RNS Institute of Technology
(AICTE Approved, VTU Affiliated, and NAAC 'A+' Accredited)
(UG Programs- CSE, ECE, ISE, EIE and EEE are Accredited by NBA up to 30.06.2025)
CHANNASANDRA, DR. VISHNUVARDHAN ROAD, BENGALURU – 560098
Department of Computer Science and Engineering
Vision: Preparing better Computer Professionals for a Real World

WEB TECHNOLOGY (BCSL504) LAB MANUAL

For Fifth Semester B.E Students [VTU/NEP, 2022-23 syllabus]

Subject Code – BCSL504

NAME : .....

BRANCH : .....

SECTION : .....

USN : .....

VISION AND MISSION OF INSTITUTION

Vision

Building RNSIT into a World Class Institution

Mission

To impart high quality education in Engineering, Technology and Management with a Difference, Enabling Students to Excel in their Career by

1. Attracting quality Students and preparing them with a strong foundation in fundamentals so as to achieve distinctions in various walks of life leading to outstanding contributions
2. Imparting value based, need based, choice based and skill based professional education to the aspiring youth and carving them into disciplined, World class Professionals with social responsibility
3. Promoting excellence in Teaching, Research and Consultancy that galvanizes academic consciousness among Faculty and Students
4. Exposing Students to emerging frontiers of knowledge in various domains and make them suitable for Industry, Entrepreneurship, Higher studies, and Research & Development
5. Providing freedom of action and choice for all the Stake holders with better visibility

VISION AND MISSION OF CSE DEPARTMENT

Vision

Preparing better computer professionals for a real world

Mission

The Department of Computer Science and Engineering will make every effort to promote an intellectual and an ethical environment in which the strengths and skills of Computer Professionals will flourish by

1. Imparting Solid foundations and Applied aspects in both Computer Science Theory and Programming practices
2. Providing Training and encouraging R&D and Consultancy Services in frontier areas of Computer Science with a Global outlook
3. Fostering the highest ideals of Ethics, Values and creating Awareness on the role of Computing in Global Environment
4. Educating and preparing the graduates, highly Sought-after, Productive, and Well-respected for their work culture
5. Supporting and inducing Lifelong Learning practice

WEB PROGRAMMING LABORATORY (21CSL481)

INTERNAL EVALUATION SHEET

EVALUATION (MAX MARKS 50)			
TEST A	**REGULAR EVALUATION B**	**RECORD C**	**TOTAL MARKS A+B+C**
20	**20**	**10**	**50**

R1: REGULAR LAB EVALUATION WRITE UP & PROGRAM EXECUTION RUBRIC (MAX MARKS 10)				
Sl. No.	**Parameters**	**Good**	**Average**	**Needs improvement**
a.	**Understanding of problem (2 marks)**	Clear understanding of problem statement while designing and implementing the program (2)	Problem statement is understood clearly but few mistakes while designing and implementing program (1)	Problem statement is not clearly understood while designing the program (1)
b.	**Writing program (2 marks)**	Program handles all possible conditions (2)	Average condition is defined and verified. (1)	Program does not handle possible conditions (1)
c.	**Design, implementation, and demonstration (3 marks)**	Program follows syntax and semantics of C programming language. Demonstrates the complete knowledge of the program written (3)	Program has few logical errors, moderately demonstrates all possible concepts implemented in programs (2)	Syntax and semantics of XHTML is not clear (1)
d.	**Result and documentation (3 marks)**	Meticulous documentation and all conditions are taken care (3)	Acceptable documentation shown (2)	Documentation does not take care all conditions (1)

R2: REGULAR LAB EVALUATION VIVA RUBRIC (MAX MARKS 10)					
Sl. No.	**Parameter**	**Excellent**	**Good**	**Average**	**Needs Improvement**
a.	**Conceptual understanding & Additional Programming (10 marks)**	Answer 80% of the viva questions and execution of Additional programs listed (10)	Answers 60% of the viva questions and execution of Additional programs listed (7)	Answers 30% of the viva questions and execution of Additional programs listed(4)	Unable to relate the concepts (1)

R3: RECORD EVALUATION RUBRIC (MAX MARKS 10)					
Sl. No.	**Parameter**	**Excellent**	**Good**	**Average**	**Needs Improvement**
a.	**Documentation (10 marks)**	Meticulous record writing including program, comments and as per the guidelines mentioned (10)	Write up contains program, but comments are not included (8)	Write up contains only program (6)	Program written with few mistakes (5)

Test 1 (8th Week) (50 Marks)			**Test 2 (14th Week) (50 Marks)**		
Execution	**Record**	**Viva**	**Execution**	**Record**	**Viva**
20	**10**	**20**	**20**	**10**	**10**

PREFACE

We have developed this comprehensive laboratory manual on **WEB PROGRAMMING** which cover broad range of programs required for modern web development and is suitable for intermediate to upper level computing students. The objective of the lab manual is to make the students comfortable with web development principles and client-side programming by strengthening their programming abilities.

This material has ten programs which provides the students an exposure to web development The combined master technologies such as JavaScript, CSS, PHP, JSON, JQUERY, XML and XHTML allows students to create websites of the caliber of industry standards like Facebook, Twitter and Gmail. The problems discussed in this manual comprises of a programming solution, sample output and extensive test cases. Viva questions, frequently appeared examination questions and practicing programming problems constitute an indispensable part of this material.

Our profound and sincere efforts will be fruitful only when students acquire the extensive knowledge by reading this manual and apply the concepts learnt apart from the requirements specified in WEB Technology and its Applications prescribed by VTU, Belagavi.

Department of CSE

SL.NO. *TABLE OF CONTENTS* *PAGE NO.*

SYALLABUS

Web Technology Lab			
Course Code	**BCSL504**	**CIE Marks**	**50**
Teaching Hours/Week (L:T:P: S)	**0:0:2:0**	**SEE Marks**	**50**
Credits	**1**	**Total Marks**	**100**
Examination type (SEE)	**PRACTICAL**		

Programs List:

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.)
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.
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.
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.
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.
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.

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
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.
9	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.
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.

Course Objectives: This course (BCSL505) will enable students to:

- Learn HTML 5 elements and their use.
- Use of CSS for enhanced user interface presentation.
- Gain knowledge of JavaScript, AJAX and jQuery for dynamic presentation.
- Use of PHP to build Web applications.
- Design and develop Websites and Web applications.

Course outcomes (Course Skill Set):

At the end of the course, the student will be able to:

CO1 Design the experiment for the given problem using HTML, JavaScript and CSS.

CO2 Develop the solution for the given real-world problem using jQuery, Ajax and PHP.

CO3 Analyze the results and produce substantial written documentation.

CO-PO MATRIX

COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2	-	3	3	-	2	2	-	-	-	-	-	-	-	-	-	-
CO3	-	-	3	3	2	-	-	-	-	3	-	-	-	-	-	-

ACKNOWLEDGMENT

A material of this scope would not have been possible without the contribution of many people. We express our sincere gratitude to Dr. R N Shetty, Chairman, RNS Group of Companies for his magnanimous support in all our endeavors.

We are grateful to Dr.Ramesh Babu H S, Principal, RNSIT, Dr. M K Venkatesha, Director, RNSIT, Dr. P Kiran, HOD, CSE for extending their constant encouragement and support.

Our heartfelt thanks to Dr. M J Sudhamani, Mrs. Mrs. Savitha T, Mr. Ranjith V and Mrs. Deepika S for their unparalleled contribution throughout the preparation of this comprehensive manual. We also acknowledge our colleagues for their timely suggestions and unconditional support.

Department of CSE

WEB TECHNOLOGY LAB
(BCSL504)

Q1. Develop the HTML page named as “Myfirstwebpage.html”. Add the following tags with relevant content.

3. Set the title of the page as “My First Web Page”
4. 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.)

PROGRAM:

```
<!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>

    <!-- Moving text using the <marquee> tag -->
    <marquee>Basic HTML Tags</marquee>

    <!-- Heading tags from h1 to h6 -->
    <h1>This is Heading 1</h1>
    <h2>This is Heading 2</h2>
    <h3>This is Heading 3</h3>
    <h4>This is Heading 4</h4>
    <h5>This is Heading 5</h5>
    <h6>This is Heading 6</h6>

    <!-- Paragraph -->
    <p>This is a paragraph demonstrating the basic use of the HTML paragraph tag.</p>

    <!-- Horizontal line -->
    <hr>

    <!-- Line Break -->
    This is a sentence.<br>
    This is a new line after a line break.
```

```
    <!-- Blockquote -->
    <blockquote>
        This is a block quote. Blockquotes are used to indicate quotations from other sources.
    </blockquote>

    <!-- Preformatted text -->
    <pre>
This is preformatted text.
It maintains both      spaces and
        line breaks.
    </pre>

    <!-- Logical styles -->
    <b>This is bold text.</b><br>
    <i>This is italic text.</i><br>
    <u>This is underlined text.</u><br>
    H<sub>2</sub>O (subscript)<br>
    x<sup>2</sup> + y<sup>2</sup> = z<sup>2</sup> (superscript)<br>
    <strong>This is strong text.</strong><br>
    <em>This is emphasized text.</em>

</body>
</html>
```

```
<h3>Span Element</h3>
<p>
The span tag is an <span>inline  tag </span>used to mark up a <span>part of  a
text</span>or part of document.</p>
</p>
</body>
</html>
```

Sample output

Basic HTML Tags

This is Heading 1

This is Heading 2

This is Heading 3

This is Heading 4

This is Heading 5

This is Heading 6

This is a paragraph demonstrating the basic use of the HTML paragraph tag.

This is a sentence.
This is a new line after a line break.

> This is a block quote. Blockquotes are used to indicate quotations from other sources.

```
This is preformatted text.
It maintains both      spaces and
        line breaks.
```

This is bold text.
This is italic text.
This is underlined text.
H_2O (subscript)
$x^2 + y^2 = z^2$ (superscript)
This is strong text.
This is emphasized text.

2.a Develop the HTML page named as "Table.html" to display your class timetable.

a) Provide the title as Time Table with table header and table footer, row-span and col-span etc.

b) Provide various color options to the cells (Highlight the lab hours and elective hours with different colors.)

c) Provide color options for rows.

PROGRAM:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Time Table</title>
    <style>
        table {
            width: 80%;
            margin: 20px auto;
            border-collapse: collapse;
        }

        th, td {
            border: 1px solid black;
            padding: 15px;
            text-align: center;
        }

        th {
            background-color: #4CAF50;
            color: white;
        }

        /* Color rows alternatively */
        tr:nth-child(even) {
            background-color: #f2f2f2;
        }

        tr:nth-child(odd) {
            background-color: #ffffff;
        }

        /* Highlight lab hours */
        .lab {
            background-color: #ffcccb;
        }
```

```
        /* Highlight elective hours */
        .elective {
            background-color: #ccffcc;
        }

        /* Table header styling */
        tfoot {
            font-weight: bold;
            background-color: #f1f1f1;
        }

        /* Row with span and col span */
        .row-span {
            background-color: #ffcc99;
        }

        .col-span {
            background-color: #ffff99;
        }
    </style>
</head>
<body>

    <h1 style="text-align:center;">Class Time Table</h1>

    <table>
        <thead>
            <tr>
                <th colspan="6">Class Schedule</th>
            </tr>
            <tr>
                <th>Day</th>
                <th>9:00 - 10:00</th>
                <th>10:00 - 11:00</th>
                <th>11:00 - 12:00</th>
                <th>12:00 - 1:00</th>
                <th>1:00 - 2:00</th>
            </tr>
        </thead>
        <tbody>
            <tr>
                <td>Monday</td>
                <td>Math</td>
                <td class="lab" colspan="2">Physics Lab</td>
```

```
            <td>Lunch</td>
            <td>Electronics</td>
        </tr>
        <tr>
            <td>Tuesday</td>
            <td class="elective">History</td>
            <td>Math</td>
            <td>Physics</td>
            <td class="lab">Chemistry Lab</td>
            <td>Lunch</td>
        </tr>
        <tr>
            <td>Wednesday</td>
            <td>Computer Science</td>
            <td>Math</td>
            <td class="elective">Music</td>
            <td rowspan="2" class="row-span">Project Work</td>
            <td>Lunch</td>
        </tr>
        <tr>
            <td>Thursday</td>
            <td>Math</td>
            <td>Physics</td>
            <td class="lab">Computer Lab</td>
            <td>Electronics</td>
        </tr>
        <tr>
            <td>Friday</td>
            <td class="col-span" colspan="2">Seminar</td>
            <td>Physics</td>
            <td>Lunch</td>
            <td>Math</td>
        </tr>
    </tbody>
    <tfoot>
        <tr>
            <td colspan="6">Note: Labs and Electives are highlighted with different colors.</td>
        </tr>
    </tfoot>
</table>

</body>
</html>
```

Sample Output

Class Time Table

Class Schedule					
Day	**9:00 - 10:00**	**10:00 - 11:00**	**11:00 - 12:00**	**12:00 - 1:00**	**1:00 - 2:00**
Monday	Math	Physics Lab		Lunch	Electronics
Tuesday	History	Math	Physics	Chemistry Lab	Lunch
Wednesday	Computer Science	Math	Music	Project Work	Lunch
Thursday	Math	Physics	Computer Lab		Electronics
Friday	Seminar		Physics	Lunch	Math
Note: Labs and Electives are highlighted with different colors.					

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.

PROGRAM:

