<body>
  <h1>Enter Student Information and Marks</h1>
  <form action="submit.php" method="post">
    <label for="name">Student Name:</label>
    <input type="text" name="name" required><br><br>

    <label for="roll_number">Roll Number:</label>
    <input type="text" name="roll_number" required><br><br>

    <label for="subject1">Subject 1 Marks:</label>
    <input type="number" name="subject1" required><br><br>

    <label for="subject2">Subject 2 Marks:</label>
    <input type="number" name="subject2" required><br><br>

    <label for="subject3">Subject 3 Marks:</label>
    <input type="number" name="subject3" required><br><br>

    <label for="subject4">Subject 4 Marks:</label>
    <input type="number" name="subject4" required><br><br>

    <label for="subject5">Subject 5 Marks:</label>
    <input type="number" name="subject5" required><br><br>

    <button type="submit">Submit</button>
    <a class="back-link" href="/web_lab/C2/view_results.php">View results</a>
  </form>

  <?php if (!empty($successMessage)): ?>
    <p><?php echo $successMessage; ?></p>
  <?php endif; ?>
```

</body> </html>

View results.php

```
<?php
```

```
$servername = "localhost";
```

```
$username = "root";
```

```
$password = "";
```

```
$dbname = "student_records";
```

```
// Create connection
```

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

```
// Check connection
```

```
if ($conn->connect_error) {
```

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

```
}
```

```
// Fetch student data
```

```
$sql = "SELECT * FROM students";
```

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

```
if ($result->num_rows > 0) {
```

```
    echo "<h1>Student Results</h1>";
```

```
    echo "<table border='1'>
```

```
        <tr>
```

```
            <th>Name</th>
```

```
            <th>Roll Number</th>
```

```
            <th>Subject 1</th>
```

```
            <th>Subject 2</th>
```

```
            <th>Subject 3</th>
```

```
            <th>Subject 4</th>
```

```
            <th>Subject 5</th>
```

```
            <th>CGPA</th>
```

```
            <th>Grade</th>
```

```
        </tr>";
```

```

while ($row = $result->fetch_assoc()) {
    // Check if any subject has marks below 50
    if ($row['subject1'] < 50 || $row['subject2'] < 50 || $row['subject3'] < 50 ||
$row['subject4'] < 50 || $row['subject5'] < 50) {
        $grade = 'F';
        $cgpa = 0; // CGPA is set to 0 if any subject mark is below 50
    } else {
        // Calculate total marks and CGPA if no subject is below 50
        $total_marks = $row['subject1'] + $row['subject2'] + $row['subject3'] +
$row['subject4'] + $row['subject5'];
        $cgpa = $total_marks / 5;

        // Assign grade based on CGPA
        if ($cgpa >= 90) {
            $grade = 'A+';
        } elseif ($cgpa >= 80) {
            $grade = 'A';
        } elseif ($cgpa >= 70) {
            $grade = 'B';
        } elseif ($cgpa >= 60) {
            $grade = 'C';
        } elseif ($cgpa >= 50) {
            $grade = 'D';
        }
    }
}

echo "<tr>
    <td>" . $row['name'] . "</td>
    <td>" . $row['roll_number'] . "</td>
    <td>" . $row['subject1'] . "</td>
    <td>" . $row['subject2'] . "</td>
    <td>" . $row['subject3'] . "</td>
    <td>" . $row['subject4'] . "</td>
    <td>" . $row['subject5'] . "</td>

```

```
        <td>" . $cgpa . "</td>
        <td>" . $grade . "</td>
    </tr>";
}
echo "</table>";
} else {
    echo "0 results found";
}
```

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

```
<form action="/web_lab/C2/submit.php">
    <button type="submit">Add a new record</button>
</form>
```


Output:

Enter Student Information and Marks

Student Name:

Roll Number:

Subject 1 Marks:

Subject 2 Marks:

Subject 3 Marks:

Subject 4 Marks:

Subject 5 Marks:

[View results](#)

Student Results

Name	Roll Number	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	CGPA	Grade
Test	20253	50	56	36	96	98	0	F
test 2	25369	50	63	12	36	96	0	F

Problem D1: Design a page where user can input his/her personal information like name, address, email, gender, mobile number etc. and perform common input validation using JavaScripts like valid email, mobile number should be 11 digits, mandatory field check etc.

Source Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Personal Information Form</title>
  <script>
    function validateForm() {
      var name = document.getElementById("name").value;
      var address = document.getElementById("address").value;
      var email = document.getElementById("email").value;
      var gender = document.querySelector('input[name="gender"]:checked');
      var mobile = document.getElementById("mobile").value;
      var isValid = true;
      var errorMessages = "";

      // Check if name is empty
      if (name.trim() === "") {
        errorMessages += "Name is required.\n";
        isValid = false;
      }

      // Check if address is empty
      if (address.trim() === "") {
        errorMessages += "Address is required.\n";
```

```

    isValid = false;
}

// Check if email is valid
var emailPattern = /^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}$/;
if (email.trim() === "") {
    errorMessages += "Email is required.\n";
    isValid = false;
} else if (!emailPattern.test(email)) {
    errorMessages += "Please enter a valid email address.\n";
    isValid = false;
}

// Check if mobile number is valid (11 digits)
var mobilePattern = /^[0-9]{11}$/;
if (mobile.trim() === "") {
    errorMessages += "Mobile number is required.\n";
    isValid = false;
} else if (!mobilePattern.test(mobile)) {
    errorMessages += "Mobile number must be exactly 11 digits.\n";
    isValid = false;
}

// Check if gender is selected
if (!gender) {
    errorMessages += "Please select a gender.\n";
    isValid = false;
}

// If validation failed, show error messages
if (!isValid) {
    alert(errorMessages);
}

return isValid;

