INDEX

Section A (HTML)

Name of the Experiment:

Design a simple webpage using only HTML tags for the Computer Science and Engineering Department of your institute or college, where <head><title>, <body>, and divisional tags like <div>, <span>, and <table> should be used as needed. (Using HTML5 is recommended.)

Objective:

To create a basic static webpage using only HTML5 elements such as <head>, <title>, <body>, <div>, <span>, and <table> to represent the Computer Science and Engineering (CSE) department information of my institute.

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>CSE Department -SBPGC</title>
</head>

<body style="display: flex;align-items: center;flex-direction: column;">
    <h1>Computer Science & Engineering Department - SBPGC</h1>
    <div>
        <span><b>Email:</b>cse@sbpgc.edu.bd</span>  
        <span><b>Phone:</b> +880-120000000</span>
    </div><hr width="790px"><br>

    <section style="width: 790px;">
            <h3>About us: </h3>
            <p>The Department of Computer Science & Engineering provides
                quality education and research opportunities in computing.
            </p>
    </section><br>
    <section style="width: 790px;">
            <h3>Course Structure</h3>
            <p>The Department of CSE offers Web Engineering, E-Commerce,
                Cyber Security, artificial intelligence and Business Studies</p>
```

```html
        <table border="1" cellpadding="5" cellspacing="0" >
            <tr>
                <th>Semester</th>
                <th>Courses</th>
            </tr>
            <tr>
                <td>7th</td>
                <td>Web Engineering, E-Commerce, Data Mining</td>
            </tr>
            <tr>
                <td>8th</td>
                <td>AI, Cyber Security, Project Work</td>
            </tr>
        </table>
    </section>
    <br><hr width="790px">
 </div>
 <footer><p>&copy; 2025 SBPGC - CSE Department</p></footer>
</body>
</html>
```

Output (Screenshot):

Computer Science & Engineering Department - SBPGC

Email:cse@sbpgc.edu.bd   **Phone:** +880-120000000

About us:

The Department of Computer Science and Engineering provides quality education and research opportunities in computing.

Course Structure

The Department of CSE offers Web Engineering, E-Commerce, Cyber Security, artificial intelligence and Business studies

Semester	Courses
7th	Web Engineering, E-Commerce, Data Mining
8th	AI, Cyber Security, Project Work

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Section B (CSS)

Name of the Experiment:

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).

Objective:

To design a simple website that demonstrates formatted text, form styling, tables, and styled
links using all three methods of applying CSS: external, internal, and inline styles.
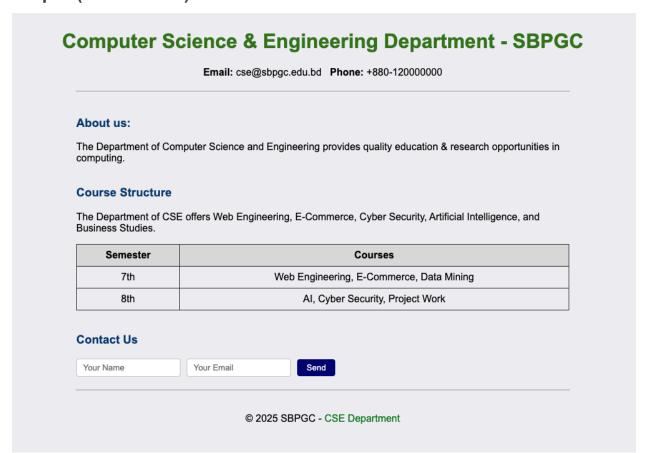
Code (External CSS):

```css
body {
 font-family: Arial, sans-serif;
 background-color: #f0f0f5;
}
.divider { width: 790px; border: 1px solid #ccc; }
.content-box { width: 790px; }
table {
 border-collapse: collapse;
 width: 100%;
}
th, td {
 border: 1px solid #333;
 padding: 8px;
 text-align: center;
}
.compact-form input {
 padding: 6px 10px;
 border: 1px solid #ccc;
 border-radius: 4px;
}
.compact-form button {
 padding: 6px 15px;
 background-color: navy;
 color: white; border: none;
 border-radius: 4px;
 cursor: pointer;
}
```

E-Commerce and Web Engineering Lab - 540208

HTML File (index.html):

