1. Lists, Links and Images

a) Write a_HTML program, to explain the working of lists.

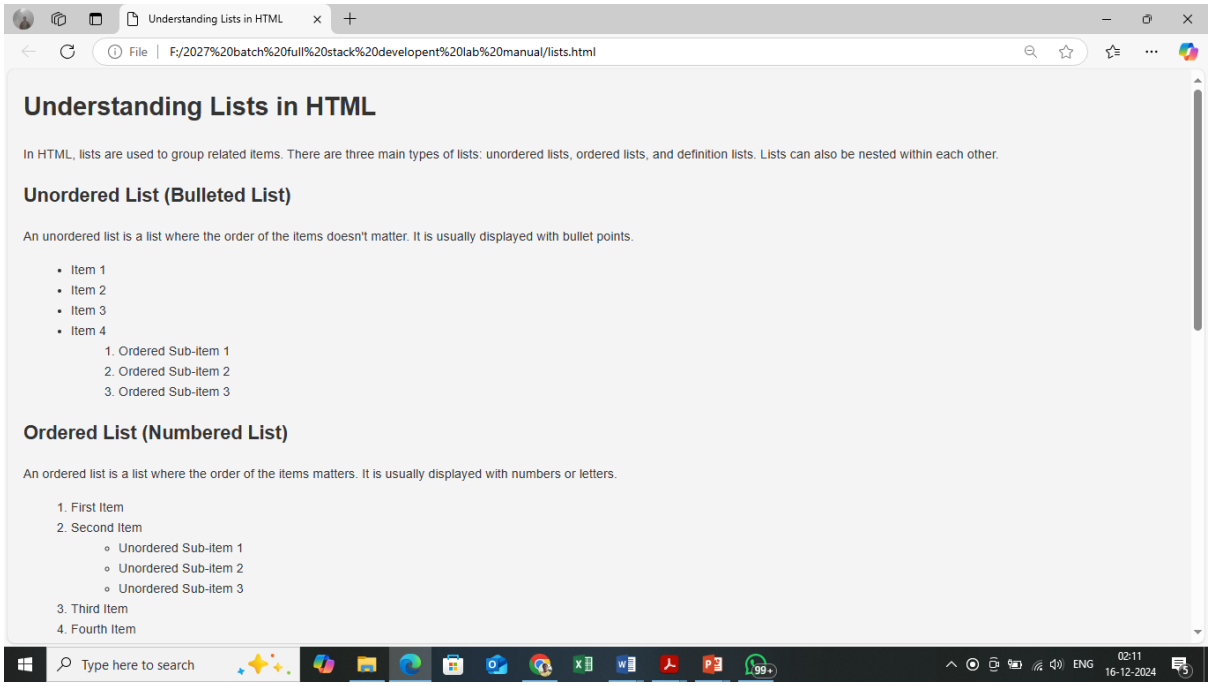
Note: It should have an ordered list, unordered list, nested definition lists. lists and ordered list in an unordered list and definition lists.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Understanding Lists in HTML</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
            color: #333;
            line-height: 1.6;
            margin: 20px;
        }
        h1, h2, h3 {
            color: #333;
        }
        ul, ol, dl {
            margin-left: 20px;
        }
        dt {
            font-weight: bold;
        }
        dd {
            margin-left: 20px;
        }
    </style>
</head>
<body>
```

```
<h1>Understanding Lists in HTML</h1>

<p>In HTML, lists are used to group related items. There are three main types of lists: unordered lists, ordered lists, and definition lists. Lists can also be nested within each other.</p>

<h2>Unordered List (Bulleted List)</h2>

<p>An unordered list is a list where the order of the items doesn't matter. It is usually displayed with bullet points.</p>

<ul>
    <li>Item 1</li>
    <li>Item 2</li>
    <li>Item 3</li>
    <li>Item 4
        <ol>
            <li>Ordered Sub-item 1</li>
            <li>Ordered Sub-item 2</li>
            <li>Ordered Sub-item 3</li>
        </ol>
    </li>
</ul>

<h2>Ordered List (Numbered List)</h2>

<p>An ordered list is a list where the order of the items matters. It is usually displayed with numbers or letters.</p>

