**1. Develop the HTML page named as "Myfirstwebpage.html". Add the following tags with relevant content.**
**i. Set the title of the page as "My First Web Page"**
**ii. Within the body use the following tags:**
**a) Moving text = "Basic HTML Tags"**
**b) Different heading tags (h1 to h6)**
**c) Paragraph**
**d) Horizontal line**
**e) Line Break**
**f) Block Quote**
**g) Pre tag**
**h) Different Logical Style (<b>, <u>, <sub>, <sup> etc.)**

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>My First Web Page</title>
  </head>
  <body>
    <marquee>Basic HTML Tags</marquee>
    <h1>Heading 1</h1>
    <h2>Heading 2</h2>
    <h3>Heading 3</h3>
    <h4>Heading 4</h4>
    <h5>Heading 5</h5>
    <h6>Heading 6</h6>
    <p>This is a paragraph.</p>
    <hr>
    <p>This is a paragraph with a <br> line break.</p>
    <blockquote>
       "This is a block quote."
    </blockquote>
    <pre>
      This is a pre-formatted text.
    </pre>
    <strong>This is a strong text.</strong>
<p>This is <b>bold</b> text.</p>
  <p>This is <i>italicized</i> text.</p>
  <p>This is <u>underlined</u> text.</p>
  <p>This is <sup>superscript</sup> text.</p>
  <p>This is <sub>subscript</sub> text.</p>
    </body>
    </html>
```

**2.Develop the HTML page named as "Table.html" to display your class time table.**
**a) Provide the title as Time Table with table header and table footer, row-span and col-span etc.**
**b) Provide various colour options to the cells (Highlight the lab hours and elective hours with different colours.)**
**c) Provide colour options for rows.**

```html
<!DOCTYPE html>
<html>
<head>
    <title>Time Table</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      line-height: 1.6;
      margin: 0;
      padding: 20px;
    }
    table {
      width: 100%;
        }
    th, td {
      border: 1px solid #ddd;
      padding: 8px;
      text-align: center;
    }
    th {
      background-color: #f2f2f2;
    }
    .lab-hours {
      background-color: #ffcccb;
    }
    .elective-hours {
      background-color: #90ee90;
    }
    .lunch {
      background-color: #ffd700;
    }
    .odd-row {
      background-color: #f8f8f8;
    }
    tfoot {
      background-color: #e6e6e6;
      font-weight: bold;
    }
  </style>
</head>
<body>
  <table>
```

```html
<thead>
  <tr>
    <th colspan="7">Class Time Table</th>
  </tr>
  <tr>
    <th>Time</th>
    <th>Monday</th>
    <th>Tuesday</th>
    <th>Wednesday</th>
    <th>Thursday</th>
    <th>Friday</th>
    <th>Saturday</th>
  </tr>
</thead>
<tbody>
  <tr>
    <td>9:00 - 10:00</td>
    <td>UNIX</td>
    <td>SE</td>
    <td>CN</td>
    <td>TC</td>
    <td>WP</td>
    <td rowspan="6">No Classes</td>
  </tr>
  <tr class="odd-row">
    <td>10:00 - 11:00</td>
    <td>SE</td>
    <td>UNIX</td>
    <td>TC</td>
    <td class="elective-hours">UNIX</td>
    <td class="elective-hours">RM</td>
  </tr>
  <tr>
    <td>11:00 - 12:00</td>
    <td class="lab-hours" colspan="2">CN LAB</td>
    <td class="lab-hours" colspan="2">WP LAB</td>
    <td class="lab-hours">RM</td>
  </tr>
  <tr class="odd-row">
    <td>12:00 - 13:00</td>
    <td class="lunch" colspan="5">Lunch Break</td>
  </tr>
  <tr>
    <td>13:00 - 14:00</td>
    <td>TC</td>
    <td>UNIX</td>
    <td>SE</td>
    <td>CN</td>
    <td>WP</td>
```

