

FULL STACK DEVELOPMENT-1

Experiment-1

Aim:

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 lists and ordered list in an unordered list and definition lists.

Source Code:

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

  <h1>HTML Lists Demonstration</h1>

  <h2>1. Ordered List</h2>
  <p>An ordered list is a list where each item is numbered:</p>
  <ol>
    <li>First item</li>
    <li>Second item</li>
    <li>Third item</li>
  </ol>

  <h2>2. Unordered List</h2>
  <p>An unordered list is a list where each item is marked with a bullet point:</p>
  <ul>
    <li>Item A</li>
    <li>Item B</li>
    <li>Item C</li>
  </ul>

  <h2>3. Nested Lists</h2>
  <p>A nested list is a list inside another list:</p>
  <ul>
    <li>Main item 1
      <ul>
        <li>Subitem 1a</li>
        <li>Subitem 1b</li>
```

```
        </ul>
    </li>
    <li>Main item 2
        <ol>
            <li>Subitem 2a</li>
            <li>Subitem 2b</li>
        </ol>
    </li>
</ul>
```

<h2>4. Ordered List in an Unordered List</h2>

<p>An ordered list inside an unordered list:</p>

```
<ul>
    <li>Unordered item 1
        <ol>
            <li>Ordered item 1.1</li>
            <li>Ordered item 1.2</li>
        </ol>
    </li>
    <li>Unordered item 2
        <ol>
            <li>Ordered item 2.1</li>
            <li>Ordered item 2.2</li>
        </ol>
    </li>
</ul>
```

<h2>5. Definition List</h2>

<p>A definition list is used to define terms and descriptions:</p>

```
<dl>
    <dt>HTML</dt>
    <dd>HyperText Markup Language used to create webpages.</dd>
    <dt>CSS</dt>
    <dd>Cascading Style Sheets used for styling webpages.</dd>
    <dt>JavaScript</dt>
    <dd>Programming language used to create interactive effects on webpages.</dd>
</dl>
```

```
</body>
```

```
</html>
```

Output:-

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

Source Code:

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

  <h1>HTML Hyperlinks Example</h1>

  <h2>1. Basic Hyperlink</h2>
  <p>This is a basic hyperlink to an external webpage:</p>
  <a href="https://www.example.com">Visit Example Website</a>

  <h2>2. Hyperlink with Target Attribute (Open in New Tab)</h2>
  <p>Clicking this link will open the page in a new tab:</p>
  <a href="https://www.example.com" target="_blank">Visit Example Website (New Tab)</a>

  <h2>3. Hyperlink to an Anchor within the Same Page</h2>
  <p>This link will jump to a section further down the page:</p>
  <a href="#section2">Go to Section 2</a>

  <h2>4. Hyperlink to a Specific Section on Another Page</h2>
  <p>This link will navigate to a specific section (if the page supports it):</p>
  <a href="https://www.example.com#section">Visit Example Website - Section</a>

  <h2>5. Hyperlink to Email</h2>
  <p>Clicking this link will open your email client with a new email to the specified address:</p>
  <a href="mailto:someone@example.com">Send an Email to Someone</a>

  <h2 id="section2">Section 2: Hyperlink to Anchor within Same Page</h2>
  <p>This is the section you jumped to when you clicked the link above.</p>

</body>
</html>
```

Output:-

c. Create a HTML document that has your image and your friend's image with a specific height and width. Also when clicked on the images it should navigate to their respective profiles.

Source Code:

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

  <h1>Image Links to Profiles</h1>

  <h2>My Profile</h2>
  <p>Click on my image to visit my profile:</p>
  <a href="https://www.example.com/myprofile" target="_blank">
    
  </a>

  <h2>My Friend's Profile</h2>
  <p>Click on my friend's image to visit their profile:</p>
  <a href="https://www.example.com/friendsprofile" target="_blank">
    
  </a>

</body>
</html>
```

Output:-

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 thumbnail image is also a link to a full sized version of the image. Create an image gallery using this technique

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Image Gallery with Thumbnails</title>
  <style>
    /* Style for the gallery */
    .gallery {
      display: flex;
      flex-wrap: wrap;
    }

    .gallery a {
      margin: 10px;
      border: 2px solid #ccc;
      padding: 5px;
    }

    .gallery img {
      width: 100px;
      height: 100px;
      transition: transform 0.3s ease;
    }

    .gallery img:hover {
      transform: scale(1.1);
    }
  </style>
</head>
<body>

  <h1>Image Gallery</h1>
  <p>Click on any thumbnail to view the full-size image.</p>

  <div class="gallery">
    <a href="fullsize1.jpg" target="_blank">
      
    </a>
  </div>
</body>
</html>
```

```

</a>
<a href="fullsize2.jpg" target="_blank">
  
</a>
<a href="fullsize3.jpg" target="_blank">
  
</a>
<a href="fullsize4.jpg" target="_blank">
  
</a>
<a href="fullsize5.jpg" target="_blank">
  
</a>
</div>

</body>
</html>

```

Output:-

Experiment-2

Aim:

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)

Source Code:

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML Table Example</title>
  <style>
    table {
      width: 100%;
      border-collapse: collapse; /* Ensures borders are collapsed into one */
    }
    th, td {
      border: 1px solid black;
      padding: 10px;
      text-align: center;
    }
  </style>

```

