WEB TECHNOLOGY LAB EXPERIMENTS (B-div)

1) Develop the HTML page named as “Myfirstwebpage.html”. Add the following tags with relevant content.
1. Set the title of the page as “My First Web Page”
2. 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..,)

```
<!DOCTYPE html>
<html>
<head>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1">
        <title>My First Page of Web Application </title>
</head>
<body>
                        <img
src="https://www.google.com/url?sa=i&url=https%3A%2F%2Fpixabay.com%2Fimages
%2Fsearch%2Fnature%2F&psig=AOvVaw3c81J8eUaEJ4HRssIVyaLv&ust=172855545
9487000&source=images&cd=vfe&opi=89978449&ved=0CBEQjRxqFwoTCMDdiv-IgYk
DFQAAAAAdAAAAABAE">
                <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>First paragraph.</p>

                <p>Second paragraph.</p>

                <p><b>Third</b>Paragraph</p>
```

```
            <hr>
                <marquee a><b>BASIC HTML TAGS<b></marquee>
            <hr>
            <p>Department of computer science and Engineering
<br>BLDEACET<br>Vijaypur</p>
            <p><pre>Department of CSE
        BLDEACET
            Vijayapur</pre></p>
                <h1>Different logic style</h2>
                <h2><b>Hello web user<b><h2>
                <h2><u>This is underline tag </u></h2>
                <h2>x<sup>2</sup>+y<sup>2</sup>=z<sup>2</sup>
                <h2>H<sub>2</sub>+O<sub>2</sub>--->2H<sub>2</sub>O</h2>
                <!--Horizontal line-->
                <hr>
                <!--Line Break-->
                <p>Thia is  line of text before the break.<br>This is a line After
break</p>

                <!--Block Quote -->
                <blockquote>This is a BlockQuote. It is used </blockquote>

</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.

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Class Time Table</title>
```

```
</head>
<body>
		<h1><center>c-Div Time Table</center></h1>
		<table align="center"border="1.0">
			<tr>
				<th>Date/Time</th>
				<th>09.00 to 10.00</th>
				<th>10.00 to 11.00</th>
				<th>11.00 to 11.15</th>
				<th>11.15 to 12.15</th>
				<th>12.15 to 01.15</th>
				<th>01.15 to 02.15</th>
				<th>02.15 to 03.15</th>
				<th>03.15 to 04.15</th>
				<th>04.30 to 05.30</th>
			</tr>
			<tr>
				<th>MON</th>
				<td colspan="5" align="center">AICTE/COURSE
ACTIVITIES/VAC</td>
				<b><td rowspan="6"
align="center"><b>L<br>U<br>N<br>C<br>H</b></td><b>
				<td colspan="3"></td>
			</tr>
			<tr>
				<th>TUE</th>
				<td colspan="2">&#9664CN B1 BATCH&#9654 &#9664WTL
B2 BATCH&#9654</td>
				<td rowspan="5"
align="center"><b>B<br>R<br>E<br>A<br>K</b></td>
				<td align="center">RM</td>
				<td align="center">SE</td>
				<td align="center">    AI    </td>
				<td align="center">TOC</td>
				<td colspan="1"></td>
			</tr>
			<tr>
				<th>WED</th>
				<td align="center">RM</td>
				<td align="center">CN</td>
```

```
                        <td align="center">SE</td>
                        <td align="center">EVS</td>
                        <td align="center">AI</td>
                        <td colspan="2" align="center">&#9664 CN B2
BATCH&#9654 &#9664WTL B1 BATCH&#9654</td>
                    </tr>
                    <tr>
                        <th>THU</th>
                        <td colspan="1"></td>
                        <td align="center">AI</td>
                        <td align="center">TOC</td>
                        <td align="center">CN</td>
                        <td colspan="3"></td>

                    </tr>
                    <tr>
                        <th>FRI</th>
                        <td align="center">TOC</td>
                        <td align="center">SE</td>
                        <td colspan="2" align="center"> &#9664 MP B1 & B2
BATCH  &#9654;</td>
                        <td align="center">RM</td>
                        <td align="center">CN</td>
                        <td align="center">YOGA</td>

                    </tr>
                    <tr>
                        <th align="center">SAT</th>
                        <td align="center">SE</td>
                        <td align="center">AI</td>
                        <td align="center">TOC</td>
                        <td align="center">CN</td>
                        <td colspan="1"></td>
                        <td colspan="1"></td>
                        <td colspan="1"></td>
                    </tr>

            </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.

exp3.html