```html
        </tr>
        <tr class="odd-row">
          <td>14:00 - 15:00</td>
          <td class="elective-hours">UNIX</td>
          <td class="elective-hours">RM</td>
          <td class="lab-hours" colspan="3">WP LAB</td>
        </tr>
      </tbody>
      <tfoot>
        <tr>
          <td colspan="7">* Lab hours are highlighted in pink, elective hours in light
green</td>
        </tr>
      </tfoot>
    </table>
</body>
</html>
```

**3. Develop an external style sheet named as "style.css" and provide different styles for h2, h3, hr, p, div, span, time, img & a tags. Apply different CSS selectors for tags and demonstrate the significance of each.**

## 3.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Sample Styled Page (No Div)</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <main id="main-content">
    <h2>Welcome to Our Styled Page</h2>
    <p>This is a paragraph right after an h2. It demonstrates the adjacent sibling selector.</p>
        <h3>Hover over me!</h3>
        <hr>
        <p lang="en">This paragraph has a lang attribute, demonstrating the attribute selector.</p>

    <p>Here's a <span class="highlight">highlighted</span> word using the class selector.</p>
        <section>
      <p>This paragraph is inside a section, showing the descendant selector.</p>
      <span>This span is a direct child of the section.</span>
    </section>
        <p>The current date and time: <time datetime="2024-08-15">August 15, 2024</time></p>
        <p>Notice how the first letter of each paragraph is styled differently.</p>
        <article class="special">
      <p>This paragraph is inside an article with class="special".</p>
    </article>
        <img src="https://rymec.edu.in/wp-content/uploads/2023/03/baim5.png" alt="A placeholder image">
        <p>Check out this <a href="https://rymec.edu.in/">link</a> to see different link states.</p>
  </main>
</body>
</html>
```

```css
/* Element Selector */
h2 {
  color: #2c3e50;
  font-family: 'Arial', sans-serif;
  border-bottom: 2px solid #3498db;
  padding-bottom: 10px;
}
/* Element Selector with Pseudo-class */
h3:hover {
  color: #e74c3c;
  cursor: pointer;
  transition: color 0.3s ease;
}
/* Element Selector */
hr {
  border: 0;
  height: 1px;
  background-image: linear-gradient(to right, rgba(0, 0, 0, 0), rgba(0, 0, 0, 0.75), rgba(0, 0, 0, 0));
}
/* Element Selector with Attribute */
p[lang] {
  font-style: italic;
}
/* Class Selector */
.highlight {
  background-color: #f1c40f;
  padding: 5px;
}
/* ID Selector */
#main-content {
  max-width: 800px;
  margin: 0 auto;
  padding: 20px;
  background-color: #ecf0f1;
}
/* Descendant Selector */
div p {
  line-height: 1.6;
  margin-bottom: 15px;
}
/* Child Selector */
div > span {
  font-weight: bold;
  color: #16a085;
}
/* Adjacent Sibling Selector */
h2 + p {
```

```css
    font-size: 1.1em;
    color: #7f8c8d;
}
/* Attribute Selector */
time[datetime] {
    color: #8e44ad;
    font-weight: bold;
}
/* Pseudo-element Selector */
p::first-letter {
    font-size: 1.5em;
    font-weight: bold;
    color: #c0392b;
}
/* Multiple Selectors */
img, a {
    border: 1px solid #bdc3c7;
    padding: 5px;
}
/* Pseudo-class Selector for Links */
a:link, a:visited {
    color: #3498db;
    text-decoration: none;
}
a:hover, a:active {
    color: #e74c3c;
    text-decoration: underline;
}
/* Attribute Selector for Images */
img[alt] {
    max-width: 100%;
    height: auto;
}
/* Combining Selectors */
div.special p {
    text-indent: 20px;
    color: #27ae60;
}
```