```

```
    }
  </script>
</head>
<body>

  <h2>Personal Information Form</h2>
  <form onsubmit="return validateForm()">
    <label for="name">Full Name:</label><br>
    <input type="text" id="name" name="name"><br><br>

    <label for="address">Address:</label><br>
    <textarea id="address" name="address" rows="4"></textarea><br><br>

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

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

    <label for="mobile">Mobile Number (11 digits):</label><br>
    <input type="text" id="mobile" name="mobile"><br><br>

    <div class="buttons">
      <button type="submit">Submit</button>
      <button type="reset">Reset</button>
    </div>
  </form>

</body>
</html>
```

Output:

Personal Information Form

Full Name:

Address:

Email:

Gender:

☐ Male

☐ Female

☐ Other

Mobile Number (11 digits):

Submit

Reset

Name is required.
Address is required.
Email is required.
Mobile number is required.
Please select a gender.

OK

Problem D1: Design a webpage containing JavaScript function that performs various actions like change text, change color, remove tag, insert new tag by different events like mouse click, mouse over etc.

Source Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JavaScript Event Handling</title>
  <style>
    .container {
      margin: 20px;
    }
    .button {
      margin: 10px;
      padding: 10px;
      cursor: pointer;
      background-color: lightblue;
    }
    .color-box {
      width: 100px;
      height: 100px;
      background-color: lightgreen;
      margin-top: 10px;
    }
    .new-tag {
      color: red;
    }
  </style>
```

```
<script>
// Function to change text content
function changeText() {
    document.getElementById("text-element").innerText = "Text Changed!";
}

// Function to change the background color of a div
function changeColor() {
    document.getElementById("color-box").style.backgroundColor = "lightcoral";
}

// Function to remove the last inserted element
function removeElement() {
    // Select the last inserted element with the class 'new-tag'
    var lastInsertedTag = document.querySelector(".new-tag:last-of-type");
    if (lastInsertedTag) { // Check if the element exists before removing it
        lastInsertedTag.remove();
    } else {
        alert("No tag to remove!");
    }
}

// Function to insert a new tag into the document
function insertNewTag() {
    var newTag = document.createElement("p");
    newTag.classList.add("new-tag");
    newTag.innerText = "This is a newly inserted tag!";
    document.body.appendChild(newTag);
}

// Function to change color on mouse over
function mouseOverChangeColor() {
    document.getElementById("mouseover-box").style.backgroundColor =
"lightblue";
}
```

```
// Function to reset color on mouse out
function mouseOutResetColor() {
    document.getElementById("mouseover-box").style.backgroundColor =
"lightgreen";
}
</script>
</head>
<body>

<div class="container">
    <h2>JavaScript Event Handling</h2>

    <!-- Button to change text -->
    <button class="button" onclick="changeText()">Change Text</button>
    <p id="text-element">This is a sample text.</p>

    <!-- Button to change background color -->
    <button class="button" onclick="changeColor()">Change Color</button>
    <div id="color-box" class="color-box"></div>

    <!-- Button to remove the last inserted tag -->
    <button class="button" onclick="removeElement()">Remove Last Tag</button>

    <!-- Button to insert a new tag -->
    <button class="button" onclick="insertNewTag()">Insert New Tag</button>

    <!-- Div with mouseover and mouseout events -->
    <div
        id="mouseover-box"
        class="color-box"
        onmouseover="mouseOverChangeColor()"
        onmouseout="mouseOutResetColor()">
        Hover over me!
    </div>
```


</div>

</body>

</html>

Output:

JavaScript Event Handling

Change Text

Text Changed!

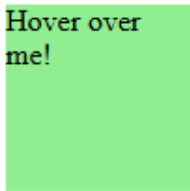
Change Color



Remove Last Tag

Insert New Tag

Hover over
me!



This is a newly inserted tag!

This is a newly inserted tag!

This is a newly inserted tag!

This is a newly inserted tag!

This is a newly inserted tag!

This is a newly inserted tag!