<ol>
    <li>First Item</li>
    <li>Second Item
        <ul>
            <li>Unordered Sub-item 1</li>
            <li>Unordered Sub-item 2</li>
            <li>Unordered Sub-item 3</li>
        </ul>
    </li>
    <li>Third Item</li>
    <li>Fourth Item</li>
</ol>
```

```
    <h2>Definition List</h2>
    <p>A definition list is a list of terms and their corresponding definitions.</p>
    <dl>
        <dt>HTML</dt>
        <dd>HyperText Markup Language, the standard language for creating web pages.</dd>
        <dt>CSS</dt>
        <dd>Cascading Style Sheets, used to style HTML elements.</dd>
        <dt>JavaScript</dt>
        <dd>A programming language used to create dynamic and interactive effects within web browsers.</dd>
        <dt>Nested Definition List</dt>
        <dd>
            <dl>
                <dt>Term 1</dt>
                <dd>Definition for term 1</dd>
                <dt>Term 2</dt>
                <dd>Definition for term 2</dd>
            </dl>
        </dd>
    </dl>
    <h2>Combining Lists</h2>
    <p>Lists can be combined and nested to create complex structures. Here is an example:</p>
    <ul>
        <li>Item with nested lists
            <ul>
                <li>Sub-item in an unordered list
                    <ol>
                        <li>Ordered sub-item in an unordered list</li>
                        <li>Another ordered sub-item</li>
                    </ol>
                </li>
            </ul>
        </li>
```

```
        <li>Another item with nested definition list
            <dl>
                <dt>Term in a nested list</dt>
                <dd>Definition for the term in a nested list</dd>
            </dl>
        </li>
    </ul>
    <h2>Conclusion</h2>
    <p>HTML provides various ways to present data in a list format. Whether you use unordered lists for bullet points, ordered lists for numbered items, or definition lists for terms and definitions, lists help organize information clearly for users. Additionally, lists can be nested within each other to create more complex and organized structures.</p>
</body>
</html>
```



1.b Write a HTML program, to explain the working of hyperlinks using <a> tag and href, target Attributes.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Understanding Hyperlinks in HTML</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
            color: #333;
            line-height: 1.6;
            margin: 20px;
        }
        h1, h2 {
            color: #333;
        }
        p {
            margin-bottom: 20px;
        }
        a {
            color: #1a0dab;
            text-decoration: none;
        }
        a:hover {
            text-decoration: underline;
        }
    </style>
</head>
<body>
    <h1>Understanding Hyperlinks in HTML</h1>
```

In HTML, hyperlinks are created using the <code><a></code> (anchor) tag. The <code>href</code> attribute specifies the URL of the page the link goes to, and the <code>target</code> attribute specifies where to open the linked document.

<h2>Basic Hyperlink</h2>

A basic hyperlink is created by using the <code><a></code> tag with the <code>href</code> attribute.

Visit Example.com

In the above example, clicking the link will take you to <code>https://www.example.com</code>.

<h2>Open Link in a New Tab</h2>

To open the link in a new tab, use the <code>target="_blank"</code> attribute.

Visit Example.com in a New Tab

In the above example, clicking the link will open <code>https://www.example.com</code> in a new tab.

<h2>Open Link in the Same Frame</h2>

To open the link in the same frame (default behavior), use the <code>target="_self"</code> attribute.

Visit Example.com in the Same Frame

In the above example, clicking the link will open <code>https://www.example.com</code> in the same tab or frame.

<h2>Open Link in a Parent Frame</h2>

To open the link in the parent frame, use the <code>target="_parent"</code> attribute. This is useful when dealing with frames.

Visit Example.com in the Parent Frame

<h2>Open Link in the Full Body of the Window</h2>

To open the link in the full body of the window, use the <code>target="_top"</code> attribute. This is also useful when dealing with frames.

Visit Example.com in the Full Body of the Window

<h2>Relative Links</h2>

Links can also be relative, pointing to other pages within the same website.

Contact Us

In the above example, clicking the link will take you to the <code>contact.html</code> page within the same website.

<h2>Email Links</h2>

You can also create a link to send an email using the <code>mailto:</code> scheme.