```
/* Style for h2 tag */
h2 {
  color: #4CAF50;
  font-size: 28px;
  font-family: Arial, sans-serif;
  text-align: center;
  margin-bottom: 20px;
}

/* Style for h3 tag */
h3 {
  color: #ff5722;
  font-size: 22px;
  font-family: 'Georgia', serif;
  margin-left: 10px;
}
/* Style for hr tag */
hr {
  border: 2px solid #333;
  width: 80%;
  margin: 10px auto;
}
/* Style for p tag */
p {
  font-size: 16px;
  line-height: 1.6;
  color: #555;
```

```
        margin: 15px 0;
}

/* Style for div tag */
div {
  padding: 10px;
  border: 2px solid #333;
  background-color: #f9f9f9;
  margin: 10px 0;
}

/* Style for span tag */
span {
  color: #ff9800;
  font-weight: bold;
}

/* Style for time tag */
time {
  font-style: italic;
  color: #9c27b0;
}

/* Style for img tag */
img {
  width: 100%;
  height: auto;
  border-radius: 10px;
}

/* Style for a tag */
a {
  color: #2196F3;
```

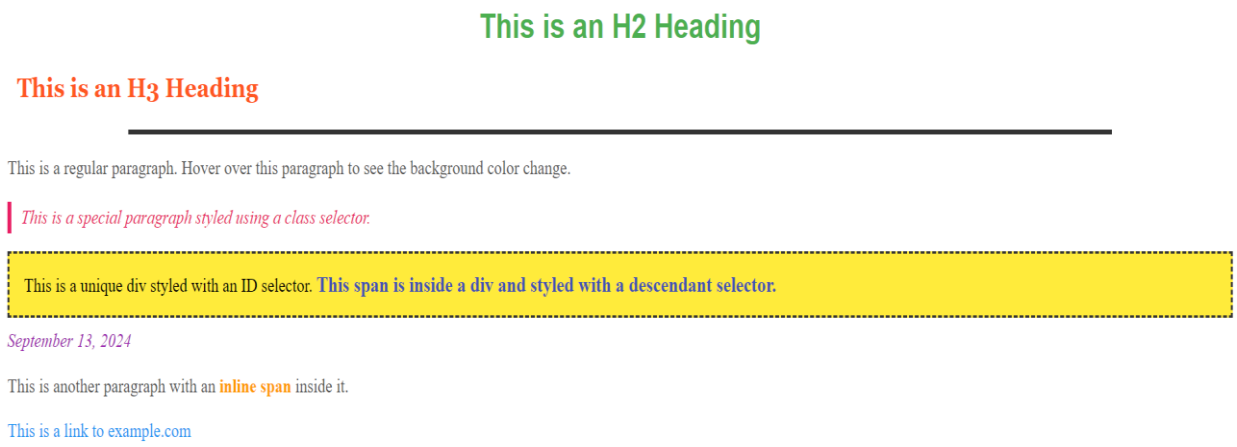
```
    text-decoration: none;
}

a:hover {
    color: #f44336;
    text-decoration: underline;
}

/* Class selector for a special paragraph */
.special-paragraph {
    color: #e91e63;
    font-style: italic;
    border-left: 4px solid #e91e63;
    padding-left: 10px;
}

/* ID selector for unique div */
#unique-div {
    background-color: #ffeb3b;
    border: 2px dashed #333;
    padding: 15px;
}

/* Descendant selector for span inside a div */
div span {
    font-size: 18px;
    color: #3f51b5;
}

/* Pseudo-class for p tag on hover */
p:hover {
    background-color: #f1f1f1;
    transition: background-color 0.3s;
}----
```

-

HTML file that uses `style.css`:

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

    <h2>This is an H2 Heading</h2>
    <h3>This is an H3 Heading</h3>

    <hr>

    <p>This is a regular paragraph. Hover over this paragraph to see the background color change.</p>
    <p class="special-paragraph">This is a special paragraph styled using a class selector.</p>

    <div id="unique-div">
        This is a unique div styled with an ID selector.
        <span>This span is inside a div and styled with a descendant selector.</span>
    </div>

    <time datetime="2024-09-13">September 13, 2024</time>
-
    <p>This is another paragraph with an <span>inline span</span> inside it.</p>

    <a href="https://www.example.com">This is a link to example.com</a>

    <img src="https://via.placeholder.com/600x400" alt="Placeholder Image">

</body>
</html>
```

Sample Output :



-

-

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 htm l>
<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;
     }

  h2 {
     text-align: center;
     color: #4CAF50;
     font-size: 24px;
  }

  /* Styling the form container */
  .form-container {
     background-color: #ffffff;
     border-radius: 8px;
-    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
     width: 60%;
     margin: 30px auto;
     padding: 20px;
  }

  /* Table alignment */
  table {
     width: 100%;
     margin: 0 auto;
  }

  td {
     padding: 10px;
  }

  /* Styling input elements */
  input[type="text"],
  input[type="email"],
  input[type="password"],
  input[type="date"],
  input[type="tel"]
```

```
{
    width: 100%;
    padding: 8px;
    border: 1px solid #ccc;
    border-radius: 4px;
}

/* Styling select, textarea, and other inputs */
select, textarea {
    width: 100%;
    padding: 8px;
    border: 1px solid #ccc;
    border-radius: 4px;
}

input[type="radio"], input[type="checkbox"] {
    margin-right: 5px;
}

/* Button styling */
input[type="submit"] {
    background-color: #4CAF50;
    color: white;
    padding: 10px 20px;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}

input[type="submit"]:hover {
    background-color: #45a049;
}

/* Font size and color styling */
label {
    font-size: 14px;
    color: #333;
}

th {
    font-size: 16px;
    color: #4CAF50;
    text-align: left;
}
```

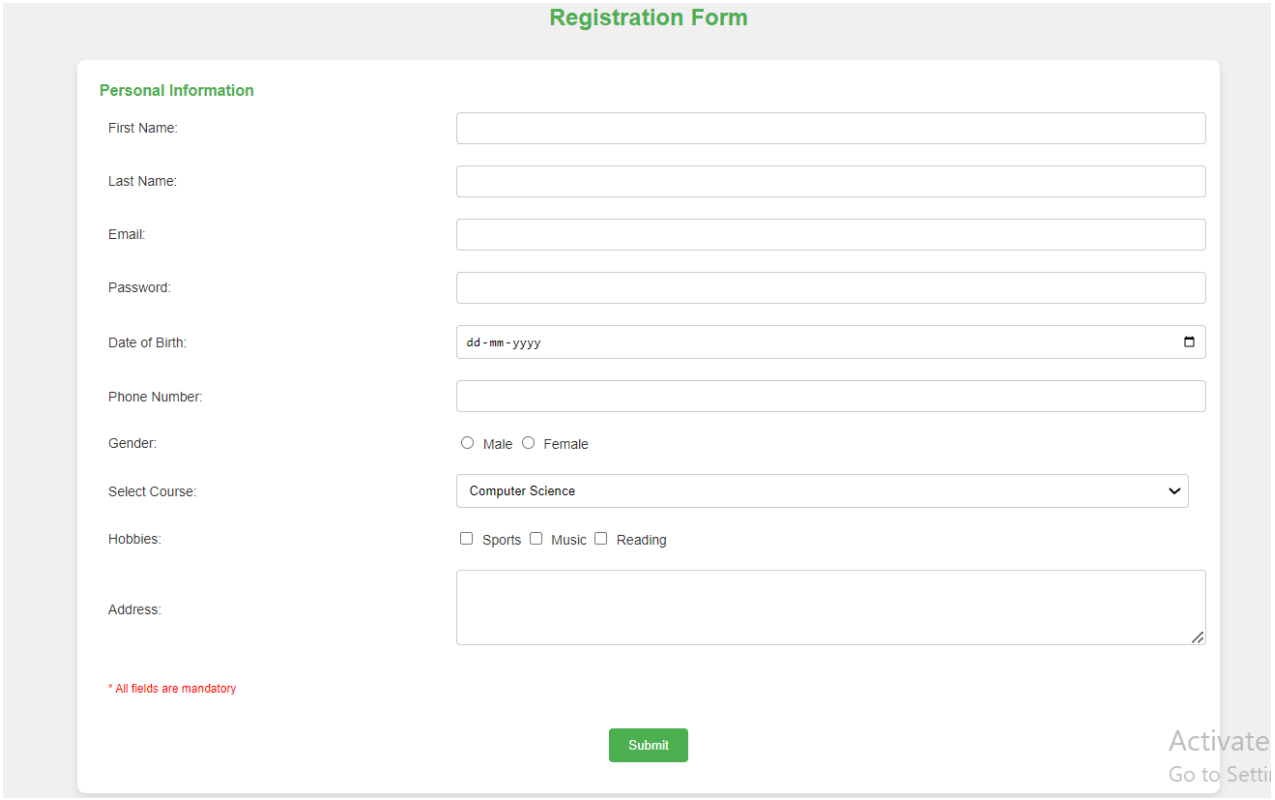
```
--

        .note {
            font-size: 12px;
            color: red;
        }
        </style>
        </head>
        <body>

          <h2>Registration Form</h2>

          <div class="form-container">
        <form action="#" method="post">
            <table>
                <tr>
                    <th colspan="2">Personal Information</th>
                </tr>
                <tr>
                    <td><label for="fname">First Name:</label></td>
                    <td><input type="text" id="fname" name="fname" required></td>
                </tr>
                <tr>
                    <td><label for="lname">Last Name:</label></td>
                    <td><input type="text" id="lname" name="lname" 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="dob">Date of Birth:</label></td>
                    <td><input type="date" id="dob" name="dob" required></td>
                </tr>
                <tr>
                    <td><label for="phone">Phone Number:</label></td>
                    <td><input type="tel" id="phone" name="phone" pattern="[0-9]{10}" required></td>
                </tr>
                <tr>
                    <td><label for="gender">Gender:</label></td>
                    <td>
                        <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>
            </td>
        </tr>
        <tr>
            <td><label for="course">Select Course:</label></td>
            <td>
                <select id="course" name="course">
                    <option value="cs">Computer Science</option>
                    <option value="it">Information Technology</option>
                    <option value="ece">Electronics and Communication</option>
                </select>
            </td>
        </tr>
        <tr>
            <td><label for="hobbies">Hobbies:</label></td>
            <td>
                <input type="checkbox" id="sports" name="hobbies" value="sports">
                <label for="sports">Sports</label>
                <input type="checkbox" id="music" name="hobbies" value="music">
                <label for="music">Music</label>
                <input type="checkbox" id="reading" name="hobbies" value="reading">
                <label for="reading">Reading</label>
            </td>
        </tr>
        <tr>
            <td><label for="address">Address:</label></td>
            <td><textarea id="address" name="address" rows="4" required></textarea></td>
        </tr>
    -    <tr>
            <td colspan="2">
                <p class="note">* All fields are mandatory</p>
            </td>
        </tr>
        <tr>
            <td colspan="2" style="text-align: center;">
                <input type="submit" value="Submit">
            </td>
        </tr>
      </table>
    </form>
  </div>

</body>
</html>
```

-

SAMPLE OUTPUT:

-



-

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>Online Newspaper</title>
  <style>
    /* Global Styles */
    body {
      font-family: 'Arial', sans-serif;
      background-color: #f9f9f9;
      color: #333;
      line-height: 1.6;
      margin: 0;
    }

    h1, h2, h3 {
      margin: 0;
    }

    /* Header styling */
    header {
      background-color: #4CAF50;
      color: white;
      padding: 20px;
      text-align: center;
    }

    /* Footer styling */
    footer {
      background-color: #333;
      color: white;
      text-align: center;
      padding: 10px;
      position: fixed;
      width: 100%;
      bottom: 0;
    }

    /* Article section styling */
    section {
```

```
--          padding: 20px;
            background-color: #ffffff;
            margin: 20px;
            border-radius: 10px;
        }

        /* Aside section (sidebar) */
        aside {
            background-color: #f0f0f0;
            padding: 15px;
            width: 30%;
            float: right;
            margin: 20px;
            border-radius: 10px;
        }

        /* Article content */
        article {
            background-color: #eef5f9;
            padding: 15px;
            margin-bottom: 20px;
            border-radius: 8px;
        }

        /* Table styling */
    ----------------------     table {
            width: 100%;
            border-collapse: collapse;
            margin-top: 10px;
        }

        th, td {
            border: 1px solid #ddd;
            padding: 8px;
            text-align: center;
        }

        th {
            background-color: #4CAF50;
            color: white;
        }

        /* Figure styling */
        figure {
            margin: 20px 0;
            padding: 15px;
            background-color: #fafafa;
```