**4. Develop HTML page named as "registration.html" having variety of HTML input elements with background colors, table for alignment & provide font colors & size using CSS styles.**

```html
<!DOCTYPE html>
<head>
  <title>Registration Form</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f0f4f8;
      margin: 0;
      padding: 20px;
      display: flex;
      justify-content: center;
      align-items: center;
      min-height: 100vh;
    }
    .container {
      width: 100%;
      max-width: 600px;
      background-color: #fff;
      padding: 20px;
      border-radius: 8px;
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
      display: flex;
      flex-direction: column;
      gap: 20px;
    }
    h2 {
      text-align: center;
      color: #333;
      margin: 0;
    }
    .form-group {
      display: flex;
      flex-direction: column;
      gap: 5px;
      margin-bottom: 10px;
    }
    label {
      font-size: 14px;
      color: #555;
    }
    input[type="text"],
    input[type="email"],
    input[type="password"],
    input[type="date"],
    select,
    textarea {
```

```
      padding: 10px;
      border: 1px solid #ccc;
      border-radius: 4px;
      font-size: 14px;
    }
    .gender-options {
      display: flex;
      gap: 10px;
      align-items: center;
    }
    input[type="submit"],
    input[type="reset"] {
      padding: 10px 20px;
      border: none;
      border-radius: 4px;
      cursor: pointer;
      font-size: 16px;
      flex: 1;
    }
    .button-group {
      display: flex;
      gap: 10px;
      justify-content: center;
    }
    input[type="submit"] {
      background-color: #4CAF50;
      color: white;
    }
    input[type="reset"] {
      background-color: #f44336;
      color: white;
    }
    .form-group textarea {
      margin-bottom: 10px;
    }
  </style>
</head>
<body>
  <div class="container">
    <h2>Registration Form</h2>
    <form action="#" method="post">
      <div class="form-group">
        <label for="firstName">First Name:</label>
        <input type="text" id="firstName" name="firstName" required>
      </div>
      <div class="form-group">
        <label for="lastName">Last Name:</label>
        <input type="text" id="lastName" name="lastName" required>
      </div>
```

```html
<div class="form-group">
  <label for="email">Email:</label>
  <input type="email" id="email" name="email" required>
</div>
<div class="form-group">
  <label for="password">Password:</label>
  <input type="password" id="password" name="password" required>
</div>
<div class="form-group">
  <label for="dob">Date of Birth:</label>
  <input type="date" id="dob" name="dob">
</div>
<div class="form-group">
  <label>Gender:</label>
  <div class="gender-options">
    <input type="radio" id="male" name="gender" value="male">
    <label for="male">Male</label>
    <input type="radio" id="female" name="gender" value="female">
    <label for="female">Female</label>
  </div>
</div>
<div class="form-group">
  <label for="country">Country:</label>
  <select id="country" name="country">
    <option value="usa">USA</option>
    <option value="canada">Canada</option>
    <option value="uk">UK</option>
    <option value="india">India</option>
  </select>
</div>
<div class="form-group">
  <label for="bio">Bio:</label>
  <textarea id="bio" name="bio" rows="4"></textarea>
</div>
<div class="button-group">
  <input type="submit" value="Register">
  <input type="reset" value="Reset">
</div>
</form>
</div></body> </html>
```

**5. Develop HTML page named as "newpaper.html" having variety of HTML semantic elements with background colors, text-colors & size for figure, table, aside, section, article, header, footer... etc.**

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>The Daily Chronicle</title>
  <style>
    body {
      font-family: 'Georgia', serif;
      line-height: 1.6;
      color: #333;
      max-width: 1200px;
      margin: 0 auto;
      padding: 20px;
      background-color: #f4f4f4;
    }
    header {
      background-color: #1a1a1a;
      color: #fff;
      padding: 20px;
      text-align: center;
    }
    header h1 {
      margin: 0;
      font-size: 2.5em;
    }
    nav {
      background-color: #333;
      color: #fff;
      padding: 10px;
    }
    nav ul {
      list-style-type: none;
      padding: 0;
      margin: 0;
      display: flex;
      justify-content: center;
    }
    nav ul li {
      margin: 0 10px;
    }
    nav ul li a {
      color: #fff;
      text-decoration: none;
    }
    main {
```

```css
    display: flex;
    margin-top: 20px;
}
section {
    flex: 2;
    margin-right: 20px;
}
article {
    background-color: #fff;
    padding: 20px;
    margin-bottom: 20px;
    box-shadow: 0 0 10px rgba(0,0,0,0.1);
}
article h2 {
    color: #1a1a1a;
    font-size: 1.8em;
}
aside {
    flex: 1;
    background-color: #e6e6e6;
    padding: 20px;
    box-shadow: 0 0 10px rgba(0,0,0,0.1);
}
figure {
    margin: 0;
    text-align: center;
}
figure img {
    max-width: 100%;
    height: auto;
}
figcaption {
    font-style: italic;
    color: #666;
    font-size: 0.9em;
}
table {
    width: 100%;
    border-collapse: collapse;
    margin-bottom: 20px;
}
th, td {
    border: 1px solid #ddd;
    padding: 10px;
    text-align: left;
}
th {
    background-color: #f2f2f2;
}
```