Send an Email

In the above example, clicking the link will open the default email client to send an email to <code>example@example.com</code>.

<h2>Conclusion</h2>

Hyperlinks are a fundamental part of HTML, allowing users to navigate between different pages and resources. By using the <code>href</code> attribute, you can specify the destination of the link, and by using the <code>target</code> attribute, you can control where the link opens.

</body>

</html>

1. C) Create a HTML document that has your image and your friends image with a specific height and width. Also when clicked on the images it should navigate to their respective profiles.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Profile Links</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
            color: #333;
            text-align: center;
            margin: 20px;
        }
        h1 {
            color: #333;
        }
        .profile {
            display: inline-block;
            margin: 20px;
        }
        .profile img {
            width: 150px;
            height: 150px;
            border-radius: 50%;
            cursor: pointer;
            transition: transform 0.3s;
        }
        .profile img:hover {
            transform: scale(1.1);
        }   </style>
```

```
</head>
<body>
    <h1>Profile Links</h1>
    <div class="profile">
        <a href="https://www.example.com/my-profile" target="_blank">
            <img src="my-image.jpg" alt="My Profile Image">
        </a>
        <p>My Profile</p>
    </div>
    <div class="profile">
        <a href="https://www.example.com/friend-profile" target="_blank">
            <img src="friend-image.jpg" alt="Friend's Profile Image">
        </a>
        <p>Friend's Profile</p>
    </div>
</body>
</html>
```

1. D) Write a HTML program, in such a way that rather than placing large images on a page, the preferred technique is to use thumbnails by setting the height and width parameters to something like to 100*100 pixels. Each thumbnails image is also a link a full sized version of the image. Create a image gallery using this technique.

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial
scale=1.0">
   <title>Image Gallery</title>
   <style>
      body {
         font-family: Arial, sans-serif;
         background-color: #f4f4f4;
         color: #333;
         text-align: center;
         margin: 20px;
      }
      h1 {
         color: #333;
      }
      .gallery {
         display: flex;
         flex-wrap: wrap;
         justify-content: center;
      }
      .gallery-item {
         margin: 10px;
      }
      .gallery-item img {
         width: 100px;
         height: 100px;
         border-radius: 5px;
         cursor: pointer;
         transition: transform 0.3s;
      }
      .gallery-item img:hover {
         transform: scale(1.1);
      }
   </style>
```

```
</head>
<body>
    <h1>Image Gallery</h1>
    <div class="gallery">
        <div class="gallery-item">
            <a href="images/image1.jpg" target="_blank">
                <img src="images/thumbnails/image1.jpg" alt="Image 1">
            </a>
        </div>
        <div class="gallery-item">
            <a href="images/image2.jpg" target="_blank">
                <img src="images/thumbnails/image2.jpg" alt="Image 2">
            </a>
        </div>
        <div class="gallery-item">
            <a href="images/image3.jpg" target="_blank">
                <img src="images/thumbnails/image3.jpg" alt="Image 3">
            </a>
        </div>
        <div class="gallery-item">
            <a href="images/image4.jpg" target="_blank">
                <img src="images/thumbnails/image4.jpg" alt="Image 4">
            </a>
        </div>
        <!-- Add more images as needed -->
    </div>
</body>
</html>
```

2. HTML Tables. forms and frames

a. Write a HTML program, to explain the working of tables. (use tags: <table>, <tr>,<th>, <td> and attributes: border, rowspan, colspan)

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Understanding HTML Tables</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
            color: #333;
            margin: 20px;
        }
        h1 {
            color: #333;
        }
        table {
            width: 100%;
            border-collapse: collapse;
            margin-bottom: 20px;
        }
        table, th, td {
            border: 1px solid #333;
        }
        th, td {
            padding: 10px;
            text-align: left;
        }
        th {
            background-color: #f2f2f2;
        }
    </style>
</head>
```

```
<body>
    <h1>Understanding HTML Tables</h1>

    <p>In HTML, tables are created using the <code>&lt;table&gt;</code> tag. The table is structured with rows (<code>&lt;tr&gt;</code>) and cells, which can be either header cells (<code>&lt;th&gt;</code>) or data cells (<code>&lt;td&gt;</code>). Attributes like <code>border</code>, <code>rowspan</code>, and <code>colspan</code> can be used to enhance the table's appearance and structure.</p>