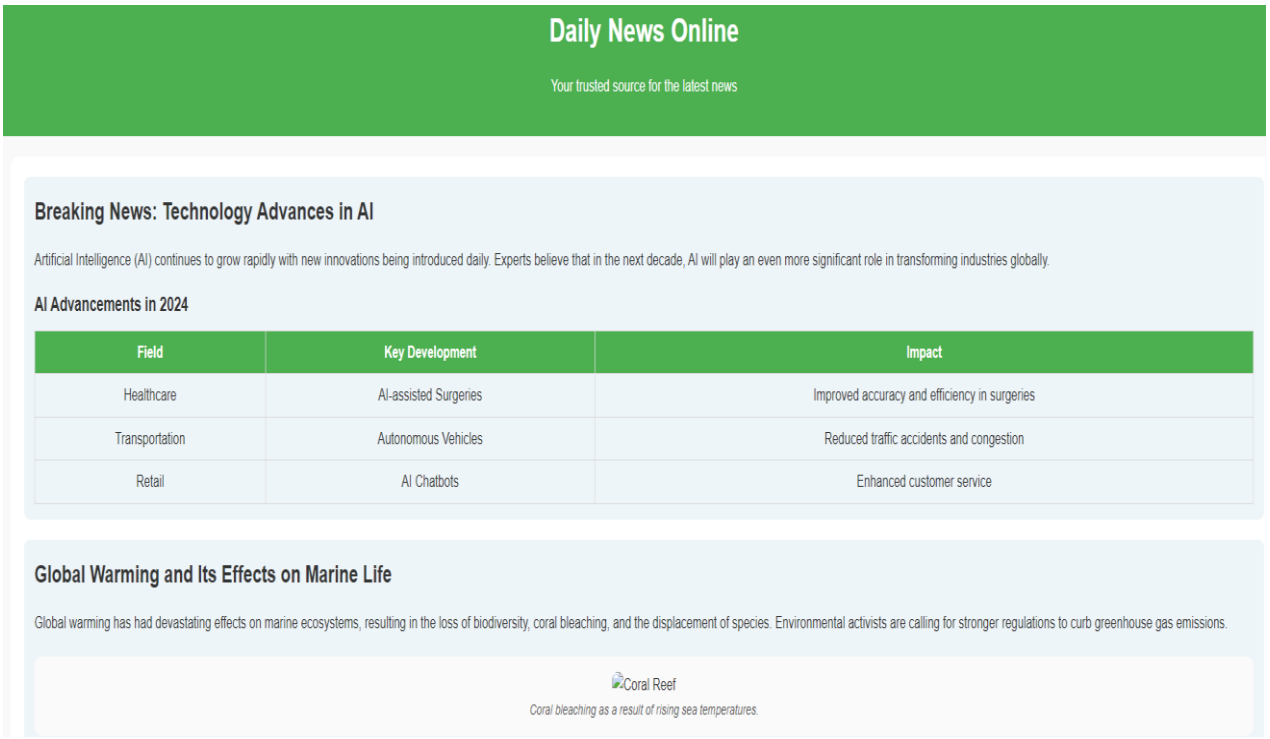
```
            border-radiu-----s: 10px;
            text-align: center;
        }

        figure img {
            max-width: 100%;
            height: auto;
            border-radius: 8px;
        }

        figure figcaption {
            font-style: italic;
            font-size: 14px;
            color: #555;
        }

        /* Clear floats */
        .clear {
            clear: both;
        }
    </style>
</head>
<body>

    <!-- Header Section -->
    <header>------
        <h1>Daily News Online</h1>
        <p>Your trusted source for the latest news</p>
    </header>

    <!-- Main Content Section -->
    <section>
        <article>
            <h2>Breaking News: Technology Advances in AI</h2>
            <p>Artificial Intelligence (AI) continues to grow rapidly with new innovations being
introduced daily. Experts believe that in the next decade, AI will play an even more significant role
in transforming industries globally.</p>

            <!-- Table showing AI Advancements -->
            <h3>AI Advancements in 2024</h3>
            <table>
                <thead>
                    <tr>
                        <th>Field</th>
                        <th>Key Development</th>
                        <th>Impact</th>
                    </tr>
```

```
            </thead------>
            <tbody>
              <tr>
                <td>Healthcare</td>
                <td>AI-assisted Surgeries</td>
                <td>Improved accuracy and efficiency in surgeries</td>
              </tr>
              <tr>
                <td>Transportation</td>
                <td>Autonomous Vehicles</td>
                <td>Reduced traffic accidents and congestion</td>
              </tr>
              <tr>
                <td>Retail</td>
                <td>AI Chatbots</td>
                <td>Enhanced customer service</td>
              </tr>
            </tbody>
          </table>
        </article>

        <article>
          <h2>Global Warming and Its Effects on Marine Life</h2>
          <p>Global warming has had devastating effects on marine ecosystems, resulting in the loss of biodiversity, coral bleaching, and the displacement of species. Environmental activists are calling for stronger reg--ulations to curb greenhouse gas emissions.</p>

          <!-- Figure with image and caption -->
          <figure>
            <img src="https://via.placeholder.com/600x400" alt="Coral Reef">
            <figcaption>Coral bleaching as a result of rising sea temperatures.</figcaption>
          </figure>
        </article>
      </section>

      <!-- Sidebar (Aside Section) -->
      <aside>
        <h3>Latest Headlines</h3>
        <ul>
          <li><a href="#">New Vaccine Shows Promising Results in Clinical Trials</a></li>
          <li><a href="#">Electric Cars Sales Surge Globally</a></li>
          <li><a href="#">SpaceX Prepares for First Commercial Lunar Mission</a></li>
          <li><a href="#">Government Announces New Renewable Energy Policies</a></li>
        </ul>
      </aside>
```

```
    <!-- Clear Floats -->
    <div class="clear"></div>

    <!-- Footer Section -->
    <footer>
        <p>&copy; 2024 Daily News Online. All rights reserved.</p>
    </footer>

</body>
</html>
```

-

SAMPLE OUTPUT:



--

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.

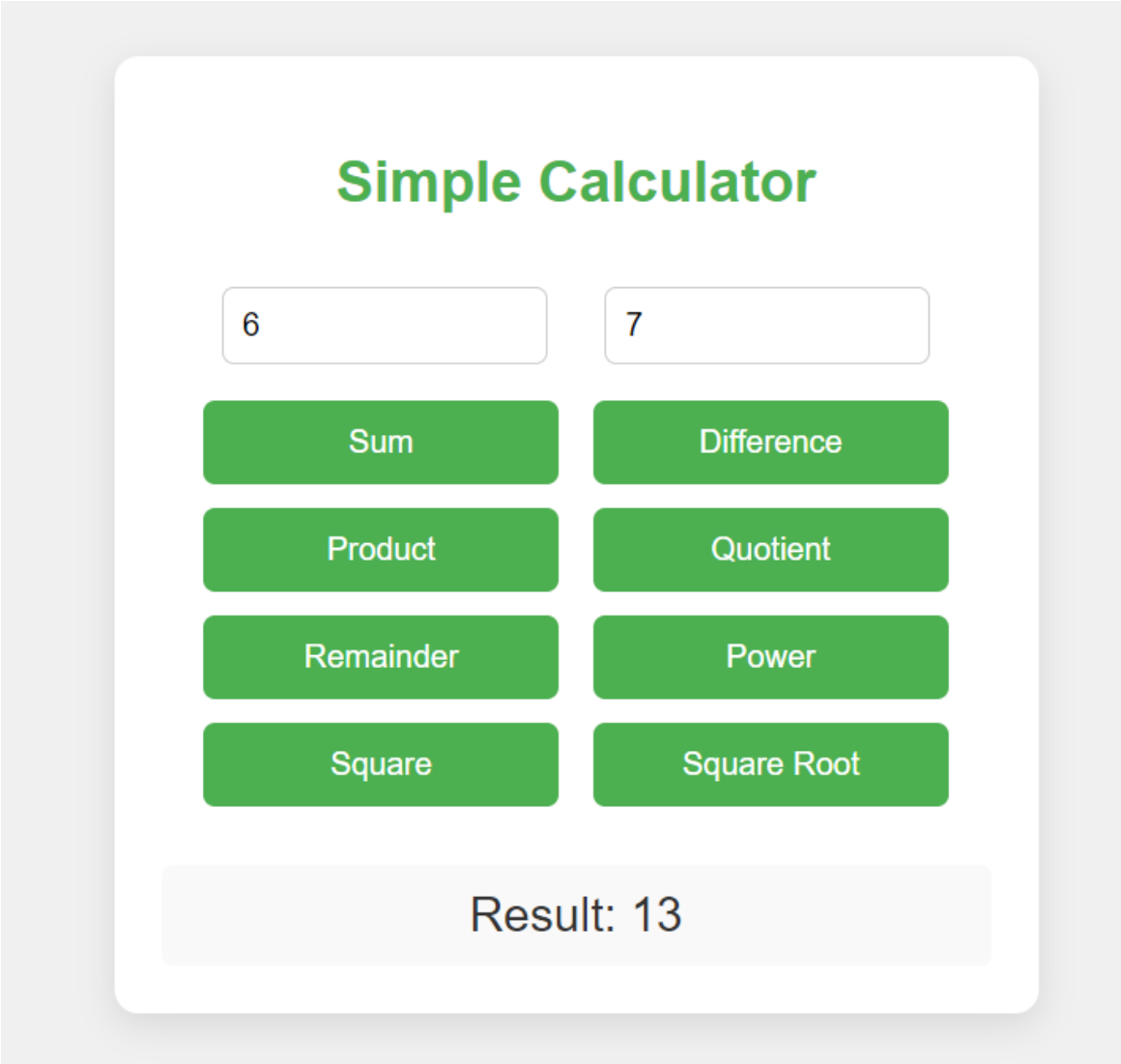
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Simple Calculator</title>
  <style>
    /* Global styles */
    body {
      font-family: Arial, sans-serif;
      background-color: #f0f0f0;
      margin: 0;
      padding: 0;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
    }

    /* Calculator container */
    .calculator {
      background-color: #fff;
      padding: 20px;
      border-radius: 10px;
---       box-shadow: 0 5px 15px rgba(0, 0, 0, 0.1);
      width: 350px;
      text-align: center;
    }

    h2 {
      color: #4CAF50;
      font-size: 24px;
      margin-bottom: 20px;
    }

    /* Input fields and buttons */
    input[type="number"] {
      width: 120px;
      padding: 8px;
      margin: 10px;
      border: 1px solid #ccc;
      border-radius: 5px;
    }

    button {
      background-color: #4CAF50;
      color: white;
```

```
            padding: 10px;
            border: none;
            border-radius: 5px;
            cursor: pointer;
            margin: 5px;
            width: 150px;
        }

        button:hover {
            background-color: #45a049;
        }

        /* Result display */
    #result {
            font-size: 20px;
            color: #333;
            margin-top: 20px;
            padding: 10px;
            background-color: #f9f9f9;
            border-radius: 5px;
        }
    </style>
</head>
<body>

    <div class="calculator">
        <h2>Simple Calculator</h2>

        <!-- Inputs -->
        <input type="number" id="num1" placeholder="Enter first number">
        <input type="number" id="num2" placeholder="Enter second number (if required)">

        <!-- Buttons for operations -->
        <button onclick="performOperation('sum')">Sum</button>
        <button onclick="performOperation('diff')">Difference</button>
        <button onclick="performOperation('prod')">Product</button>
        <button onclick="performOperation('quotient')">Quotient</button>
        <button onclick="performOperation('remainder')">Remainder</button>
        <button onclick="performOperation('power')">Power</button>
        <button onclick="performOperation('square')">Square</button>
       <button onclick="performOperation('sqrt')">Square Root</button>

        <!-- Result Display -->
        <div id="result">Result: 0</div>
    </div>

    <script>
        // JavaScript function to perform calculator operations
        function performOperation(operation) {
            let num1 = parseFloat(document.getElementById('num1').value);
            let num2 = parseFloat(document.getElementById('num2').value);
```

```
        let result = 0;

        // Perform operation based on button clicked
        switch (operation) {
            case 'sum':
                result = num1 + num2;
                break;
            case 'diff':
                result = num1 - num2;
                break;
            case 'prod':
                result = num1 * num2;
                break;
            case 'quotient':
                result = num1 / num2;
                break;
            case 'remainder':
                result = num1 % num2;
                break;
            case 'power':
                result = Math.pow(num1, num2);
                break;
            case 'square':
                result = Math.pow(num1, 2);
                break;
            case 'sqrt':
                result = Math.sqrt(num1);
                break;
            default:
                result = 0;
        }

        // Display the result
        document.getElementById('result').innerText = 'Result: ' + result;
    }
  </script>

</body>
</html>


<option>B.sc</option>
<option>B.com Computers</option>
<option>B.A</option>
</select><br>
<br>
Engineering: <select name="eng" id="eng">
<option selected>-- Select Group --</option>
<option>CSE</option>
<option>ECE</option>
<option>CIVIL</option>
```

```
<option>EEE</option>
</select><br><br>

Hobbies: <input type="checkbox" name="CheckboxGroup1" value="checkbox"
id="CheckboxGroup1">Playing chess
<input type="checkbox" name="CheckboxGroup1" value="checkbox"
id="CheckboxGroup2">Reading Books<br><br>
<h3 style="color:#F00">Address</h3>
<textarea name="textarea" cols="35" rows="5" id="textarea"></textarea><br>
<br>
 Attch Resume: <input type="file" name="fileField" id="fileField"><br><br>