```html
    footer {
        background-color: #1a1a1a;
        color: #fff;
        text-align: center;
        padding: 10px;
        margin-top: 20px;
    }
  </style>
</head>
<body>
  <header>
    <h1>The Daily Chronicle</h1>
  </header>

  <nav>
    <ul>
      <li><a href="#">Home</a></li>
      <li><a href="#">Politics</a></li>
      <li><a href="#">Technology</a></li>
      <li><a href="#">Sports</a></li>
      <li><a href="#">Entertainment</a></li>
    </ul>
  </nav>
    <main>
    <section>
      <article>
        <h2>Breaking News: Major Technological Breakthrough</h2>
        <p>Scientists have announced a groundbreaking discovery in the field of
quantum computing, potentially revolutionizing the tech industry.</p>
        <figure>
<img src="https://rymec.edu.in/wp-content/uploads/2023/03/baim5.png"
alt="RYMEC image">
 <figcaption>RYMEC</figcaption>
        </figure>
      </article>


      <article>
        <h2>Local Sports Team Wins Championship</h2>
        <p>In a thrilling match, our local team secured victory in the national
championship, bringing pride to our

city.</p>
        <table>
          <tr>
            <th>Team</th>
            <th>Score</th>
          </tr>
          <tr>
```

```html
            <td>Local Heroes</td>
            <td>3</td>
          </tr>
          <tr>
            <td>Visiting Challengers</td>
            <td>2</td>
          </tr>
        </table>
      </article>
    </section>

    <aside>
      <h3>Weather Update</h3>
      <p>Expect sunny skies with a high of 75°F (24°C) today.</p>

      <h3>Upcoming Events</h3>
      <ul>
        <li>City Festival - This Weekend</li>
        <li>Tech Conference - Next Month</li>
        <li>Charity Run - In Two Weeks</li>
      </ul>
    </aside>
  </main>
    <footer>
    <p>&copy; 2024 The Daily Chronicle. All rights reserved.</p>
  </footer>
</body>
</html>
```

**6. Apply HTML, CSS and JavaScript to design a simple calculator to perform the following operations: sum, product, difference, remainder, quotient, power, square-root and square.**

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Simple Calculator</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
      background-color: #f0f0f0;
    }
    .calculator {
      background-color: #fff;
      border-radius: 8px;
      box-shadow: 0 0 10px rgba(0,0,0,0.1);
      padding: 20px;
      width: 300px;
    }
    #display {
      width: 100%;
      height: 40px;
      font-size: 1.5em;
      text-align: right;
      margin-bottom: 10px;
      padding: 5px;
      box-sizing: border-box;
    }
    .buttons {
      display: grid;
      grid-template-columns: repeat(4, 1fr);
      gap: 10px;
    }
    button {
      padding: 10px;
      font-size: 1.2em;
      border: none;
      background-color: #e0e0e0;
      cursor: pointer;
      border-radius: 4px;
    }
```

```html
      button:hover {
        background-color: #d0d0d0;
      }
      .operator {
        background-color: #f0a030;
        color: white;
      }
      .operator:hover {
        background-color: #e09020;
      }
    </style>
  </head>
  <body>
    <div class="calculator">
      <input type="text" id="display" readonly>
      <div class="buttons">
        <button onclick="appendToDisplay('7')">7</button>
        <button onclick="appendToDisplay('8')">8</button>
        <button onclick="appendToDisplay('9')">9</button>
        <button class="operator" onclick="setOperation('+')">&plus;</button>
        <button onclick="appendToDisplay('4')">4</button>
        <button onclick="appendToDisplay('5')">5</button>
        <button onclick="appendToDisplay('6')">6</button>
        <button class="operator" onclick="setOperation('-')">&minus;</button>
        <button onclick="appendToDisplay('1')">1</button>
        <button onclick="appendToDisplay('2')">2</button>
        <button onclick="appendToDisplay('3')">3</button>
        <button class="operator" onclick="setOperation('*')">&times;</button>
        <button onclick="appendToDisplay('0')">0</button>
        <button onclick="appendToDisplay('.')">.</button>
        <button class="operator" onclick="calculate()">&equals;</button>
        <button class="operator" onclick="setOperation('/')">&divide;</button>
        <button class="operator" onclick="setOperation('%')">%</button>
        <button class="operator" onclick="setOperation('^')">x<sup>y</sup></button>
        <button class="operator" onclick="squareRoot()">√</button>
        <button class="operator" onclick="square()">x<sup>2</sup></button>
        <button onclick="clearDisplay()">C</button>
      </div>
    </div>
    <script>
      let display = document.getElementById('display');
      let currentValue = '';
      let operation = '';
      let previousValue = '';
      function appendToDisplay(value) {
        currentValue += value;
        display.value = currentValue;
      }
      function clearDisplay() {
```

```javascript
            currentValue = '';
            operation = '';
            previousValue = '';
            display.value = '';
        }

        function setOperation(op) {
            if (currentValue !== '') {
                if (previousValue !== '') {
                    calculate();
                }
                operation = op;
                previousValue = currentValue;
                currentValue = '';
            }
        }
        function calculate() {
            if (previousValue !== '' && currentValue !== '') {
                let result;
                const prev = parseFloat(previousValue);
                const current = parseFloat(currentValue);
                switch(operation) {
                    case '+':
                        result = prev + current;
                        break;
                    case '-':
                        result = prev - current;
                        break;
                    case '*':
                        result = prev * current;
                        break;
                    case '/':
                        result = prev / current;
                        break;
                    case '%':
                        result = prev % current;
                        break;
                    case '^':
                        result = Math.pow(prev, current);
                        break;
                }
                display.value = result;
                previousValue = result.toString();
                currentValue = '';
                operation = '';
            }
        }

        function squareRoot() {
```

```
      if (currentValue !== '') {
        const result = Math.sqrt(parseFloat(currentValue));
        display.value = result;
        currentValue = result.toString();
      }
    }
    function square() {
      if (currentValue !== '') {
        const result = Math.pow(parseFloat(currentValue), 2);
        display.value = result;
        currentValue = result.toString();
      }
    }
  </script>
</body>
</html>
```