    <h2>Basic Table</h2>
    <table border="1">
        <tr>
            <th>Header 1</th>
            <th>Header 2</th>
            <th>Header 3</th>
        </tr>
        <tr>
            <td>Row 1, Cell 1</td>
            <td>Row 1, Cell 2</td>
            <td>Row 1, Cell 3</td>
        </tr>
        <tr>
            <td>Row 2, Cell 1</td>
            <td>Row 2, Cell 2</td>
            <td>Row 2, Cell 3</td>
        </tr>
    </table>

    <h2>Table with Rowspan</h2>
    <p>The <code>rowspan</code> attribute allows a cell to span multiple rows.</p>
    <table border="1">
        <tr>
            <th>Header 1</th>
```

```
            <th>Header 2</th>
            <th>Header 3</th>
        </tr>
        <tr>
            <td rowspan="2">Rowspan 2 Rows</td>
            <td>Row 1, Cell 2</td>
            <td>Row 1, Cell 3</td>
        </tr>
        <tr>
            <td>Row 2, Cell 2</td>
            <td>Row 2, Cell 3</td>
        </tr>
    </table>

    <h2>Table with Colspan</h2>
    <p>The <code>colspan</code> attribute allows a cell to span multiple columns.</p>
    <table border="1">
        <tr>
            <th>Header 1</th>
            <th>Header 2</th>
            <th>Header 3</th>
        </tr>
        <tr>
            <td>Row 1, Cell 1</td>
            <td colspan="2">Colspan 2 Columns</td>
        </tr>
        <tr>
            <td>Row 2, Cell 1</td>
            <td>Row 2, Cell 2</td>
            <td>Row 2, Cell 3</td>
        </tr>
    </table>

    <h2>Complex Table Example</h2>
    <p>This table combines both <code>rowspan</code> and <code>colspan</code> attributes.</p>
```

```
    <table border="1">
        <tr>
            <th>Header 1</th>
            <th>Header 2</th>
            <th>Header 3</th>
            <th>Header 4</th>
        </tr>
        <tr>
            <td rowspan="2">Rowspan 2 Rows</td>
            <td>Row 1, Cell 2</td>
            <td colspan="2">Colspan 2 Columns</td>
        </tr>
        <tr>
            <td>Row 2, Cell 2</td>
            <td>Row 2, Cell 3</td>
            <td>Row 2, Cell 4</td>
        </tr>
        <tr>
            <td>Row 3, Cell 1</td>
            <td colspan="3">Colspan 3 Columns</td>
        </tr>
    </table>