<input type="image" src="submit.jpg">
</form>
</body>
</html>
```

SAMPLE OUTPUT:



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 Operations</title>
<style>
  body {
    font-family: Arial, sans-serif;
    background-color: #f4f4f9;
    margin: 0;
    padding: 20px;
  }

  h2 {
    color: #333;
  }

  label, input, button {
    display: block;
    margin: 10px 0;
  }

  textarea {
    width: 100%;
    height: 150px;
  }

  button {
    padding: 10px 20px;
    background-color: #4CAF50;
    color: white;
    border: none;
    border-radius: 5px;
    cursor: pointer;
  }

  button:hover {
    background-color: #45a049;
  }

  pre {
    background-color: #f9f9f9;
    padding: 10px;
    border-radius: 5px;
```

```
        white-space: pre-wrap;
    }
</style>
</head>
<body>

<h2>JSON Operations</h2>

<!-- JSON to Object -->


    <label for="jsonInput">Enter JSON Text:</label>
    <textarea id="jsonInput" placeholder='{"name": "Alice", "age": 25, "date":"2024-09-
13"}'></textarea>
    <button onclick="convertJsonToObject()">Convert JSON to Object</button>
    <pre id="jsonObjectOutput">JavaScript Object will appear here...</pre>

    <!-- JSON Date Conversion -->
    <button onclick="convertJsonToDate()">Convert JSON Date</button>
    <pre id="jsonDateOutput">Converted Date will appear here...</pre>

    <!-- JSON to CSV -->
    <button onclick="convertJsonToCsv()">Convert JSON to CSV</button>
    <pre id="csvOutput">CSV format will appear here...</pre>

    <!-- CSV to JSON -->
    <label for="csvInput">Enter CSV Data (e.g., "name,age,date\nAlice,25,2024-09-13"):</label>
    <textarea id="csvInput"></textarea>
    <button onclick="convertCsvToJson()">Convert CSV to JSON</button>
    <pre id="jsonFromCsvOutput">JSON format will appear here...</pre>

    <!-- Hashing a String -->
    <label for="hashStringInput">Enter String to Hash:</label>
    <input type="text" id="hashStringInput" placeholder="Enter string to hash">
    <button onclick="createHash()">Create Hash</button>
    <pre id="hashOutput">Hashed string will appear here...</pre>

    <script>
     // Convert JSON to JavaScript Object
     function convertJsonToObject() {
        const jsonText = document.getElementById('jsonInput').value;
        try {
            const jsonObject = JSON.parse(jsonText);
            document.getElementById('jsonObjectOutput').textContent = JSON.stringify(jsonObject, null,
2);
        } catch (e) {
            document.getElementById('jsonObjectOutput').textContent = 'Invalid JSON format.';
        }
```

```
        }
        // Convert JSON date string into a JavaScript Date object
        function convertJsonToDate() {
            const jsonText = document.getElementById('jsonInput').value;
            try {
                const jsonObject = JSON.parse(jsonText);
                const date = new Date(jsonObject.date); // Assuming date field in JSON
                document.getElementById('jsonDateOutput').textContent = `Converted Date: ${date}`;
            } catch (e) {
                document.getElementById('jsonDateOutput').textContent = 'Invalid JSON or missing date
    field.';
            }
        }

        // Convert JSON to CSV
        function convertJsonToCsv() {
            const jsonText = document.getElementById('jsonInput').value;
            try {
                const jsonObject = JSON.parse(jsonText);
                const keys = Object.keys(jsonObject);
                const values = Object.values(jsonObject);
                const csv = keys.join(',') + '\n' + values.join(',');
                document.getElementById('csvOutput').textContent = csv;
            } catch (e) {
                document.getElementById('csvOutput').textContent = 'Invalid JSON format.';
            }
        }

        // Convert CSV to JSON
        function convertCsvToJson() {
        const csvText = document.getElementById('csvInput').value;
        try {
            const lines = csvText.split('\n');
            const keys = lines[0].split(',');
            const values = lines[1].split(',');
            const jsonObject = {};
            keys.forEach((key, index) => {
                jsonObject[key.trim()] = values[index].trim();
            });
            document.getElementById('jsonFromCsvOutput').textContent = JSON.stringify(jsonObject, null,
2);
        } catch (e) {
            document.getElementById('jsonFromCsvOutput').textContent = 'Invalid CSV format.';
        }
    }
```

```
    // Create Hash (using a simple hashing algorithm for the browser)
    // crypto.createHash() is Node.js specific, so we'll use a basic hash simulation here for the browser.
    function createHash() {
        const str = document.getElementById('hashStringInput').value;
        let hash = 0;
        for (let i = 0; i < str.length; i++) {
            const char = str.charCodeAt(i);
            hash = ((hash << 5) - hash) + char;
            hash |= 0; // Convert to 32-bit integer
        }
        document.getElementById('hashOutput').textContent = 'Hashed String: ' + hash.toString();
    }

    // In Node.js, you would use:
    // const crypto = require('crypto');
    // function createNodeHash(str) {
    //     return crypto.createHash('sha256').update(str).digest('hex');
    // }
  </script>
</body>
</html>
```

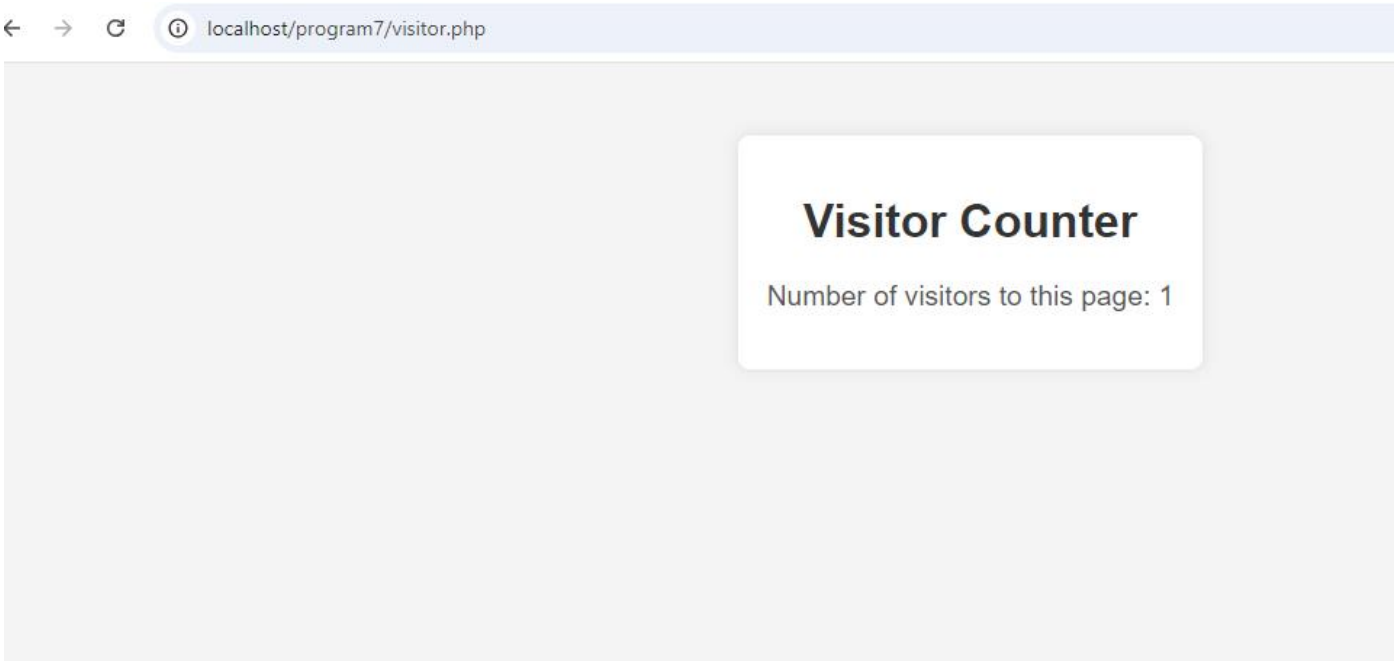
SAMPLE OUTPUT:

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.

```
<?php
// Define the file path to store the visitor count
$filename = 'count.txt';

// Check if the file exists
if (!file_exists($filename)) {
    // If the file doesn't exist, create it and initialize the count to 0
    file_put_contents($filename, '0');
}

// Read the current count from the file
$count = (int)file_get_contents($filename);

// Increment the count
$count++;

// Update the count in the file
file_put_contents($filename, $count);

// Output the HTML with the visitor count
?>
<!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;
            text-align: center;
            background-color: #f4f4f4;
            margin: 0;
            padding: 50px;
        }
        h1 {
            color: #333;
        }
        .container {-
            background: #fff;
            border-radius: 8px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
            display: inline-block;
            padding: 20px;
        }
        p {
            font-size: 1.2em;
            color: #555;
        }
    </style>
</head>
<body>
    <div class="container">
        <h1>Visitor Counter</h1>
        <p>Number of visitors to this page: <?php echo $count; ?></p>
```

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

Sample Output:



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

Assuming you have a MySQL database named school and a table named students with columns id, name, and grade.

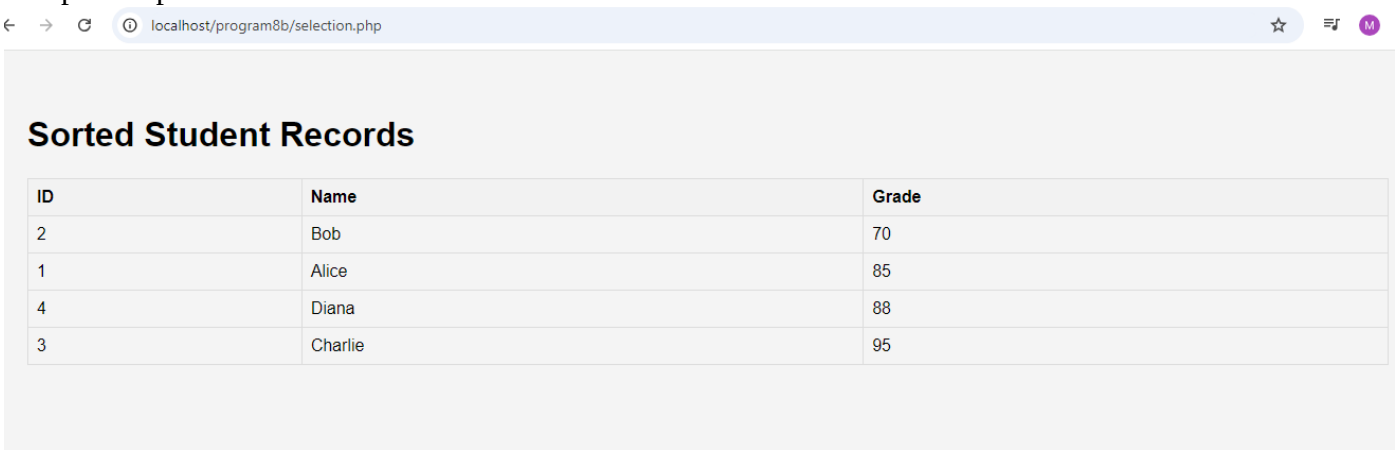
```
CREATE DATABASE school;

USE school;

CREATE TABLE students (
    id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(100),
    grade INT
);

INSERT INTO students (name, grade) VALUES
('Alice', 85),
('Bob', 70),
('Charlie', 95),
('Diana', 88);
```

```
<?php
// Database connection
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "school";

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

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

// Fetch student records
$sql = "SELECT id, name, grade FROM students";
$result = $conn->query($sql);

$students = array();
if ($result->num_rows > 0) {
    while($row = $result->fetch_assoc()) {
        $students[] = $row;
    }
}

// Selection Sort function
function selectionSort(&$arr) {
    $n = count($arr);
    for ($i = 0; $i < $n - 1; $i++) {
        $minIndex = $i;
        for ($j = $i + 1; $j < $n; $j++) {
            if ($arr[$j]['grade'] < $arr[$minIndex]['grade']) {
                $minIndex = $j;
            }
        }
```

```
        // Swap the minimum element with the first element
        if ($minIndex != $i) {
            $temp = $arr[$i];
            $arr[$i] = $arr[$minIndex];
            $arr[$minIndex] = $temp;
        }
    }
}

// Sort students by grade
selectionSort($students);

$conn->close();
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Sorted Student Records</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 20px;
            padding: 20px;
            background-color: #f4f4f4;
        }
        table {
            width: 100%;
            border-collapse: collapse;
        }
        table, th, td {
            border: 1px solid #ddd;
        }
        th, td {
            padding: 8px;
            text-align: left;
        }
        th {
            background-color: #f2f2f2;
        }
    </style>
</head>
<body>
    <h1>Sorted Student Records</h1>
    <table>
        <thead>
            <tr>
                <th>ID</th>
                <th>Name</th>
                <th>Grade</th>
            </tr>
        </thead>
        <tbody>
            <?php foreach ($students as $student): ?>
            <tr>
                <td><?php echo htmlspecialchars($student['id']); ?></td>
                <td><?php echo htmlspecialchars($student['name']); ?></td>
                <td><?php echo htmlspecialchars($student['grade']); ?></td>
```

```
            </tr>
            <?php endforeach; ?>
        </tbody>
    </table>
</body>
</html>
```

Sample Output:



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.