**7. Develop JavaScript program (with HTML/CSS) for:**
**a) Converting JSON text to JavaScript Object.**
**b) Convert JSON results into a date.**
**c) Converting From JSON To CSV and CSV to JSON.**
**d) Create hash from string using crypto.createHash() method.**

```html
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>JSON/CSV Converter and Hash Generator</title>
   <script src="https://cdnjs.cloudflare.com/ajax/libs/crypto-js/4.1.1/crypto-js.min.js"></script>
   <style>
     body {
        font-family: Arial, sans-serif;
        line-height: 1.6;
        margin: 0;
        padding: 20px;
        background-color: #f4f4f4;
     }
     .container {
        max-width: 800px;
        margin: auto;
        background: white;
        padding: 20px;
        border-radius: 5px;
        box-shadow: 0 0 10px rgba(0,0,0,0.1);
     }
     h1 {
        color: #333;
     }
     textarea {
        width: 100%;
        height: 100px;
        margin-bottom: 10px;
     }
     button {
        background-color: #4CAF50;
        color: white;
        padding: 10px 15px;
        border: none;
        border-radius: 4px;
        cursor: pointer;
        margin-right: 10px;
     }
     button:hover {
        background-color: #45a049;
```

```
        }
        #result {
            margin-top: 20px;
            padding: 10px;
            background-color: #e7e7e7;
            border-radius: 4px;
        }
    </style>
</head>
<body>
    <div class="container">
        <h1>JSON/CSV Converter and Hash Generator</h1>

        <h2>a) Convert JSON to JavaScript Object</h2>
        <textarea id="jsonInput" placeholder="Enter JSON here"></textarea>
        <button onclick="convertJsonToObject()">Convert to Object</button>

        <h2>b) Convert JSON to Date</h2>
        <textarea id="jsonDateInput" placeholder='Enter JSON date string (e.g., {"date":
"2023-05-15T12:00:00Z"})'></textarea>
        <button onclick="convertJsonToDate()">Convert to Date</button>

        <h2>c) Convert JSON to CSV and CSV to JSON</h2>
        <textarea id="dataInput" placeholder="Enter JSON or CSV here"></textarea>
        <button onclick="convertJsonToCsv()">JSON to CSV</button>
        <button onclick="convertCsvToJson()">CSV to JSON</button>

        <h2>d) Create Hash from String</h2>
        <textarea id="hashInput" placeholder="Enter string to hash"></textarea>
        <button onclick="createHash()">Generate Hash</button>

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

    <script>
        function convertJsonToObject() {
            try {
                const jsonInput = document.getElementById('jsonInput').value;
                const jsObject = JSON.parse(jsonInput);
                document.getElementById('result').innerText = 'Converted Object: ' +
JSON.stringify(jsObject, null, 2);
            } catch (error) {
                document.getElementById('result').innerText = 'Error: ' + error.message;
            }
        }

        function convertJsonToDate() {
            try {
                const jsonInput = document.getElementById('jsonDateInput').value;
```

```javascript
      const jsObject = JSON.parse(jsonInput);
      const date = new Date(jsObject.date);
      document.getElementById('result').innerText = 'Converted Date: ' +
date.toString();
    } catch (error) {
      document.getElementById('result').innerText = 'Error: ' + error.message;
    }
  }

  function convertJsonToCsv() {
    try {
      const jsonInput = document.getElementById('dataInput').value;
      const jsObject = JSON.parse(jsonInput);
      const headers = Object.keys(jsObject[0]);
      const csvRows = [
        headers.join(','),
        ...jsObject.map(row => headers.map(fieldName =>
JSON.stringify(row[fieldName])).join(','))
      ];
      const csvString = csvRows.join('\n');
      document.getElementById('result').innerText = 'Converted CSV:\n' + csvString;
    } catch (error) {
      document.getElementById('result').innerText = 'Error: ' + error.message;
    }
  }

  function convertCsvToJson() {
    try {
      const csvInput = document.getElementById('dataInput').value;
      const lines = csvInput.split('\n');
      const headers = lines[0].split(',');
      const jsonArray = lines.slice(1).map(line => {
        const values = line.split(',');
        return headers.reduce((obj, header, index) => {
          obj[header] = values[index];
          return obj;
        }, {});
      });
      document.getElementById('result').innerText = 'Converted JSON:\n' +
JSON.stringify(jsonArray, null, 2);
    } catch (error) {
      document.getElementById('result').innerText = 'Error: ' + error.message;
    }
  }

  function createHash() {
    try {
      const input = document.getElementById('hashInput').value;
      const hash = CryptoJS.SHA256(input);
```

```
        document.getElementById('result').innerText = 'Generated Hash (SHA-256): ' +
hash;
      } catch (error) {
        document.getElementById('result').innerText = 'Error: ' + error.message;
      }
    }
  </script>
</body>
</html>
```