```
<!DOCTYPE html>
<html>
<head>
	<meta charset="utf-8">
	<meta name="viewport" content="width=device-width, initial-scale=1">
	<title></title>
	<link rel="stylesheet" type="text/css" href="exp3.css">
</head>
<body>
	<h2>This is heading</h2>
	<hr class="new1">It has a legacy of more than 100 years</hr>
	<div>
		<h3 class="center">This is a heading in a div element</h3>
		<p class="simple">This is some text in a div element</p>
	</div>
	<p>My mother has <span>blue</span></p>
	<p><b><a href="https://www.google.com">This is link for google </a></b></p>
	<img src="image.jpg" alt="Cannot display">
	<p>I wake up at <time>6:00</time>
	in the morning</p>
	<p>
		jawahar Lal Nehru birthday is celebrated on <time datetime="2024-11-14
12:00">Children's Day.</time>
	</p>

</body>
</html>
```

Exp3.css

```
h2{
	color:orange;
}
```

```
hr.new1{
        border-top:1px solid red ;
}
a{
        color:hotpink;
}div{
        background-color: lightblue;
}
h3.center{
        color:blue;
        font-style: italic;
        text-align: center;
}
p.simple{
        color:green;
}
span{
        color:blue;
}
```

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.

```
<!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: #f0f0f0;
    margin: 0;
    padding: 20px;
}
h1 {
    color: #333;
    text-align: center;
}
table {
    width: 100%;
    max-width: 600px;
    margin: 0 auto;
    background-color: #fff;
    padding: 20px;
    border-radius: 8px;
    box-shadow: 0 0 10px rgba(0,0,0,0.1);
}
td {
    padding: 10px;
}
label {
    color: #555;
    font-weight: bold;
```

```
}
input[type="text"], input[type="email"], input[type="password"], select, textarea {
    width: 100%;
    padding: 8px;
    border: 1px solid #ddd;
    border-radius: 4px;
    box-sizing: border-box;
    font-size: 16px;
}
input[type="radio"], input[type="checkbox"] {
    margin-right: 5px;
}
input[type="submit"] {
    background-color: #4CAF50;
    color: white;
    padding: 10px 20px;
    border: none;
    border-radius: 4px;
    cursor: pointer;
    font-size: 18px;
}
input[type="submit"]:hover {
    background-color: #45a049;
```

```
        }
        .error {
            color: #ff0000;
            font-size: 14px;
        }
    </style>
</head>
<body>
    <h1>Registration Form</h1>
    <form action="#" method="post">
        <table>
            <tr>
                <td><label for="fullname">Full Name:</label></td>
                <td><input type="text" id="fullname" name="fullname" required></td>
            </tr>
            <tr>
                <td><label for="email">Email:</label></td>
                <td><input type="email" id="email" name="email" required></td>
            </tr>
            <tr>
                <td><label for="password">Password:</label></td>
                <td><input type="password" id="password" name="password" required></td>
            </tr>
```

```
        <tr>
            <td><label for="confirm_password">Confirm Password:</label></td>
            <td><input type="password" id="confirm_password"
name="confirm_password" required></td>
        </tr>
        <tr>
            <td><label>Gender:</label></td>
            <td>
                <input type="radio" id="male" name="gender" value="male" required>
                <label for="male">Male</label>
                <input type="radio" id="female" name="gender" value="female" required>
                <label for="female">Female</label>
                <input type="radio" id="other" name="gender" value="other" required>
                <label for="other">Other</label>
            </td>
        </tr>
        <tr>
            <td><label for="birthdate">Date of Birth:</label></td>
            <td><input type="date" id="birthdate" name="birthdate" required></td>
        </tr>
        <tr>
            <td><label for="country">Country:</label></td>
            <td>
                <select id="country" name="country" required>
```

```
            <option value="">Select a country</option>
            <option value="usa">India</option>
            <option value="uk">United Kingdom</option>
            <option value="canada">Canada</option>
            <option value="australia">Australia</option>
            <option value="other">Other</option>
        </select>
    </td>
</tr>
<tr>
    <td><label for="interests">Interests:</label></td>
    <td>
        <input type="checkbox" id="sports" name="interests[]" value="sports">
        <label for="sports">Sports</label>
        <input type="checkbox" id="music" name="interests[]" value="music">
        <label for="music">Music</label>
        <input type="checkbox" id="reading" name="interests[]" value="reading">
        <label for="reading">Reading</label>
        <input type="checkbox" id="travel" name="interests[]" value="travel">
        <label for="travel">Travel</label>
    </td>
</tr>
<tr>
```