```html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>CSE Department - SBPGC</title>
 <link rel="stylesheet" href="style.css"> <!-- External CSS  -->
 <style>
   h1 { color: #3a8000; }
   section h3 { color: #004080; }
   a { color: green; }
   th{ background-color: #ddd; }
 </style> <!-- Internal CSS ->
</head><!-- Inline CSS -->
<body style="display: flex; align-items: center; flex-direction: column;">
 <h1>Computer Science & Engineering Department - SBPGC</h1>
 <div>
   <span><b>Email:</b> cse@sbpgc.edu.bd</span>  
   <span><b>Phone:</b> +880-120000000</span>
 </div><hr class="divider">
 <section class="content-box">
   <h3>About us:</h3>
   <p>The Department of Computer Science and Engineering provides quality
      education & research opportunities in computing.</p>
 </section>
 <section class="content-box">
   <h3>Course Structure</h3>
   <p>The Department of CSE offers Web Engineering, E-Commerce, Cyber
      Security, Artificial Intelligence, and Business Studies.</p>
   <table>
     <tr>
       <th>Semester</th>
       <th>Courses</th>
     </tr>
     <tr>
       <td>7th</td>
       <td>Web Engineering, E-Commerce, Data Mining</td>
     </tr>
     <tr>
       <td>8th</td>
       <td>AI, Cyber Security, Project Work</td>
```

```
        </tr>
    </table>
  </section><br>
    <section class="content-box"> <h3>Contact Us</h3>
        <form action="#" method="post" class="compact-form">
            <input type="text" name="name" placeholder="Your Name">
            <input type="email" name="email" placeholder="Your Email">
            <button type="submit">Send</button>
        </form>
    </section>
    <br><hr class="divider">
    <footer>
        <p>&copy; 2025 SBPGC -<a href="https://www.sbpgc.edu.bd/"> CSE
            Department</a></p>
    </footer>
</body> </html>
```

Output (Screenshot):

Computer Science & Engineering Department - SBPGC

Email: cse@sbpgc.edu.bd **Phone:** +880-120000000

About us:

The Department of Computer Science and Engineering provides quality education & research opportunities in computing.

Course Structure

The Department of CSE offers Web Engineering, E-Commerce, Cyber Security, Artificial Intelligence, and Business Studies.

Semester	Courses
7th	Web Engineering, E-Commerce, Data Mining
8th	AI, Cyber Security, Project Work

Contact Us

| Your Name | Your Email | Send |

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Section C (PHP, MySQL)

Name of the Experiment:

Design a form that contains "Text Fields", "Text Area", "Check Boxes", "Multiple Checkboxes", "Radio Buttons", "List Boxes", "Password Fields", "Submit Button", "Reset Button", and store the values of this form into a MySQL database and show the stored information on another page using a PHP program.

Objective:

To Design a form that contains "Text Fields", "Text Area", "Check Boxes", "Multiple Checkboxes", "Radio Buttons", "List Boxes", "Password Fields", "Submit Button", "Reset Button", and store the values of this form into a MySQL database and show the stored information on another page using a PHP program.

Code:

Database Setup (create_database.sql)

```sql
CREATE DATABASE form_data;

CREATE TABLE users (
  id INT AUTO_INCREMENT PRIMARY KEY,
  fullname VARCHAR(100),
  email VARCHAR(100),
  gender VARCHAR(10),
  bio TEXT,
  interests VARCHAR(100),
  password VARCHAR(100)
);
```

HTML Form (form.php)

```php
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>User Registration</title>
 <style>
   .form-box {
     width: 400px;
     border: 1px solid #ccc;
```