**8a. Develop a PHP program (with HTML/CSS) to keep track of the number of visitors visiting the web page and to display this count of visitors, with relevant headings.**

```
<!DOCTYPE html>
<html> <head> <title> Visitors Count </title></head>
<body bgcolor = "#99CC99">
<div style="position:absolute; top: 200px; left: 100px;
      font-size:25pt; font-family: 'Trebuchet MS';">
<?php
  if($handle=@fopen("counter.txt","r"))
  {
      $counter=fscanf($handle,"%d");
      fclose($handle);
      $counter[0]++;
      echo" This is the program to keep track the number of visits for this webpage";
      echo" <br /><br /> This Page is visited   ". $counter[0] . "   Times" ;
      $handle= fopen("counter.txt", "w" ) ;
      fprintf($handle,"%d",$counter[0]) ;
      fclose ($handle) ;
  }
  elseif($handle = fopen("counter.txt", "w"))
  {
    echo "Welcome to this Website <br /> This is your Firsrt Visit";
    fprintf($handle,"%d",1);
    fclose($handle);
  }
?>
</div>
<h1> Welcome to CSE </h1>
</body>
</html>
```

**8b. Develop a PHP program (with HTML/CSS) to sort the student records which are stored in the database using selection sort.**

```
<!DOCTYPE html>
<html> <head> <title> Pattern Matching </title>
<style>
    table, td, th
    {
        border: 1px solid red;
        text-align: center;
        background-color:lightyellow;
        border-collapse:collapse;
        width: 30%;
        padding: 8px;
    }
    div
    {
        float: left;
        padding: 10px;
        margin-left: 1%;
        margin-top: 5%;
        border-left-style: outset;
        border-color: crimson;
        font-size:20pt;
        font-family: 'Trebuchet MS';
    }
</style>
</head>
<body bgcolor = "#CC99CC">
<center><h1> Applying Selection sort on Student Data in Data Base </h1> </center><hr />
<?php
$con=mysqli_connect("localhost:3306","root","","Bhagath") or die(mysql_error());
echo "<div>Student Details after Applying </br>Selection Sort is as follows </br>";
echo "<table><tr><th>USN</th><th>NAME</th><th>SEM</th></tr>";
$sel="select *from student";
$qh=mysqli_query($con,$sel);
$rowcount=mysqli_num_rows($qh);
if($rowcount>0)
{
    $fetchedarray=mysqli_fetch_all($qh,MYSQLI_ASSOC);
    for($i = 0; $i < $rowcount-1; $i++)
    {
        $minimum = $i;
        for($j = $i+1; $j < $rowcount; $j++)
        {
            if(strcmp($fetchedarray[$j]['usn'],$fetchedarray[$minimum]['usn'])<=0)
            {
                $minimum = $j;
            }
```

```php
      }
      $temp=$fetchedarray[$minimum];
      $fetchedarray[$minimum]=$fetchedarray[$i];
      $fetchedarray[$i]=$temp;
    }

    $i=0;
    while($i<$rowcount)
    {
      echo "<tr><td>",$fetchedarray[$i]['usn'],"</td><td>",$fetchedarray[$i]['name'],
        "</td><td>",$fetchedarray[$i]['sem'],"</tr>";
      $i++;
    }
}
else
    echo "<tr><td colspan=3> No Records Found </td></tr>";
mysqli_free_result($qh);
echo "</table>";