Create an HTML file (e.g., `index.html`) with paragraphs, lists, and div elements.

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>jQuery Script Example</title>
   <link rel="stylesheet" href="styles.css">
   <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
   <script src="script.js" defer></script>
</head>
<body>
   <h1>jQuery Demo</h1>

   <p id="paragraph">This is a paragraph.</p>
   <ul id="list">
      <li>Item 1</li>
      <li>Item 2</li>
   </ul>

   <div id="animated-div">Animate me!</div>

   <button id="append-content">Append Content</button>
   <button id="animate-div">Animate Div</button>
</body>
</html>
```

CSS Styles

Create a CSS file (e.g., `styles.css`) to style the elements and define the animated states.

```
body {
   font-family: Arial, sans-serif;
   margin: 20px;
}

#paragraph {
   margin-bottom: 20px;
}

#list {
   margin-bottom: 20px;
}
```

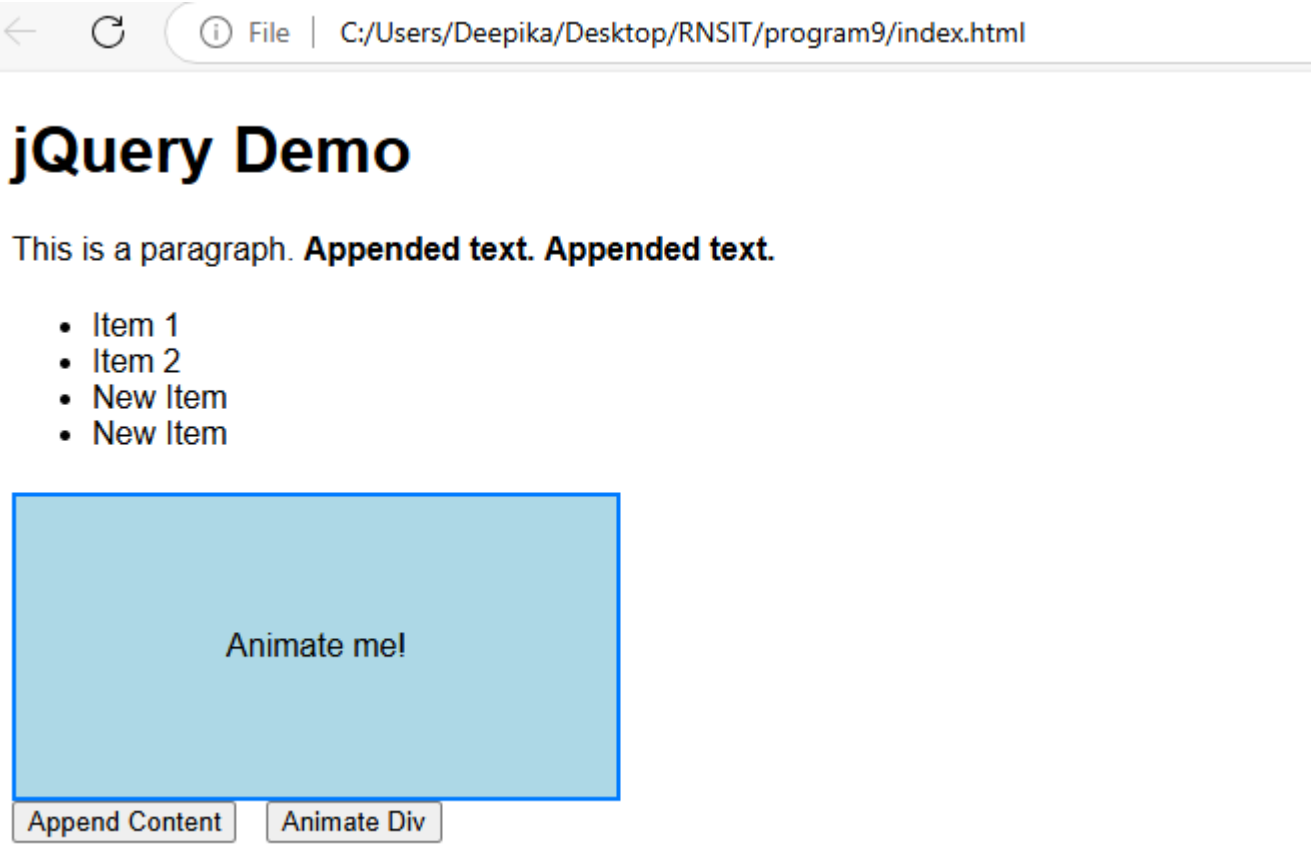
```
#animated-div {
    width: 200px;
    height: 100px;
    background-color: lightblue;
    display: flex;
    align-items: center;
    justify-content: center;
    border: 2px solid #007BFF;
    transition: background-color 0.5s;
}

.animate-background {
    background-color: lightcoral;
}

button {
    margin-right: 10px;
}
```

jQuery Script

Create a jQuery file (e.g., `script.js`) to handle the interaction with the page.

```
$(document).ready(function() {

    // Append content to paragraph and list

    $('#append-content').click(function() {

        $('#paragraph').append(' <strong>Appended text.</strong>');

        $('#list').append('<li>New Item</li>');

    });

   // Animate the div and change its color

    $('#animate-div').click(function() {

        $('#animated-div')

            .animate({ width: '300px', height: '150px' }, 1000) // Animation

            .toggleClass('animate-background'); // Change color using CSS class

    });

})
```

Sample Output:



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.

Create a basic HTML file, a CSS file for styling, and a couple of text and JSON files for fetching data.

File Structure

- `index.html`
- `styles.css`
- `textfile.txt` (plain text file)
- `data.json` (JSON file)
- `script.js` (JavaScript file)

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>AJAX Example</title>
   <link rel="stylesheet" href="styles.css">
   <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
-   <script src="script.js" defer></script>
</head>
<body>
   <h1>AJAX Example</h1>

   <h2>AJAX Without jQuery</h2>
   <button id="fetch-text">Fetch Text File (No jQuery)</button>
   <div id="text-content"></div>

   <h2>AJAX With jQuery</h2>
   <button id="fetch-text-jquery">Fetch Text File (With jQuery)</button>
   <div id="text-content-jquery"></div>

   <h2>JSON Example</h2>
   <button id="fetch-json">Fetch JSON Data</button>
   <div id="json-content"></div>
</body>
</html>
```

CSS File (styles.css)

```
body {
   font-family: Arial, sans-serif;
   margin: 20px
button {
```

```
    m-argin: 10px 0;
}

#text-content, #text-content-jquery, #json-content {
    border: 1px solid #ddd;
    padding: 10px;
    margin-top: 10px;
    background-color: #f9f9f9;
}
```

Text File (textfile.txt)

```
This is a sample text file used to demonstrate AJAX requests.
```

JSON File (data.json)

```
{
    "name": "John Doe",
    "age": 30,
    "email": "john.doe@example.com"
}
```

JavaScript File (script.js)

AJAX Without jQuery

```
document.addEventListener('DOMContentLoaded', function() {
    // Fetch text file content using native AJAX
    document.getElementById('fetch-text').addEventListener('click', function() {
        var xhr = new XMLHttpRequest();
        xhr.open('GET', 'textfile.txt', true);
        xhr.onreadystatechange = function() {
            if (xhr.readyState === 4 && xhr.status === 200) {
                document.getElementById('text-content').innerText = xhr.responseText;
            }
        };
      -----xhr.send();
    });
});
```

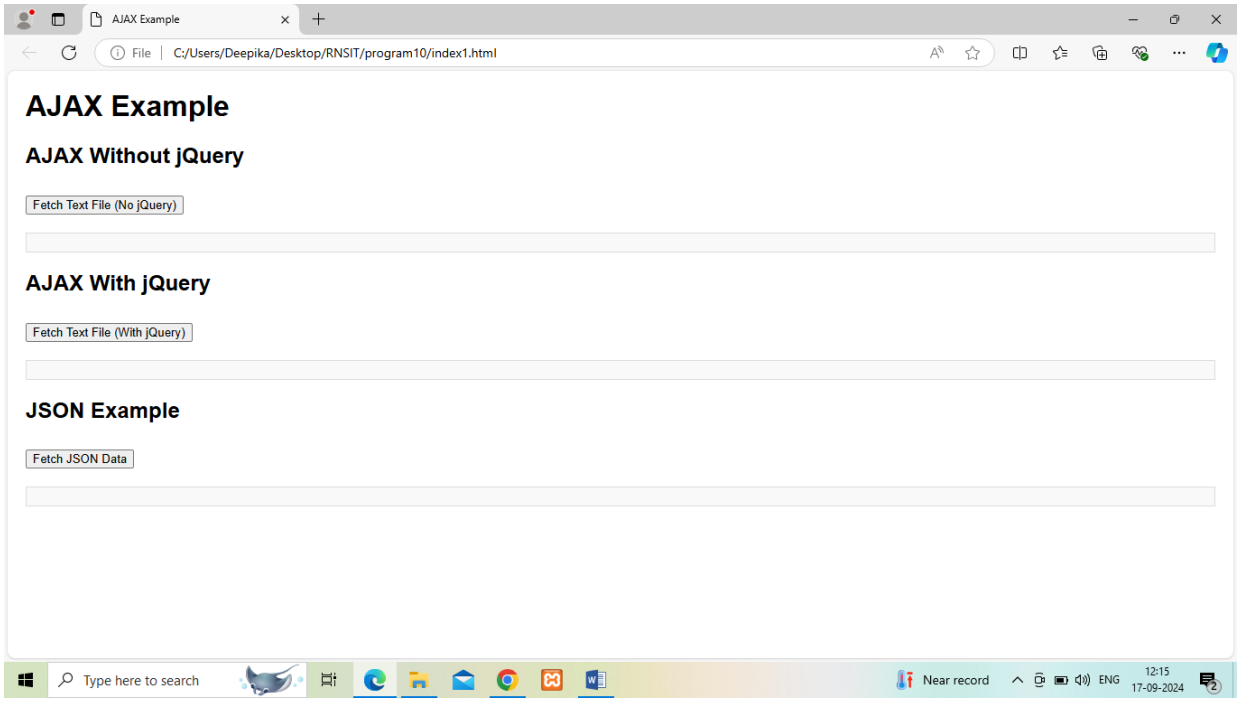
AJAX With jQuery

Using `parseJSON()` in jQuery

```
$(document).ready(function() {
    // Manually parse JSON
    $('#fetch-json').click(function() {
        $.ajax({
            url: 'data.json',
            method: 'GET',
            dataType: 'text', // Receive as plain text
            success: function(data) {
                var parsedData = $.parseJSON(data);
```

```
            $('#json-content'<strong>Name:</strong> ' + parsedData.name + '<br>' +
               '<strong>Age:</strong> ' + parsedData.age + '<br>' +
               '<strong>Email:</strong> ' + parsedData.email
            );
        }
    });
});
```

SAMPLE OUTPUT:



VIVA QUESTIONS AND ANSWERS

Web	RBT*	COs
What is the World Wide Web (WWW, W3)? The World Wide Web -- also known as the web, WWW or W3 -- refers to all the public websites or pagesthat users can access on their local computers and other devices through the internet. These pages and documents are interconnected by means of hyperlinks that users click on for information. This informationcan be in different formats, including text, images, audio and video.	L1	CO1
What is Internet? The Internet, sometimes called simply "the Net," is a worldwide system of computer networks -- a networkof networks	L1	CO1
What is Web server and browser? A web browser is basically the software that we use for browsing on the internet and displaying pages. Conversely, a web server refers to the software that provides its users with the documents they request viatheir web browsers. A web browser, also known as a "browser," is an application software that allows users to find, access, display, and view websites. Microsoft Internet Explorer, Google Chrome, Mozilla Firefox, and Apple Safariare all popular web browsers. A web server is software and hardware that uses HTTP (Hypertext Transfer Protocol) and other protocols torespond to client requests made over the World Wide Web. The main job of a web server is to display website content through storing, processing and delivering WebPages to users.	L1	CO1
What is HTTP? (L1,CO1) Hypertext Transfer Protocol (HTTP) is a method for encoding and transporting information between a client(such as a web browser) and a web server. HTTP is the primary protocol for transmission of information across the Internet.	L1	CO1
. **URL: Universal Resource Locator (URL) (L1.CO1)** • URL shows the address of a resource on the Internet. It can refer to the website, some particulardocument, or an image. The Internet user just needs to insert URL into the location (Search) bar to find the needed website, document, folder, or image.	L1	CO1

• A URL contains the following information:
  o The protocol used to a access the resource
  o The location of the server (whether by IP address or domain name)
  o The port number on the server (optional)
  o The location of the resource in the directory structure of the server
  o A fragment identifier (optional)
• The URLs of a file stored on the Internet are unique in nature.
• General syntax of URL:
Protocol://Servername.domain/Directories/Subdirectories/Filename.filetype		