```css
      padding: 20px;
    }
    h2 { text-align: center; }
    label{ font-weight: bold; }
    input, textarea, select {
      width: 100%;
      padding: 10px 12px;
      box-sizing: border-box;
    }
    .btn-group {
        display: flex;
        justify-content: flex-start;
        gap: 12px;
    }
    input[type="submit"], input[type="reset"] {
      background-color: green;
      border: none;
      padding: 10px 12px;
      width: 48%;
    }
    input[type="reset"] {
      background-color: red;
    }
 </style>
</head>

<body style="display: flex; font-family: Arial;justify-content: center;">
 <div class="form-box">
    <h2>User Registration Form</h2>
    <form action="store.php" method="post">
      <div>
        <label for="name">Name:</label>
        <input type="text" name="name" id="name">
      </div><br>
      <div>
        <label for="email">Email:</label>
        <input type="email" name="email" id="email">
      </div><br>
```

```html
    <div>
      <label for="email">Password:</label>
      <input type="password" name="password" id="email">
    </div><br>

     <div class="btn-group">
          <label>Interests:</label>
          <span><input type="checkbox" name="interests[]"
               value="Coding"></span>
          <span>Coding</span>
          <span><input type="checkbox" name="interests[]"
               value="sports"></span>
          <span>sports</span>
          <span><input type="checkbox" name="interests[]"
               value="Music"></span>
          <span>Music</span>
      </div><br>

      <div class="btn-group">
          <label>Gender:</label>
          <span>Male</span>
          <span><input type="radio" name="gender" value="Male"></span> 
          <span>Female</span>
          <span><input type="radio" name="gender" value="Female"></span>
      </div><br>

    <div>
      <label for="message">About:</label>
      <textarea name="message" id="message" rows="2"></textarea>
    </div><br>
    <div class="btn-group">
      <input type="submit" value="Submit">
      <input type="reset" value="Reset">
    </div>
  </form>
 </div>
</body>
</html>
```

Insert Data into DB (insert.php)

```php
<?php
$conn = new mysqli("localhost", "root", "", "form_data");

$fullname = $_POST['name'];
$email = $_POST['email'];
$bio = $_POST['message'];
$gender = $_POST['gender'];
var_dump($_POST['interests']);
$hobbies = implode(", ", $_POST['interests']);
$password = $_POST['password'];

$sql = "INSERT INTO users (fullname, email, bio, gender, password, interests)
        VALUES ('$fullname','$email','$bio','$gender','$password', '$hobbies')";

$conn->query($sql);
echo "Data inserted successfully. <a href='display.php'>View Data</a>";
header("Location: display.php");
?>
```

User Registration Form

Name:

    admin

Email:

    admin@gmail.com

Password:

    ....

Interests: ☑ Coding ☑ sports ☑ Music

Gender: Male ⦿   Female ○

About:

    62 Nazimuddin Rd, Dhaka 1100

    Submit   Reset

Display Stored Data (display.php)

```php
<?php
$conn = new mysqli("localhost", "root", "", "form_data");