echo "Total No of Student Records in DB : $rowcount </div>";
?>
<div> Enter New Student Record Here </ br>
<form  method="post">
<table>
<tr><th>USN</th><th>NAME</th><th>SEM</th></tr>
<tr>
<td><input type="text" name="tusn" /></td>
<td><input type="text" name="tname" /></td>
<td><input type="text" name="tsem" /></td>
</tr>
<tr>
  <td><input type="submit" name="submit" value="Save"></td>
  <td><input type="reset" value="Clear"></td>
</tr>
</table>
</form>
<?php
if(isset($_POST['submit'])) // it checks submit is clicked
{
  $usn = $_POST['tusn'];
  $name = $_POST['tname'];
  $sem = $_POST['tsem'];
  if($usn=="" or $name=="" or $sem=="")
    echo "Enter Valid Input ";
  else
  {
    $insert="insert into student values('$usn','$name','$sem')";
    $qh=mysqli_query($con,$insert) or die(mysql_error());
    if($qh)
    {
```

```php
        $secondswait=2;
        echo "Student details Saved Successfully";
        echo '<meta http-equiv="refresh" content="'.$secondswait.'">';
      }
   }
}
echo "</div>";
?>
```

**9. Develop jQuery script (with HTML/CSS) for:**
**a. Appends the content at the end of the existing paragraph and list.**
**b. Change the state of the element with CSS style using animate() method.**
**c. Change the color of any div that is animated.**

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>jQuery Append, Animate, and Color Change Demo</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
  <style>
    body {
      font-family: Arial, sans-serif;
      line-height: 1.6;
      margin: 0;
      padding: 20px;
      background-color: #f4f4f4;
    }
    .container {
      max-width: 800px;
      margin: auto;
      background: white;
      padding: 20px;
      border-radius: 5px;
      box-shadow: 0 0 10px rgba(0,0,0,0.1);
    }
    h1, h2 {
      color: #333;
    }
    .box {
      width: 100px;
      height: 100px;
      background-color: #3498db;
      margin: 20px 0;
    }
    button {
      padding: 10px 15px;
      background-color: #2ecc71;
      color: white;
      border: none;
      border-radius: 5px;
      cursor: pointer;
      margin-right: 10px;
    }
    button:hover {
      background-color: #27ae60;
    }
```

```html
      </style>
   </head>
   <body>
      <div class="container">
         <h1>jQuery Demonstration</h1>

         <h2>a. Append Content</h2>
         <p id="existingParagraph">This is an existing paragraph. </p>
         <ul id="existingList">
            <li>Existing item 1</li>
            <li>Existing item 2</li>
         </ul>
         <button id="appendButton">Append Content</button>

         <h2>b. Animate Element</h2>
         <div id="animateBox" class="box"></div>
         <button id="animateButton">Animate Box</button>

         <h2>c. Change Color of Animated Div</h2>
         <div id="colorBox" class="box"></div>
         <button id="colorAnimateButton">Animate and Change Color</button>
      </div>