</body>
</html>
```

b. Write a HTML program, to explain the working of tables.by preparing a timetable. (Note: use <caption> tag to set the caption to the table & also use cell spacing, cell padding, border, rowspan, colspan etc.)

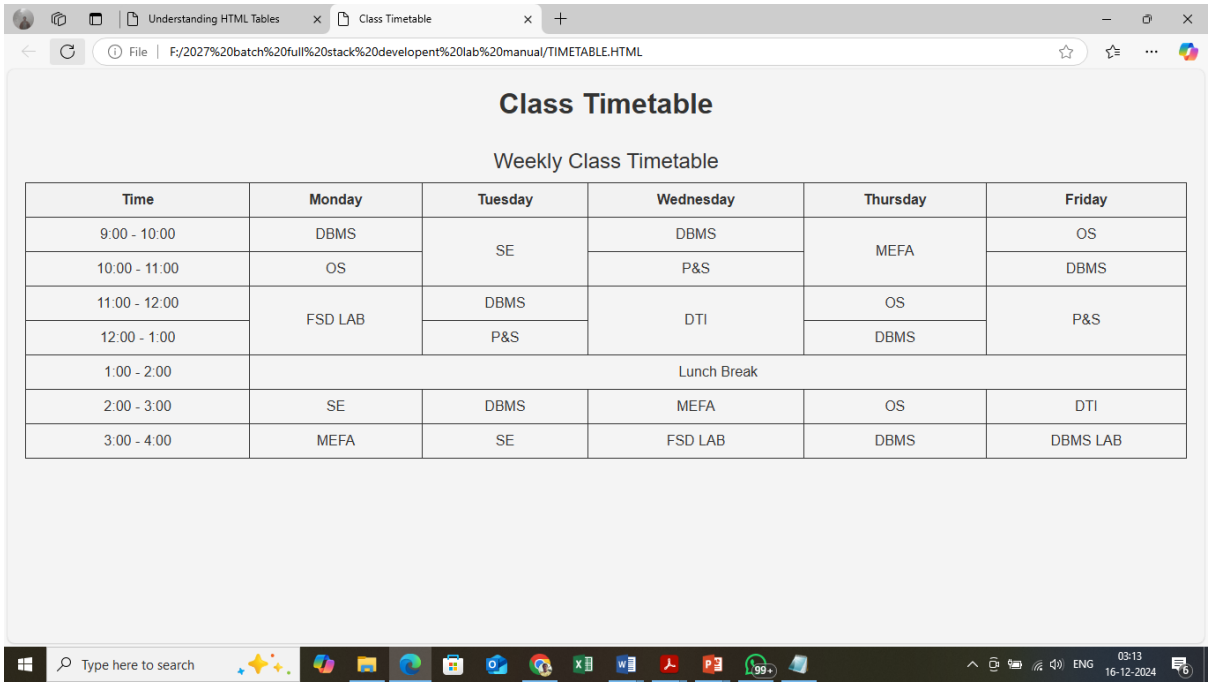
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
```

```
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Class Timetable</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
            color: #333;
            margin: 20px;
            text-align: center;
        }
        h1 {
            color: #333;
        }
        table {
            width: 100%;
            border-collapse: collapse;
            margin-bottom: 20px;
        }
        table, th, td {
            border: 1px solid #333;
        }
        th, td {
            padding: 10px;
            text-align: center;
        }
        th {
```

```
            background-color: #f2f2f2;
        }
        caption {
            caption-side: top;
            font-size: 1.5em;
            margin: 10px;
        }
    </style>
</head>
<body>
    <h1>Class Timetable</h1>

    <table cellspacing="0" cellpadding="10">
        <caption>Weekly                    Class
Timetable</caption>
        <tr>
            <th>Time</th>
            <th>Monday</th>
            <th>Tuesday</th>
            <th>Wednesday</th>
            <th>Thursday</th>
            <th>Friday</th>
        </tr>
        <tr>
            <td>9:00 - 10:00</td>
            <td>DBMS</td>
            <td rowspan="2">SE</td>
            <td>DBMS</td>
```

```
    <td rowspan="2">MEFA</td>
    <td>OS</td>
</tr>
<tr>
    <td>10:00 - 11:00</td>
    <td>OS</td>
    <td>P&S</td>
    <td>DBMS</td>
</tr>
<tr>
    <td>11:00 - 12:00</td>
    <td rowspan="2">FSD LAB</td>
    <td>DBMS</td>
    <td rowspan="2">DTI</td>
    <td>OS</td>
    <td rowspan="2">P&S</td>
</tr>
<tr>
    <td>12:00 - 1:00</td>
    <td>P&S</td>
    <td>DBMS</td>
</tr>
<tr>
    <td>1:00 - 2:00</td>
    <td colspan="5">Lunch Break</td>
</tr>
<tr>
    <td>2:00 - 3:00</td>
```

```
            <td>SE</td>
            <td>DBMS</td>
            <td>MEFA</td>
            <td>OS</td>
            <td>DTI</td>
        </tr>
        <tr>
            <td>3:00 - 4:00</td>
            <td>MEFA</td>
            <td>SE</td>
            <td>FSD LAB</td>
            <td>DBMS</td>
            <td>DBMS LAB</td>
        </tr>
    </table>

</body>
</html>
```



1. C) Write a HTML program, to explain the working of forms, by designing registration form.

Note: include text field, password field, number field, date of birth field, checkboxes, radio buttons, list boxes using <select> ,<option> tags, <text area> and two buttons submit and reset. Use tables to provide better views.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Registration Form</title>
    <style>
```