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

if ($result->num_rows > 0) {
  echo "<h2>User Information</h2>";
  echo "<table style='border: 1px solid black; border-collapse: collapse;'
        border='1' cellpadding='10' cellspacing='0'>
          <tr>
              <th>ID</th> <th>Name</th> <th>Email</th> <th>Gender</th>
              <th>Interests</th> <th>About</th>
          </tr>";
  while ($row = $result->fetch_assoc()) {
      echo "<tr>
              <td>" . $row["id"] . "</td> <td>" . $row["fullname"] . "</td>
              <td>" . $row["email"] . "</td> <td>" . $row["gender"] . "</td>
              <td>" . $row["interests"] . "</td>
              <td>" . $row["bio"] . "</td>
            </tr>";
  }
  echo "</table>";
} else {
  echo "<p>No records found</p>";
}
$conn->close();
?>
```

Output:

User Information

ID	Name	Email	Gender	Interests	About
1	SBPGC	spbgc@gmail.com	Male	Coding, sports, Music	62 Nazimuddin Rd, Dhaka 1100
2	admin	admin@gmail.com	Male	Coding, sports, Music	62 Nazimuddin Rd, Dhaka 1100

E-Commerce and Web Engineering Lab - 540208

Section D (JavaScript)

Name of the Experiment:

Design and Implementation of a Personal Information Input Form with Client-Side Validation using JavaScript

Objective:

To create a web-based input form where users can enter their personal details such as name, address, email, gender, and mobile number. The form uses JavaScript to perform client-side validation by:

- Ensuring all mandatory fields are filled.

- Validating that the email follows proper formatting standards.

- Checking that the mobile number contains exactly 11 digits.

- Confirming that a gender option is selected before submission.

This experiment demonstrates how to improve user experience and data quality by validating input data before it is submitted to the server.

Code:

HTML file with a Script tag (index.html)

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Form Validation</title>
  <style>
      body { font-family: Arial, sans-serif; display: flex; justify-content:
center; align-items: center; height: 100vh; background-color: #f5f5f5; }
      .container { background: white; padding: 30px; border-radius: 15px;
```

```
box-shadow: 0px 0px 15px rgba(0, 0, 0, 0.2); width: 400px; }
      h2 { text-align: center; }
      label { font-weight: bold; display: block; margin-top: 10px; }
      input[type="text"], input[type="email"] { width: 100%; padding: 8px;
margin-top: 5px; border: 1px solid #ccc; border-radius: 5px; }
      .error { color: red; font-size: 12px; }
      button { width: 100%; background: #28a745; color: white; padding: 10px;
border: none; border-radius: 5px; margin-top: 15px; cursor: pointer; }
      button:hover { background: #218838; }
  </style>
</head>
<body>
  <div class="container">
      <h2>Personal Information Form</h2>
      <form id="userForm">
          <label>Name: </label>
          <input type="text" id="name" required>
          <span class="error" id="nameError"></span>

          <label>Address: </label>
          <input type="text" id="address" required>
          <span class="error" id="addressError"></span>

          <label>Email: </label>
          <input type="email" id="email" required>
          <span class="error" id="emailError"></span>

          <label>Gender: </label>
          <input type="radio" name="gender" value="Male"> Male
          <input type="radio" name="gender" value="Female"> Female
          <input type="radio" name="gender" value="Female"> Other
          <span class="error" id="genderError"></span>

          <label>Mobile Number: </label>
          <input type="text" id="mobile" maxlength="11" required>
          <span class="error" id="mobileError"></span>

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

```html
        </form>
    </div>


    <script>
        document.getElementById("userForm").addEventListener("submit",
function(event) {
            event.preventDefault();
            let name = document.getElementById("name").value;
            let email = document.getElementById("email").value;
            let mobile = document.getElementById("mobile").value;
            let address = document.getElementById("address").value;
            let gender = document.querySelector('input[name="gender"]:checked');
            let isValid = true;

            document.getElementById("nameError").textContent = name ? "" : "Name
is required.";
            document.getElementById("addressError").textContent = address ? "" :
"Address is required.";
            document.getElementById("emailError").textContent =
/^[^\s@]+@[^\s@]+\.[^\s@]+$/.test(email) ? "" : "Invalid email format.";
            document.getElementById("mobileError").textContent =
/^[0-9]{11}$/.test(mobile) ? "" : "Mobile number must be exactly 11 digits.";
            document.getElementById("genderError").textContent = gender ? "" :
"Gender is required.";

            if (!name || !email || !mobile || !address || !gender ||
!/^[0-9]{11}$/.test(mobile)) {
                isValid = false;
            }

            if (isValid) {
                alert("Form submitted successfully!");
            }
        });
    </script>
</body>
</html>
```

E-Commerce and Web Engineering Lab - 540208

Output:

Personal Information Form

Name:
SBPGC

Address:
62 Nazimuddin Rd, Dhaka 1100

Email:
sbpgc@gmail.com

Gender:
○ Male ○ Female ● Other

Mobile Number:
0182290394

Mobile number must be exactly 11 digits.

Submit