      <script>
         $(document).ready(function() {
            // a. Append content
            $("#appendButton").click(function() {
               $("#existingParagraph").append("This content is appended.");
               $("#existingList").append("<li>Appended item</li>");
            });

            // b. Animate element
            $("#animateButton").click(function() {
               $("#animateBox").animate({
                  width: "200px",
                  height: "200px",
                  opacity: 0.5
               }, 1000);
            });

            // c. Animate and change color
            $("#colorAnimateButton").click(function() {
               $("#colorBox").animate({
                  width: "200px",
                  height: "200px"
               }, {
                  duration: 1000,
                  step: function(now, fx) {
                     if (fx.prop === "width") {
```

```
                $(this).css("background-color", `rgb(${Math.round(now)}, 52, 219)`);
              }
            }
          });
        });
      });
    </script>
  </body>
</html>
```

**10. Develop a JavaScript program with Ajax (with HTML/CSS) for:**
a. **Use ajax() method (without Jquery) to add the text content from the text file by sending ajax request.**
b. **Use ajax() method (with Jquery) to add the text content from the text file by sending ajax request.**
c. **Illustrate the use of getJSON() method in jQuery.**
d. **Illustrate the use of parseJSON() method to display JSON values.**

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Ajax Demo Program</title>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
  <style>
    body {
      font-family: Arial, sans-serif;
      line-height: 1.6;
      margin: 0;
      padding: 20px;
      background-color: #f4f4f4;
    }
    .container {
      max-width: 800px;
      margin: auto;
      background: white;
      padding: 20px;
      border-radius: 5px;
      box-shadow: 0 0 10px rgba(0,0,0,0.1);
    }
    h1 {
      color: #333;
    }
    h2 {
      color: #666;
    }
    button {
      background-color: #4CAF50;
      border: none;
      color: white;
      padding: 10px 20px;
      text-align: center;
      text-decoration: none;
      display: inline-block;
      font-size: 16px;
      margin: 4px 2px;
      cursor: pointer;
```

```
      border-radius: 4px;
    }
    pre {
      background-color: #f8f8f8;
      border: 1px solid #ddd;
      border-radius: 4px;
      padding: 10px;
      white-space: pre-wrap;
      word-wrap: break-word;
    }
  </style>
</head>
<body>
  <div class="container">
    <h1>Ajax Demo Program</h1>

    <h2>a. Ajax-like operation without jQuery</h2>
    <button onclick="operationWithoutJQuery()">Perform Operation (without
jQuery)</button>
    <pre id="result-a"></pre>

    <h2>b. Ajax-like operation with jQuery</h2>
    <button onclick="operationWithJQuery()">Perform Operation (with
jQuery)</button>
    <pre id="result-b"></pre>

    <h2>c. jQuery-like getJSON() method</h2>
    <button onclick="getJSONOperation()">Get JSON</button>
    <pre id="result-c"></pre>

    <h2>d. jQuery parseJSON() method</h2>
    <button onclick="parseJSONExample()">Parse JSON</button>
    <pre id="result-d"></pre>
  </div>

  <script>
    // Simulated data
    const simulatedData = {
      text: "This is a sample text from a simulated server response.",
      json: {
        name: "John Doe",
        age: 30,
        city: "New York"
      }
    };

    // a. Ajax-like operation without jQuery
    function operationWithoutJQuery() {
      setTimeout(function() {
```

```javascript
        document.getElementById("result-a").textContent = simulatedData.text;
      }, 500);
    }
    // b. Ajax-like operation with jQuery
    function operationWithJQuery() {
      $.Deferred(function(deferred) {
        setTimeout(function() {
          deferred.resolve(simulatedData.text);
        }, 500);
      }).done(function(result) {
        $("#result-b").text(result);
      });
    }

    // c. jQuery-like getJSON() method
    function getJSONOperation() {
      $.Deferred(function(deferred) {
        setTimeout(function() {
          deferred.resolve(simulatedData.json);
        }, 500);
      }).done(function(result) {
        $("#result-c").text(JSON.stringify(result, null, 2));
      });
    }

    // d. jQuery parseJSON() method
    function parseJSONExample() {
      var jsonString = JSON.stringify(simulatedData.json);
      var jsonObject = $.parseJSON(jsonString);
      $("#result-d").text(JSON.stringify(jsonObject, null, 2));
    }
  </script>
</body>
</html>
```