```
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
            color: #333;
            margin: 20px;
        }
        h1 {
            text-align: center;
            color: #333;
        }
        table {
            margin: 0 auto;
            border-collapse: collapse;
            width: 50%;
        }
        table, th, td {
            border: 1px solid #ccc;
        }
        th, td {
            padding: 10px;
            text-align: left;
        }
        th {
            background-color: #f2f2f2;
        }
        input[type="text"],
input[type="password"],
```

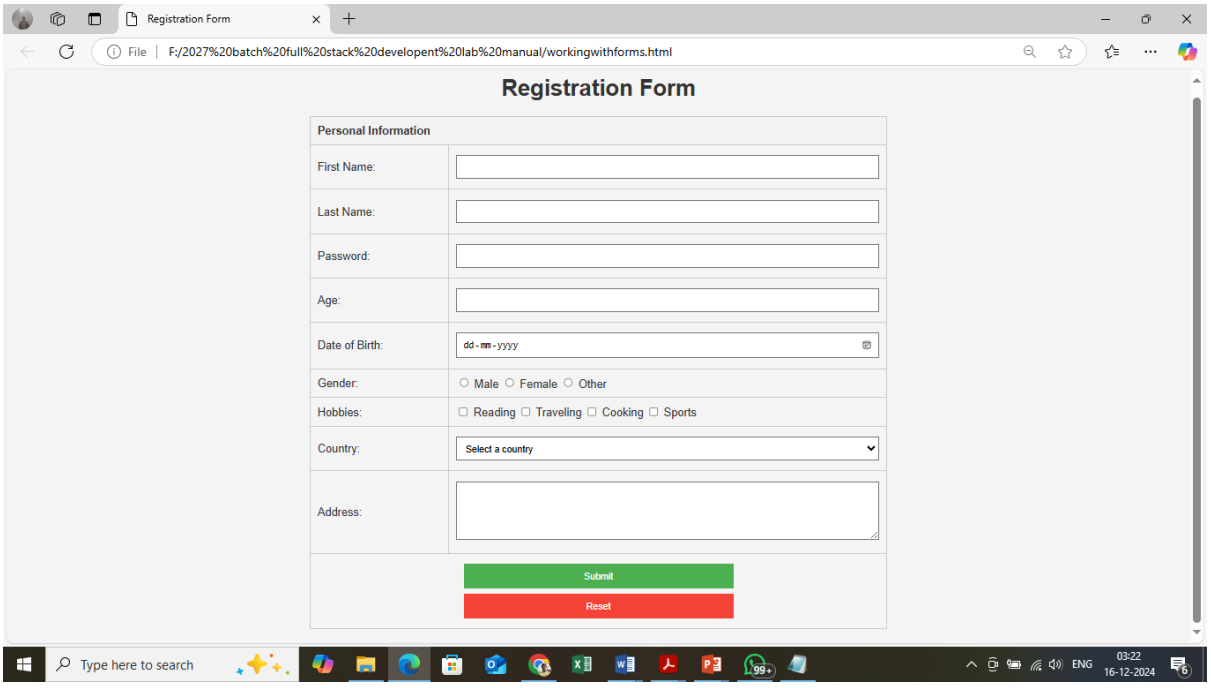
```
input[type="number"],    input[type="date"],
select, textarea {
            width: 100%;
            padding: 8px;
            margin: 4px 0;
            box-sizing: border-box;
        }
        input[type="submit"],
input[type="reset"] {
            width: 48%;
            padding: 10px;
            margin: 4px 1%;
            background-color: #4CAF50;
            color: white;
            border: none;
            cursor: pointer;
        }
        input[type="reset"] {
            background-color: #f44336;
        }
        input[type="submit"]:hover,
input[type="reset"]:hover {
            opacity: 0.9;
        }
    </style>
</head>
<body>
```

```
    <h1>Registration Form</h1>
    <form action="#" method="post">
        <table>
            <tr>
                <th colspan="2">Personal Information</th>
            </tr>
            <tr>
                <td>First Name:</td>
                <td><input type="text" name="firstname" required></td>
            </tr>
            <tr>
                <td>Last Name:</td>
                <td><input type="text" name="lastname" required></td>
            </tr>
            <tr>
                <td>Password:</td>
                <td><input type="password" name="password" required></td>
            </tr>
            <tr>
                <td>Age:</td>
                <td><input type="number" name="age" required></td>
            </tr>
            <tr>
```