DNS: DNS is short for Domain Name System. Like a phone-book, DNS maintains and maps the name of thewebsite, i.e. URL, and particular IP address it links to. Every URL on the internet has a unique IP address which is of the computer which hosts the server of the website requested.	L1	CO1
HYPER TEXT MARKUP LANGUAGE		
What is HTML? HTML stands for Hyper Text Markup Language. It is a universal language which allows an individual usingspecial code to create web pages to be viewed on internet.	L1	CO1
What is a HTML tag? HTML tags tells the browser what to do. Tags are the keywords that defines the format of a web pa---ge. HTML tags are used to create HTML documents and render their properties. Each HTML tags have differentproperties. Some basic HTML tags are: <!DOCTYPE> : Defines the document type <html>: Defines an HTML document <head>: Contains metadata/information for the document <title>: Defines a title for the document <body>: Defines the document's body <h1> to <h6>: Defines HTML headings <p>: Defines a paragraph : Inserts a single line break <hr> : Defines a thematic change in the content	L1	CO1
Write format of a simple HTML page. (L1, CO1) <HTML> <HEAD> <TITLE> This is the Title </TITLE> </HEAD> <BODY>	L1	CO1

…. Type the body of the program </BODY> </HTML>		
What is meta element in HTML? The meta element is used to provide additional information about a document. The meta tag has no content;rather, all of the information provided is specified with attributes. The two attributes that are used to provide information are name and content. The user makes up a name asthe value of the name attribute and specifies information through the content attribute. One commonly chosen name is keywords; the value of the content attribute associated with the keywords arethose which the author of a document believes characterizes his or her document. example: <meta name = "Title" content = "Programming the Web" /> <meta name = "Author" content = "Divya K" />	L1	CO1
What are some text formatting tags in **HTML?** - is used for introducing various paragraphs.2. - this tag is used for giving an empty blank line. HEADING TAGS - <h1> </h1> .. <h6> </h6> is used to introduce various headings. <h1> is the biggestand <h6> is the smallest heading tag. <HR> TAG – is used to draw lines and horizontal rules.4.<B>,<I>,<U> for bold, italic and underline respectively.	L1	CO1
Explain the use of <img> tag. Image can be displayed on the web page using <img> tag. When the <img> tag is used, it should also be mentioned which image needs to be displayed. This is doneusing src attribute. Attribute means extra information given to the browser Whenever <img> tag is used, alt attribute is also used. Alt stands for alert. <html> <head>	L2	CO1

<title>display image</title> Modulze 1 : Introduction to HTML </head> <body> </body> </html>		
How do you change the color of background or text in HTML? Include the element \"bgcolor\" with a color code in your body tag: - <BODY BGCOLOR=\"#ffffff\" TEXT=\"#000000\" LINK=\"#cc0000\"VLINK=\"#000066\" ALINK=\"#ffff00\">	L1	CO1
How to make a picture of a background image of a web page? To make a picture a background image on a web page, you should put the following tag code after the </head> tag. <body background = "image.gif"> Here, replace the “image.gif” with the name of your image file which you want to display on your web page	L1	CO1
What is hypertext and href? Hyperlinks are the mechanism which allows the navigation from one page to another. > The term “hyper” means beyond and “link” means connection >Whichever text helps in navigation is called hypertext > Hyperlinks cam be created using <a> (anchor tag) >The attribute that should be used for <a> is hrefExample: <html> <head> <title> hyperlink </title> </head>	L1	CO1

 CLICK HERE </html>		
What is table tag? write syntax. A table is a two-dimensional matrix, consisting of rows and columns. All table related tags are includedbetween <TABLE> </TABLE> tags. A table is a matrix of cells. The cells in the top row often contain column labels, those in the leftmost columnoften contain row labels, and most of the rest of the cells contain the data of the table. The content of a cell can be almost any document element, including text, a heading, a horizontal rule, an image, and a nested table. Syntax: <TABLE> -<TH> Heading </TH> <TR> Row elements </TR> <TD> Table data values </TD> </TABLE>	L1	CO1
What do you mean by row spanning and column spanning? Row spanning is used to merge (combine) two or more rows. Column spanning is used to merge (combine) two or more columns.	L1	CO1
What is the difference between DIV and SPAN in **HTML?** The difference between **span** and **div** is that a span element is **in-line** and usually used for a small chunk of HTML inside a line,such as inside a paragraph. Whereas, a div or division element is **block-line** which is equivalent to having a line-break before and after it and used to group larger chunks of code. **Example:** This is <span class="Web Dev">interview	L1	CO1
What is the purpose of using alternative texts in images? The purpose of using alternative texts is to define what the image is about. During an image mapping, it can be confusing and difficult to understand what hotspots correspond to a particular link. These alternative texts come in action here and put a description at each link which makes it easy for users to understand the hotspotlinks easily.	L1	CO1
Why do we use <blockquote>? give example.	L1	

The <blockquote> tag is used to make the contents look different from the surrounding text. <html> <head> <title> Blockquotes </title> </head> <body> HELLO THERE <blockquote> ROOTWORKZ </blockquote> </body> </html>		CO1
Name some common lists that are used when designing a page. There are many common lists used for design a page. You can choose any or a combination of the followinglist types: • **Ordered list** – The ordered list displays elements in a numbered format. It is represented by tag. • **Unordered list** – The unordered list displays elements in a bulleted format. It is represented by tag. • **Definition list** – The definition list displays elements in definition form like in a dictionary. The <dl>, <dt> and <dd> tags are used to define description list.	L1	CO1
Is the <!DOCTYPE html> tag considered as a HTML tag? No, the <!DOCTYPE html> declaration is not an HTML tag. There are many type of HTML, such as, HTML 4.01 Strict, HTML 4.01 Transitional, HTML 4.01 Frameset, XHTML 1.0 Strict, XHTML 1.0 Transitional, XHTML 1.0 Frameset, XHTML 1.1 etc. So, <!DOCTYPE html> is used to instruct the web browser about the HTML page.	L1	CO1
What is semantic HTML? Semantic HTML is a coding style. It is the use of **HTML markup** to reinforce the semantics or meaning of the content. For example: In semantic HTML ** ** tag is not used for bold statement as well as ** **tag is used for italic. Instead of these we use **** and **** tags.	L1	CO1
What is marquee? Marquee is used for the scrolling text on a web page. It scrolls the image or text up, down, left or right automatically. You should put the text which you want to scroll within the **<marquee>……</marquee>** tag.	L1	CO1

What is difference between HTML and XHTML? The differences between HTML and XHTML are: • HTML is an application of Standard Generalized Markup Language. Whereas, XML is an applicationof Extensible Markup Language. • The first one is a static Web Page whereas the later one is a dynamic Web Page. • HTML allows programmer to perform changes in the tags and use attribute minimization whereasXHTML when user need a new markup tag then user can define it in this. • HTML is about displaying information whereas XHTML is about describing the information.	L1	CO1
What are HTML forms? An HTML form is used to allow a user to input data on a web page and the element used is form element andits main attributes are action and method. The most common way for a user to communicate information from a Web browser to the server is through aform. XHTML provides tags to generate the commonly used objects on a screen form. These objects are called controls or widgets. There are controls for single-line and multiple-line text collection, checkboxes, radio buttons, and menus, among others. All control tags are inline tags. **format is <form action= http://www.example.abc = "get"> <form>** **----** Example: <form action="/action_page.php"> <label for="fname">First name:</label> <input type="text" id="fname" name="fname" value="John"> <label for="lname">Last name:</label> <input type="text" id="lname" name="lname" value="Doe"> <input type="submit" value="Submit"> </form>	L1	CO1
Write a complete HTML form script using checkbox, actions buttons (SUBMIT, RESET), <textarea>tag and radio button. <-html> <head> <title> CompleteForm</title> </head> <body> <h1>Registration Form</h1> <form action=" "> <p> <label>Enter your email id: <input type = "text" name = "myname" size = "24" maxlength = "25" />	L2	

</label> <label>Enter the password: <input type = "password" name = "mypass" size = "20" maxlength = "20" /> </label> <label><input type="radio" name="act" value="one"/>Male</label> <label><input type="radio" name="act" value="two"/>Female</label> Which of the following Accounts do you have? <label><input type="checkbox" name="act" value="one"/>Gmail</label> <label><input type="checkbox" name="act" value="two"/>Facebook</label> <label><input type="checkbox" name="act" value="three"/>Twitter</label> <label><input type="checkbox" name="act" value="four"/>Google+</label> Any Suggestions? <textarea name="feedback" rows="5" cols="100"> </textarea> Click on Submit if you want to register <input type="SUBMIT" value="SUBMIT"/> <input type="RESET" value="RESET"/> </form> </body> <html>		CO1
Explain frames and <frame> tag. The browser window can be used to display more than one document at a time. The window can be dividedinto rectangular areas, each of which is a frame. Each frame is capable of displaying its own document. frameset> tag: >The number of frames and their layout in the browser window are specified with the <frameset> tag. >A frameset element takes the place of the body element in a document. A document has either a body or aframeset but cannot have both. >T-he <frameset> tag must have either a rows or a cols attribute. (or both) > To create horizontal frames, rows attribute is used. >To create vertical frames, cols attribute is used.Example of	L2	CO1

horizontal frame:

```
<html>
<head>
<title>Frameset Rows</title>
</head>
<frameset rows = "*,*">
<frame src = "Framerow1.html"/>
<frame src = ""Framerow2.html"/>
</frameset>
</html>
```

What are the HTML tags used to display the data in the tabular form?

L1 CO1

The list of HTML tags used to display data in the tabular form include:

Tag	Decsription
<table>	It defines a table
<tr>	This tag defines a row in a table
<th>	It defines a header cell in a table
<td>	This is used to define a cell in a table
<caption>	It defines the table caption
<colgroup>	It specifies a group of one or more columns in a table for formatting
<col>	This is used with <colgroup> element to specify column properties for each column
<tbody>	This tag is used to group the body content in a table.
<thead>	It is used to group the header content in a table
<tfooter>	It is used to group the footer content in a table

CASCADING STYLE SHEETS

What are Style Sheets?

L1 CO1

Style sheets are collections of style information that are applied to plain text. Style information includes fontattributes such as type size, special effects (bold,italic,underline),color and alignment. Style sheets also provide broader formatting instructions byspecifying values for quantities such as line spacing and left and right margins.

Define cascading.

L1 CO1

Cascading refers to a certain set of rules that browsers use, in cascading order, to determine

how to use the style information. Such a set of rules is useful in the event of conflicting style information because the ruleswould give the browser a way to determine which style is given precedence.		
What is CSS? 1. CSS are powerful mechanism for adding styles (e.g. Fonts, Colors, Spacing) to web documents. 2.They enforce standards and uniformity throughout a web site and provide numerous attributes to createdynamic effects. 3. The advantage of a style sheet includes the ability to make global changes to all documents from a singlelocation. Style sheets are said to cascade when they combine to specify the appearance of a page.	L1	CO1
What are the style precedence rules when using multiple approaches? Inline styles override both linked style sheets and style information stored in the document head with <STYLE> tag. Styles defined in the document head override linked style sheets. Linked style sheets overridebrowser defaults	L1	CO1
List down the ways of including style information in a document. 1.Linked Styles -Style information is read from a separate file that is specified in the <LINK> tag 2.Embedded Styles -Style information is defined in the document head using the <STYLE> and </STYLE>tags. 3.Inline Styles -Style information is placed inside an HTML tag and applies to all content between that tagand it's companion closing tag.	L1	CO1
Write syntax to introduce style sheets in HTML. <HTML> <HEAD> <STYLE Type = “text/css”> predefined tag name {attribute name1:attribute value1; attribute name2:attributevalue2; ……attribute name-n:attribute value-n}	L2	CO1

<STYLE> </HEAD> <BODY> write the body of program </BODY> </HTML>		
Can you create a multi-colored text on a web page? Yes, we can create a multi-colored text on a web page. To create a multicolor text, you can use for the specific texts that you want to color.	L1	CO1
What happens if you open the external CSS file in a browser? When you try to open the external CSS file in a browser, the browser cannot open the file, because the file has a different extension. The only way to use an external CSS file is to reference it using **<link/>** tag within another HTML document.	L1	CO1
What is the hierarchy that is being followed when it comes to style sheets? If a single selector includes three different style definitions, the definition that is closest to the actual tag takes precedence. Inline style takes priority over embedded style sheets, which takes priority over external style sheets.	L1	CO1
What are the limits of the text field size? The default size for a text field is around **13 characters**. However, if you include the size attribute, you can set the size value to be as low as 1. The maximum size value will be determined by the browser width. Also, if the size attribute is set to 0, the size will be set to the default size of 13 characters.	L1	CO1
What is Cell Spacing and Cell Padding? Cell Spacing is referred to as the space or gap between the two cells of the same table. Whereas, Cell Padding is referred to as the gap or space between the content of the cell and cell wall or cell border.**Example:** <table border cellspacing=3> <table border cellpadding=3> <table border cellspacing=3 cellpadding=3>	L1	CO1
-Write script using cellspacing	L2	

and cellpadding.