```
            <td><label for="bio">Bio:</label></td>
            <td><textarea id="bio" name="bio" rows="4"></textarea></td>
        </tr>
        <tr
          <td colspan="2" style="text-align: center;">
              <input type="submit" value="Register">
          </td>
        </tr>
      </table>
   </form>
</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.

```
<!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 {
    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;
        }
        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://www.cnet.com/a/img/resize/c7cb26e927bebaa784fb55a01e71d7fecb15d2e
3/hub/2019/06/26/3f76e99d-8055-46f3-8f27-558ee276b665/20180405-ibm-q-quantum-c
omputer-02.jpg?auto=webp&fit=crop&height=675&width=1200" alt="Quantum
Computer">
                    <figcaption>A state-of-the-art quantum computer at the research
facility</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>
                    <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; 2023 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.

```
<!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;
        }
        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() {
        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

```
<!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;
                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>
```

8 a. 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.

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

8.a. Develop a PHP program (with HTML/CSS) to keep track of the number of visitors visiting the web

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Visitor Counter</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            line-height: 1.6;
            margin: 0;
            padding: 20px;
            background-color: #f4f4f4;
```

```
        }
        .container {
            max-width: 600px;
            margin: auto;
            background: white;
            padding: 20px;
            border-radius: 5px;
            box-shadow: 0 0 10px rgba(0,0,0,0.1);
        }
        h1 {
            color: #333;
            text-align: center;
        }
        .counter {
            font-size: 24px;
            text-align: center;
            margin-top: 20px;
        }
    </style>
</head>
<body>
    <div class="container">
        <h1>Welcome to Our Website</h1>
        <div class="counter">
            <?php
```

```
        $counterFile = 'visitor_count.txt';

        // Read the current count
        if (file_exists($counterFile)) {
            $count = (int)file_get_contents($counterFile);
        } else {
            $count = 0;
        }

        // Increment the count
        $count++;

        // Save the new count
        file_put_contents($counterFile, $count);

        // Display the count
        echo "<h2>Visitor Count</h2>";
        echo "<p>You are visitor number: $count</p>";
        ?>
      </div>
    </div>
</body>
</html>
```

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

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Student Record Sorter</title>
    <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;
            text-align: center;
        }
        table {
            width: 100%;
            border-collapse: collapse;
            margin-top: 20px;
        }
        th, td {
            padding: 10px;
            border: 1px solid #ddd;
            text-align: left;
        }
        th {
            background-color: #f2f2f2;
        }
    </style>
</head>
<body>
    <div class="container">
        <h1>Student Records</h1>
        <?php
        // Database connection details
        $host = 'localhost';
```

```
    $dbname = 'student_records';
    $username = 'your_username';
    $password = 'your_password';

    try {
        $pdo = new PDO("mysql:host=$host;dbname=$dbname", $username, $password);
        $pdo->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);

        // Fetch student records
        $stmt = $pdo->query("SELECT * FROM students");
        $students = $stmt->fetchAll(PDO::FETCH_ASSOC);

        // Selection sort function
        function selectionSort(&$arr, $n) {
            for ($i = 0; $i < $n - 1; $i++) {
                $min_idx = $i;
                for ($j = $i + 1; $j < $n; $j++) {
                    if ($arr[$j]['gpa'] < $arr[$min_idx]['gpa']) {
                        $min_idx = $j;
                    }
                }
                if ($min_idx != $i) {
                    $temp = $arr[$i];
                    $arr[$i] = $arr[$min_idx];
                    $arr[$min_idx] = $temp;
```

```
            }
        }
    }

    // Sort students by GPA
    selectionSort($students, count($students));

    // Display sorted student records
    echo "<table>";
    echo "<tr><th>ID</th><th>Name</th><th>GPA</th></tr>";
    foreach ($students as $student) {
        echo "<tr>";
        echo "<td>" . htmlspecialchars($student['id']) . "</td>";
        echo "<td>" . htmlspecialchars($student['name']) . "</td>";
        echo "<td>" . htmlspecialchars($student['gpa']) . "</td>";
        echo "</tr>";
    }
    echo "</table>";
} catch(PDOException $e) {
    echo "Connection failed: " . $e->getMessage();
}
?>
</div>
</body>
</html>
```