```
            <td>Date of Birth:</td>
            <td><input type="date" name="dob" required></td>
        </tr>
        <tr>
            <td>Gender:</td>
            <td>
                <input type="radio" name="gender" value="male" required> Male
                <input type="radio" name="gender" value="female" required> Female
                <input type="radio" name="gender" value="other" required> Other
            </td>
        </tr>
        <tr>
            <td>Hobbies:</td>
            <td>
                <input type="checkbox" name="hobby1" value="Reading"> Reading
                <input type="checkbox" name="hobby2" value="Traveling"> Traveling
                <input type="checkbox" name="hobby3" value="Cooking"> Cooking
```

```
                <input type="checkbox" name="hobby4" value="Sports"> Sports
            </td>
        </tr>
        <tr>
            <td>Country:</td>
            <td>
                <select name="country" required>
                    <option value="">Select a country</option>
                    <option value="USA">USA</option>
                    <option value="Canada">Canada</option>
                    <option value="UK">UK</option>
                    <option value="Australia">Australia</option>
                    <option value="India">India</option>
                </select>
            </td>
        </tr>
        <tr>
            <td>Address:</td>
            <td><textarea name="address" rows="4" required></textarea></td>
```

```
            </tr>
            <tr>
                <td colspan="2" style="text-align: center;">
                    <input type="submit" value="Submit">
                    <input type="reset" value="Reset">
                </td>
            </tr>
        </table>
    </form>

</body>
</html>
```



2. D) Write a HTML program, to Explain the working of frames, such that page is to be divided into 3 parts on either direction.

(Note: first frame image, second frame paragraph, third frame hyperlink. And also make sure of using no frame attribute such that frames to be fixed).

1J

3. HTML 5 and Cascading Style Sheets, Types of CSS

a) Write a HTML Program that makes use of <article>, <aside>, <figure>, <figcaption>, <footer>, <header>, <main>, <nav>, <section>, , , tags.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>HTML5 Semantic Tags Example</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 0;
            padding: 0;
        }
        header, footer {
            background-color: #333;
            color: white;
            padding: 10px;
            text-align: center;
        }
```

```
nav {
    background-color: #f4f4f4;
    padding: 10px;
    text-align: center;
}
main {
    margin: 20px;
}
section {
    background-color: #e2e2e2;
    padding: 15px;
    margin-bottom: 20px;
}
article {
    background-color: #f9f9f9;
    padding: 15px;
    margin: 10px 0;
}
aside {
    background-color: #e9e9e9;
    padding: 10px;
    margin-top: 10px;
}
figure {
    display: inline-block;
    margin: 10px;
}
figcaption {
```

```
            font-size: 0.9em;
            text-align: center;
        }
        .content {
            display: flex;
            justify-content: space-between;
        }
    </style>
</head>
<body>

<header>
    <h1>Welcome to My Website</h1>
    <p>Your one-stop destination for information</p>
</header>

<nav>
    <ul>
        <li><a href="#home">Home</a></li>
        <li><a href="#about">About</a></li>
        <li><a href="#services">Services</a></li>
        <li><a href="#contact">Contact</a></li>
    </ul>
</nav>
```

```
<main>
  <section>
    <h2>Introduction</h2>
    <p>This is the main section of the page where the content will be displayed.</p>
  </section>

  <div class="content">
    <article>
      <h2>Article 1: Exploring HTML5</h2>
      <p>HTML5 is the latest version of HTML and includes many new features and improvements...</p>
    </article>

    <article>
      <h2>Article 2: Understanding CSS3</h2>
      <p>CSS3 is the latest evolution of the Cascading Style Sheets language...</p>
    </article>
  </div>

  <aside>
    <h3>Related Resources</h3>
    <p>Check out these resources for more information on web development:</p>
```

```
        <ul>
            <li><a
href="https://developer.mozilla.org/en-
US/docs/Web/HTML">MDN Web
Docs</a></li>
            <li><a
href="https://www.w3schools.com/">W3Sc
hools</a></li>
            <li><a href="https://www.css-
tricks.com/">CSS-Tricks</a></li>
        </ul>
    </aside>

    <figure>
        <img
src="https://via.placeholder.com/300"
alt="HTML5 Logo">
        <figcaption>HTML5
Logo</figcaption>
    </figure>
</main>

<footer>
    <p>&copy; 2024 My Website. All Rights
Reserved.</p>
</footer>

</body>
```