Script:

```
<html>

<head>
<title> cell spacing and cell padding </title>
</head>
<body>
<h3>Table with space = 10, pad = 50</h3>
<table border = "7" cellspacing = "10" cellpadding = "50">
<tr>
<td> Kswamy</td>
<td>Chethan </td>
</tr>
</table>
<h3>Table with space = 50, pad = 10</h3>
<table border = "7" cellspacing = "50" cellpadding = "10">
<tr>
<td> Divya </td>
<td>Chethan </td>
</tr>
←/table>
</body>
</html>
```

C01

JAVASCRIPT

What is JavaScript? Why do we use it?

JavaScript is an interpreted, client-side, event-based, object-oriented scripting language that you can use toadd dynamic interactivity to your web pages.

We use it to:

>Create special effects with images that give the impression that a button is either highlighted or depressedwhenever the mouse pointer is hovered over it.

>Validate information that users enter into your web forms

>Open pages in new windows, and customize the appearance of those new windows.

>Detect the capabilities of the user's browser and alter your page's content appropriately.

L1

CO1

> And much more. <script> tag is used to add JavaScript in HTML <script language=” JavaScript” type=”text/Java Script”> … code … </script>		
List JavaScript data types. i. Number: The number data type is used to represent positive or negative numbers with or without decimalplace, or numbers written using exponential notation. ii. String: The string data type is used to represent textual data . Strings are created using single or doublequotes surrounding one or more characters, as shown below: iii. Boolean: The Boolean data type can hold only two values: true or false. It is typically used to store values. like yes (true) or no (false), on (true) or off (false). iv. Null: This is another special data type that can have only one value-the null value. A null value meansthat there is no value. It is not equivalent to an empty string ("") or 0 v. Object: The object is a complex data type that allows you to store collections of data. vi. Undefined: The undefined data type can only have one value-the special value undefined. If a variable hasbeen declared, but has not been assigned a value, has the value undefined.	L1	CO1
Define DOM. DOM (Document Object Model) is an API that defines how JavaScript programs can access and manipulatethe HTML document currently displayed by a browser. It includes the definition of the properties of document object, many of which are themselves objects with their own properties.	L1	CO1
What is the use of typeof operator in JavaScript? typeof is an operator that provides information about the data type of a value stored in a variable and also itsuse is to test that a variable has been defined before attempting to use it. It is a unary operator that is placed before its single operand, which can be of any type. Its value is a stringindicating the data type of the operand. The typeof operator evaluates to "number", "string" or "boolean" if its operand is a number, string, orboolean value and returns true or false based on the evaluation.	L1	CO1

Explain JavaScript array. An array is a special type of JavaScript object that can store multiple data values unlike a variable, which canonly store one data value at a time. In order to use an array in JavaScript, you must first create it. There are a number of ways to create arrays inJavaScript. >arrDays = new Array(); If you already know how many elements a given array will have, you can declare this explicitly: >arrDays = new Array(7); >arrDays = new Array("Monday","Tuesday"); >arrDays = ["Monday","Tuesday"];	L2	CO1
What is === operator? === is called as strict equality operator which returns true when the two operands are having the same valuewithout any type conversion. Strict equality === checks that two values are the same or not. Values are not implicitly converted to some other value before comparison. If the variable values are of different types, then the values are considered as unequal. If the variable is of the same type, are not numeric, and have the same value, they are considered as equal.	L1	CO1
Explain all three types of errors in JavaScript. Logic errors: It is caused by the use of syntactically correct code, which does not fulfill the required task. Forexample, an infinite loop. Load-time errors: The errors shown at the time of the page loading are counted under Load-time errors. These errors are encountered by the use of improper syntax, and thus are detected while the page is gettingloaded Run-time errors: This is the error that comes up while the program is running. It is caused by illegal operations, for example, division of a number by zero, or trying to access a non-existent area of the memory.	L2	CO1

What boolean operators does JavaScript support? &&, || and !	L1	CO1
What looping structures are there in JavaScript? for, while, do-while loops, but no foreach.	L1	CO1
What is THIS keyword? It refers to the current object.	L1	CO1
What does isNaN function do? Return true if the argument is not a number.	L1	CO1
What is negative infinity? It's a number in JavaScript, derived by dividing negative number by zero.	L1	CO1
Where are cookies actually stored on the hard disk? This depends on the user's browser and OS. In the case of Netscape with Windows OS,all the cookies are stored in a single file called cookies.txtc:\Program Files\Netscape\Users\username\cookies.txt	L1	CO1
What can javascript programs do? Generation of HTML pages on-the-fly without accessing the Web server. The user can be given control overthe browser like User input validation Simple computations can be performed on the client's machine. The user's browser, OS, screen size, etc. can be detected Date and Time Handling.	L1	CO1
How to set a HTML document's background color? document.bgcolor property can be set to any appropriate color.	L1	CO1
What does the "Access is Denied" IE error **mean?** The "Access Denied" error in any browser is due to the following reason. A JavaScript in one window or frame is tries to access another window or frame whose document's domain is different from the documentcontaining the script.	L1	CO1
Is a JavaScript script faster than an ASP script? Yes. Since JavaScript is a client-side script it does require the web server's help for its computation, so it isalways faster than any server-side script like ASP,PHP,etc..	L1	CO1
Are Java and JavaScript the Same? No. java and javascript are two different languages.	L1	CO1

Java is a powerful object - oriented programming language like C++, C whereas Javascript is a client-sidescripting language with some limitations.		
How to embed javascript in a web page? javascript code can be embedded in a web page between <script langugage="javascript"> </script> tags	L1	CO1
How to access an external javascript file that is stored externally and not embedded? This can be achieved by using the following tag between head tags or between body tags. <scriptsrc="abc.js"></script> where abc.js is the external javscript file to be accessed.	L1	CO1
What is the difference between an alert box and a confirmation box? An alert box displays only one button which is the OK button whereas the Confirm box displays two buttons: namely OK and cancel.	L1	CO1
What is a prompt box? A prompt box allows the user to enter input by providing a text box.	L1	CO1
How to hide javascript code from old browsers that dont run it? Use the below specified style of comments - <script language=javascript> <!-- javascript code goes here // -->	L1	CO1
How to comment javascript code? Use // for line comments and /* */ for block comments	L1	CO1
Name the numeric constants representing max,min values Number. MAX_V ALUE Number. MIN_VA	L1	CO1

LUE		
What does javascript null mean? The null value is a unique value representing no value or no object. It implies no object, or null string, novalid Boolean value, no number and no array object.	L1	CO1
What does undefined value mean in javascript? Undefined value means the variable used in the code doesn't exist or is not assigned any value or the property doesn't exist.	L1	CO1
What is the difference between undefined value and null value? 1. Undefined value cannot be explicitly stated that is there is no keyword called undefined whereas nullvalue has keyword called null 2. typeof undefined variable or property returns undefined whereas typeof null value returns object	L1	CO1
Does javascript have the concept level scope? No. JavaScript does not have block level scope,all the variables declared inside a function possess the samelevel of scope unlike c,c++,java.	L1	CO1
What are undefined and undeclared variables? Undeclared variables are those that are not declared in the program (do not exist at all), trying to read theirvalues gives runtime error. But if undeclared variables are assigned then implicit declaration is done . Undefined variables are those that are not assigned any value but are declared in the program. Trying to readsuch variables gives special value called undefined value.	L1	CO1
What is === operator? ==== is strict equality operator, it returns true only when the two operands are having the same value withoutany type conversion.	L1	CO1
What does the delete operator do? The delete operator is used to delete all the variables and objects used in the program, but it does not deletevariables declared with var keyword.	L1	CO1
What does break and continue statements do? Continue statement continues the current loop (if label not specified) in a new iteration whereas break statement exits the current loop.	L1	CO1
How to create a function using function constructor?	L1	CO1

The following example illustrates this It creates a function called square with argument x and returns x multiplied by itself. var square = new Function ("x","return x*x");		

PHP

What is PHP? **PHP** stands for *Hypertext Preprocessor*. It is an open source server-side scripting language which is widely used for web development. It supports many databases like MySQL, Oracle, Sybase, Solid, PostgreSQL, generic ODBC etc	L1	CO2
Explain the difference b/w static and dynamic websites? In **static websites**, *content can't be changed* after running the script. You can't change anything on the site. It is predefined. In **dynamic websites**, *content of script can be changed at the run time*. Its content is regenerated every time a user visit or reload. Google, yahoo and every search engine is the example of dynamic website.	L2	CO2
What is "echo" in PHP? PHP echo output one or more string. It is a language construct not a function. So the use of parentheses is not required. But if you want to pass more than one parameter to echo, the use of parentheses is required. **void echo (string $arg1 [, string $...])**	L1	CO2
What is the difference between "echo" and "print" in PHP? **Echo** can *output one or more string* but **print** can only *output one string and always returns 1*. **Echo** is *faster than print* because it does not return any value.	L1	CO2
What is the difference between $message and $$message?** **$message *stores variable data* while **$$message** is used *to store variable of variables*. $message stores fixed data whereas the data stored in $$message may be changed dynamically.	L1	CO2
What are the ways to define a constant in PHP? PHP constants are name or identifier that can't be changed during execution of the script. PHP constants are defined in two ways: o Using define() function o Using const() function	L1	CO2
How many data types are there in PHP? PHP data types are used to hold different types of data or values. There are 8 primitive data types which are further categorized in 3 types:	L1	CO2

○ Scalar types ○ Compound types ○ Special types		
How to do single and multi-line comment in PHP? PHP single line comment is made in two ways: ○ Using // (C++ style single line comment) ○ Using # (Unix Shell style single line comment) PHP multi-line comment is made by enclosing all lines within.	L1	CO2
What is the use of count() function in PHP? The PHP count() function is used *to count total elements in the array, or something an object*.	L1	CO2
What is the use of header() function in PHP? The header() function is used to send a raw HTTP header to a client. It must be called before sending the actual output. For example, you can't print any HTML element before using this function.	L1	CO2
What does isset() function? The isset() function checks if the variable is defined and not null.	L1	CO2
Explain PHP parameterized functions. PHP parameterized functions are functions with parameters. You can pass any number of parameters inside a function. These given parameters act as variables inside your function. They are specified inside the parentheses, after the function name. Output depends upon dynamic values passed as parameters into the function.	L2	CO2
Explain PHP variable length argument function PHP supports variable length argument function. It means you can pass 0, 1 or n number of arguments in function. To do this, you need to use 3 ellipses (dots) before the argument name. The 3 dot concept is implemented for variable length argument since PHP 5.6.	L2	CO2
What is the array in PHP? An array is used to store multiple values in a single value. In PHP, it orders maps of pairs of keys and values. It saves the collection of the data type.	L1	CO2
How many types of array are there in PHP? There are three types of array in PHP: 1. **Indexed array:** an array with a numeric key. 2. **Associative array:** an array where each key has its specific value. 3. **Multidimensional array:** an array containing one or more arrays within itself.	L1	CO2
What is the difference between indexed and associative array? The indexed array holds elements in an indexed form which is represented by number starting from 0 and incremented by 1. For example: $season=**array**("summer","winter","spring","autumn"); The associative array holds elements with name. For example:	L1	CO2

$salary=**array**("Sonoo"=>"350000","John"=>"450000","Kartik"=>"200000");		
How can you submit a form without a submit button? You can use JavaScript submit() function to submit the form without explicitly clicking any submit button.	L1	CO2
What are the ways to include file in PHP? PHP allows you to include file so that page content can be reused again. There are two ways to add the file in PHP. 1. include 2. require	L1	CO2
What are the ways to include file in PHP? PHP allows you to include file so that page content can be reused again. There are two ways to add the file in PHP. 1. include 2. require	L1	CO2
Explain setcookie() function in PHP? PHP setcookie() function is used to set cookie with HTTP response. Once the cookie is set, you can access it by $_COOKIE superglobal variable. **Syntax:** bool setcookie (string $name [, string $value [, int $expire = 0 [, string $path [, string $domain [, bool $secure = false [, bool $httponly = false]]]]])	L2	CO2
How can you retrieve a cookie value? echo $_COOKIE ["user"];	L1	CO2
What is a session? PHP Engine creates a logical object to preserve data across subsequent HTTP requests, which is known as session. Sessions generally store temporary data to allow multiple PHP pages to offer a complete functional transaction for the same user. Simply, it maintains data of an user (browser).	L1	CO2
What is $_SESSION in PHP? A session creates a file in a temporary directory on the server where registered session variables and their session id are stored. This data will be available to all pages on the site amid that visit. The area of the temporary record is controlled by a setting in the php.ini document called session.save_path.	L1	CO2