</html>

3.b) Write a HTML program to embed audio and video into HTML web page.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Embedding Audio and Video</title>
</head>
<body>

    <h1>Embedding Audio and Video into HTML</h1>

    <!-- Audio Section -->
    <section>
        <h2>Audio Example</h2>
        <p>Click the play button to listen to the audio file.</p>
```

```
        <audio controls>
            <source src="https://www.soundhelix.com/examples/mp3/SoundHelix-Song-1.mp3" type="audio/mp3">
            Your browser does not support the audio element.
        </audio>
    </section>

    <!-- Video Section -->
    <section>
        <h2>Video Example</h2>
        <p>Click the play button to watch the video.</p>

        <video width="640" height="360" controls>
            <source src="https://www.w3schools.com/html/movie.mp4" type="video/mp4">
            <source src="https://www.w3schools.com/html/movie.ogg" type="video/ogg">
```

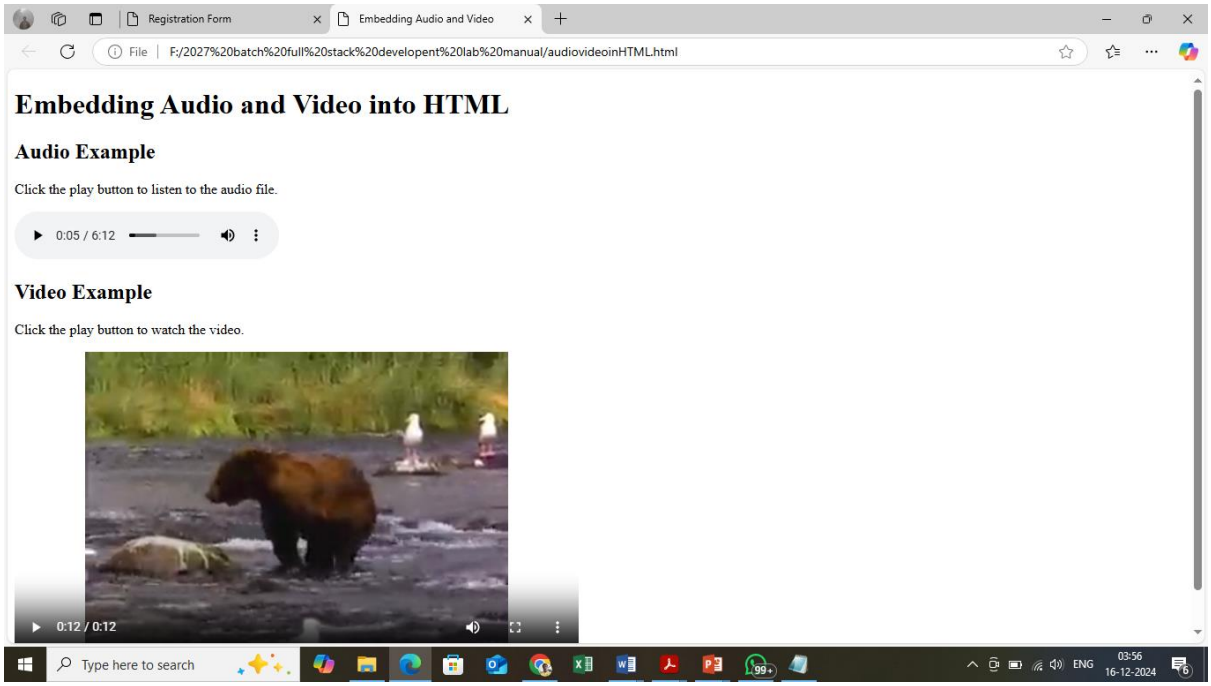
Your browser does not support the video element.

</video>

</section>

</body>

</html>



3.C) Write a program to apply different types(or levels of styles or style specification formats) – inline, internal, external styles to HTML elements(identify selector, property and value).