What is PHP session_start() and session_destroy() function? PHP session_start() function is used to start the session. It starts new or resumes the current session. It returns the current session if the session is created already. If the session is not available, it creates and returns new sessions.	L1	CO2
What is the difference between session and cookie? The main difference between session and cookie is that *cookies are stored on user's computer in the text file* format while *sessions are stored on the server side*. Cookies can't hold multiple variables, on the other hand, Session can hold multiple variables. You can manually set an expiry for a cookie, while session only remains active as long as browser is open.	L1	CO2
Write syntax to open a file in PHP? PHP fopen() function is used to open file or URL and returns resource. It accepts two arguments: $filename and $mode. **Syntax:** **resource fopen (string $filename , string $mode [, bool $use_include_path = false [, resource $context]])**	L1	CO2
How to read a file in PHP? PHP provides various functions to read data from the file. Different functions allow you to read all file data, read data line by line, and read data character by character. PHP file read functions are given below: o fread() o fgets() o fgetc()	L1	CO2
How to write in a file in PHP? PHP fwrite() and fputs() functions are used to write data into file. To write data into a file, you need to use w, r+, w+, x, x+, c or c+ mode.	L1	CO2
How to delete file in PHP? The unlink() function is used to delete a file in PHP.	L1	CO2
What are the different types of errors in PHP? There are 3 types of error in PHP. 1. **Notices:**These are non-critical errors. These errors are not displayed to the users. 2. **Warnings:**These are more serious errors, but they do not result in script termination. By default, these errors are displayed to the user. 3. **Fatal Errors:**These are the most critical errors. These errors may cause due to immediate	L1	CO2

termination of script.		
What is htaccess in PHP? The .htaccess is a configuration file on Apache server. You can change configuration settings using directives in Apache configuration files like .htaccess and httpd.conf.	L1	CO2
What is the meaning of a Persistent Cookie? A persistent cookie is permanently stored in a cookie file on the browser's computer. By default, cookies are temporary and are erased if we close the browser.	L1	CO2
How can we create a database using PHP and MySQL? The necessary steps to create a MySQL database using PHP are: o Establish a **connection** to MySQL server from your PHP script. o If the connection is successful, write a SQL query to create a **database** and store it in a string variable. o **Execute** the query.	L1	CO2
JQuery		
What is jQuery? jQuery is a JavaScript library that makes it easy to create dynamic web pages. It helps in making web apps more efficient and interactive. It also helps to speed up the development process by providing a set of functions that can be used to manipulate data. It is a lightweight library that can be easily integrated into any website.	L1	CO2
How is jQuery different from other javascript frameworks? There are a few differences between jQuery and other libraries. The following makes jQuery lightweight and easier to understand, integrate, and use. jQuery is much smaller than other libraries. jQuery does not have any dependencies on other libraries or frameworks. (Like babel). jQuery is not as complex as other libraries. This makes it easier to use and understand.	L1	CO2
Is jQuery a JavaScript or JSON library file? jQuery is said to be a library of single JavaScript files which consists of DOM/CSS manipulations, event effects or animations, AJAX functions and various commonly used plugins.	L1	CO2

Does jQuery work for both HTML and XML documents? No. jQuery works only for HTML documents.	L1	CO2
List some Features of jQuery. jQuery includes the following features: DOM element choices utilizing the multi-browser open source selector engine Sizzle, a jQuery project spin-off. DOM manipulation is based on CSS selectors that employ element names and characteristics, such as id and class, as criteria to pick nodes in the DOM. Events Animations and effects.	L1	CO2
What is jQuery Mobile? Query Mobile is a JavaScript library that enables developers to create mobile-first applications. It is a lightweight framework that allows developers to create rich, touch-first interfaces that are optimized for touch devices.	L1	CO2
What is the $() function in the jQuery library? The $() function is used to access the properties of elements in the DOM (Document Object Model). $() is similar to javascript's selector functions, but it is more powerful and has more options. $() can be used to access attributes, classes, id, data-* attributes, and more.	L1	CO2
Explain $(document).ready() function? The $(document).ready() function is a jQuery extension that allows you to immediately run code when the document is ready. It's most commonly used to initialize a new page or to load scripts or styles into the document. However, it can also be used to load a script or style into the document at any time.	L2	CO2
What is the exact difference between the methods onload() and document.ready()? The **onload()** and **document.ready()** methods are used to load and render the HTML and JavaScript code that is needed to display the page. **The onload() method loads the HTML code using a pre-compiled object that is passed to the onload event handler**	L2	CO2

The document.ready() method loads the JavaScript code using a pre-compiled object that is passed to the document.ready event handler.		
Describe jQuery Connect in brief. Also, list its uses. JQuery connect is a JavaScript library that provides a declarative API for binding data to elements. It allows you to specify the data source, the element that should be bound to the data, and the callback function that will be invoked when the element is bound.	L2	CO2
What is the use of css() method in jQuery? The css() method is used to change the style property of the selected element.	L1	CO2
Which jquery method is used to hide selected elements? The hide() function in jQuery is used to try and hide the chosen element. **For Example -** Suppose we need to hide a division tag, that consists of id = "ib". Then the jQuery code will be - $("#ib").hide();	L1	CO2
What are events in jQuery? User actions on a webpage are called events and handling responses to those is called event handling. jQuery provides simple methods for attaching event handlers to selected elements. When an event occurs, the provided function is executed	L1	CO2
What is the significance of jQuery.length? jQuery.length property is used to **count the number of the elements** of the jQuery object.	L1	CO2

What is jQuery click event?
 	
jQuery click event happens when we click on an HTML element.
jQuery provides a method click() method that aids to trigger the click event.
For example, $("p").click() will trigger the click event whenever the elements with paragraph tag are clicked on a browser page.
 	
Syntax:
 	
$(selector).click(function(){
//code that runs when the click event is triggered
	L1	CO2

});		
What is the purpose of JQuery's delay() method? Can you use this for different types of browsers like (Internet Explorer)? The delay() method is used to set the delay between two events, such as a click or a change in state. The delay can be set to a number of different values, including milliseconds, seconds, and even hours. This can be useful when you want to wait for an event to occur before doing something else. --	L1	CO2
Can you explain about ajaxStart() functions? The **ajaxStart()** event is a global event that occurs when an Ajax request begins, assuming no other Ajax requests are presently active. The ajaxStart() event can also be used to cancel a previously -called Ajax callback or to start a new one.	L1	CO2
Can you explain about ajaxComplete() function? The **ajaxComplete()** is called regardless of whether the request is successful or fails, and a complete callback is returned, even for synchronous queries.	L1	CO2
Can you tell something about jQuery each() method? The each() method in jQuery allows us to loop through different datasets such as arrays or objects (even DOM objects). It can be used to loop through a number of DOM objects from the same selectors.	L1	CO2
Describe the benefits of jQuery Ajax techniques. With the aid of DOM and JavaScript, there is a great advantage of AJAX. Ajax can request and receive data from the server without requiring a page reload. jQuery Ajax methods are a powerful way to make your web applications more responsive. They enable you to take advantage of the power of Ajax by using JavaScript to make your web pages load faster and more efficiently.	L2	CO2
What is CDN? CDN is an acronym that stands for Content Delivery Network or Content Distribution Network. It is a big distributed system of servers spread throughout the internet in many data centres. It downloads content from servers at a greater bandwidth, resulting in speedier loading times. Several firms offer free public CDNs, including Google, Amazon, Microsoft, Yahoo, etc	L1	CO2
What is the difference between javascript and jquery?	L1	CO2

JavaScript is an interpreted language written in C and is a combination of ECMAScript and DOM whereas jQuery is a JavaScript library developed to run things faster and make things simplified for JavaScript. jQuery doesn't have the ECMAScript.		
What are the selectors in jQuery? How many types of selectors in jQuery? In order to work with any element on the web page, we would first need to find it. Selectors find the HTML elements in jQuery. Some of the most commonly used and basic selectors are: Name: Used to select all elements which match the given element Name. #ID: Used to select a single element which matches with the given ID .Class: Used to select all elements which match with the given Class. Universal (*): Used to select all elements available in a DOM. Multiple Elements E, F, G: Used to select the combined results of all the specified selectors E, F or G. Attribute Selector: Used to select elements based on their attribute value.	L1	CO2
Explain how CSS classes can be manipulated in HTML using jQuery. Query provides several methods to manipulate the CSS classes assigned to HTML elements. The most important methods are addClass(), removeClass() and toggleClass().	L2	CO2
JSON		
What is JSON? **JSON** stands for **JavaScript Object Notation** but it does not use **JavaScript** to perform operations, it just uses the **JavaScript** syntax. It is a light-weighted and language-independent format mainly used to transmit the data between the server and the web app.	L1	CO2

Explain the structure and format of JSON.
The **JSON** format follows the structure of the **JavaScript object**. It contains the **key-value** pairs in the form of strings that can be transmitted from server to web app and vice-versa. The values stored in **JSON** can be retrieved in the same way as the values of **JavaScript object** are retrieved.
`{`
`"key1": "value1",`
`"key2": "value2",`
`"key3": "value3"`
`}`
	L2	CO2

What is the reason for using JSON? **JSON** is a light weighted format that is used to transfer the data on the network. The main reason for using **JSON** is that it provides a very simple and easy way to communicate between the server and the web app by data transmission. It is used as an alternative for the **XML format**.	L1	CO2
What are the features of JSON? There are different features of JSON as listed below: • It is a light weight format that helps to optimize the performance of the web app. • It is independent of different programming languages. • It has a vast support from different programming languages. • The **JSON** format is very easy to understand. • It can represent the complex data structures.	L1	CO2
List different data types supported by JSON. **JSON** has a support for the following data-types: • Number • Boolean • String • Array • Object • Null	L1	CO2
Explain how to transform JSON text to a JavaScript object? One of the common uses of JSON is to collect JSON data from a web server as a file or HTTP request, and convert the JSON data to a JavaScript, ant then it avails the data in a web page.	L2	CO2
Mention what is the rule for JSON syntax rules? Give an example of JSON object? JSON syntax is a set of the JavaScript object notation syntax. • Data is in name/value pairs • Data is separated by comma • Curly brackets hold objects • Square bracket holds arrays	L1	CO2
Why must one use JSON over XML? • It is faster and lighter than XML as on the wire data format • XML data is typeless while JSON objects are typed • JSON types: Number, Array, Boolean, String	L1	CO2

• XML data are all string • Data is readily available as JSON object is in your JavaScript • Fetching values is as simple as reading from an object property in your JavaScript code		
Mention what is JSON-RPC and JSON Parser? • **JSON RPC:** It is a simple remote procedure call protocol same as XML-RPC although it uses the lightweight JSON format instead of XML • **JSON Parser:** JSON parser is used to parse the JSON data into objects to use its value. It can be parsed by javaScript, PHP and jQuery	L1	CO2
Mention what is the function used for encoding JSON in PHP? For encoding JSON in PHP, **json_encode () function** is used. This function returns the JSON representation of a value on success or false on failure.	L1	CO2
Explain how you can convert a string into a JSON Array? To convert a string into a JSON array, you need to create a JSONObject object for each of your objects, and add those to your JSON array.	L2	CO2
Mention what are the drawbacks of JSON? Drawbacks of json are • It does not contain type definition • It lacks some sort of DTD	L1	CO2
Mention what is the difference between JSON and JSONP? • **JSON:** JSON is a simple data format used for communication medium between different systems • **JSONP:** It is a methodology for using that format with cross domain ajax requests while not being affected by same origin policy issue.	L1	CO2
AJAX		
What is AJAX? AJAX stands for Asynchronous JavaScript and XML. It is a group of related technologies used to display data asynchronously. In other words, it sends and retrieves data without reloading the	L1	CO2

web page.		
What are the real web applications of AJAX currently running in the market? o Twitter o Facebook o Gmail o Youtube	L1	CO2
What are the security issues with AJAX? o AJAX source code is readable o Attackers can insert the script into the system	L1	CO2
What is the difference between synchronous and asynchronous requests? Synchronous request blocks the user until a response is retrieved whereas asynchronous doesn't block the user.	L1	CO2
What is the purpose of XMLHttpRequest? o It sends data in the background to the server. o It requests data from the server. o It receives data from the server. o It updates data without reloading the page.	L1	CO2
What are the important methods of XMLHttpRequest? o abort() - It is used to cancel the current request. o getAllResponseHeaders() - It returns the header details. o getResponseHeader() - It returns the specific header details. o open() - It is used to open the request. o -----send() - It is used to send the request. o setRequestHeader() - It adds request header.	L1	CO2
What are the types of open() method used for XMLHttpRequest? o open(method, URL) - It opens the request specifying get or post method and URL. o open(method, URL, async) - It is same as above but specifies asynchronous or not. o open(method, URL, async, username, password) - It is same as above but specifies the username and password.	L1	CO2
What are the types of send() method used for XMLHttpRequest? o send() - It sends get request o send(string) - It sends post request.	L1	CO2
What is JSON in AJAX? JSON stands for JavaScript Object Notation. In AJAX, it is used to exchange data between a browser and a server. It is easy to understand, and data exchange is faster than XML. It supports array, object, string, number, and values.	L1	CO2

What is JSON in AJAX? JSON stands for JavaScript Object Notation. In AJAX, it is used to exchange data between a browser and a server. It is easy to understand, and data exchange is faster than XML. It supports array, object, string, number, and values.	L1	CO2
What are the common AJAX frameworks? o Dojo Toolkit o YUI o Google Web Toolkit (GWT) o Spry o MooTools o Prototype	L1	CO2
How can you test the AJAX code? JUnit is the open source unit testing framework for client-side JavaScript. It is required to create test cases. The unit test case is a code which ensures that the program logic works as expected	L1	CO2