```
</head>
<body>
  <h1>HTML Table Example</h1>

  <table border="1">
    <caption><strong>Student Information</strong></caption>
    <tr>
      <th>Roll No</th>
      <th>Name</th>
      <th>Subject</th>
      <th>Marks</th>
    </tr>
    <tr>
      <td>101</td>
      <td>John</td>
      <td>Math</td>
      <td>85</td>
    </tr>
    <tr>
      <td>102</td>
      <td>Alice</td>
      <td>English</td>
      <td>92</td>
    </tr>
    <tr>
      <td>103</td>
      <td>Bob</td>
      <td colspan="2">Science</td>
      <td>78</td>
    </tr>
    <tr>
      <td rowspan="2">104</td>
      <td>Charlie</td>
      <td>History</td>
      <td>88</td>
    </tr>
    <tr>
      <td>Dave</td>
      <td>Geography</td>
      <td>91</td>
    </tr>
  </table>

</body>
```

</html>

Output:

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

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Timetable Example</title>
  <style>
    table {
      width: 80%;
      margin: 20px auto;
      border-collapse: collapse; /* Ensures borders are collapsed into one */
    }
    th, td {
      border: 1px solid #333;
      padding: 15px;
      text-align: center;
    }
    caption {
      font-size: 24px;
      font-weight: bold;
      margin-bottom: 10px;
    }
  </style>
</head>
<body>
  <h1>Weekly Timetable</h1>

  <table border="1" cellspacing="5" cellpadding="10">
    <caption>School Weekly Timetable</caption>
    <tr>
      <th>Time</th>
      <th>Monday</th>
      <th>Tuesday</th>
      <th>Wednesday</th>
      <th>Thursday</th>
      <th>Friday</th>
    </tr>
```



```

<tr>
  <td>8:00 - 9:00</td>
  <td>Maths</td>
  <td>English</td>
  <td>Science</td>
  <td>History</td>
  <td>Geography</td>
</tr>
<tr>
  <td>9:00 - 10:00</td>
  <td>Physics</td>
  <td>Maths</td>
  <td>English</td>
  <td>Biology</td>
  <td rowspan="2">Computer Science</td>
</tr>
<tr>
  <td>10:00 - 11:00</td>
  <td>Chemistry</td>
  <td>History</td>
  <td>Maths</td>
  <td>English</td>
</tr>
<tr>
  <td>11:00 - 12:00</td>
  <td colspan="2">Sports</td>
  <td>Music</td>
  <td>Art</td>
  <td>Drama</td>
</tr>
<tr>
  <td>12:00 - 1:00</td>
  <td>Geography</td>
  <td>Physics</td>
  <td>Maths</td>
  <td>Computer Science</td>
  <td>French</td>
</tr>
</table>

```

</body>

</html>

Output:

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 & tags, and two buttons ie: submit and reset. Use tables to provide a better view).

Source Code:

```
<!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>
    table {
      width: 50%;
      margin: 20px auto;
      border-collapse: collapse;
    }
    td, th {
      padding: 10px;
      text-align: left;
      border: 1px solid #ccc;
    }
    h2 {
      text-align: center;
    }
    input[type="text"], input[type="password"], input[type="number"], input[type="date"], select {
      width: 100%;
      padding: 8px;
      margin: 5px 0;
      border: 1px solid #ccc;
    }
    input[type="submit"], input[type="reset"] {
      width: 48%;
      padding: 10px;
      margin: 10px 1%;
      background-color: #4CAF50;
      color: white;
      border: none;
      cursor: pointer;
    }
    input[type="submit"]:hover, input[type="reset"]:hover {
```

```

        background-color: #45a049;
    }
</style>
</head>
<body>
    <h2>Registration Form</h2>

    <form action="#" method="POST">
        <table>
            <tr>
                <th colspan="2">Personal Information</th>
            </tr>
            <tr>
                <td>Full Name:</td>
                <td><input type="text" name="fullname" required></td>
            </tr>
            <tr>
                <td>Email:</td>
                <td><input type="text" name="email" required></td>
            </tr>
            <tr>
                <td>Password:</td>
                <td><input type="password" name="password" required></td>
            </tr>
            <tr>
                <td>Phone Number:</td>
                <td><input type="number" name="phone" required></td>
            </tr>
            <tr>
                <td>Date of Birth:</td>
                <td><input type="date" name="dob" required></td>
            </tr>

            <tr>
                <th colspan="2">Gender</th>
            </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>
        </table>
    </form>

```

```

<tr>
  <th colspan="2">Preferences</th>
</tr>
<tr>
  <td>Hobbies:</td>
  <td>
    <input type="checkbox" name="hobbies" value="Reading"> Reading
    <input type="checkbox" name="hobbies" value="Traveling"> Traveling
    <input type="checkbox" name="hobbies" value="Music"> Music
  </td>
</tr>
<tr>
  <td>Country:</td>
  <td>
    <select name="country">
      <option value="USA">USA</option>
      <option value="Canada">Canada</option>
      <option value="UK">UK</option>
      <option value="India">India</option>
      <option value="Australia">Australia</option>
    </select>
  </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>

```

Output:

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).

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Frames Example in Single Page</title>
  <style>
    body {
      font-family: Arial, sans-serif;
    }

    /* Layout of the page */
    .container {
      display: flex;
      height: 100vh;
    }

    /* Each frame will occupy 1/3 of the page */
    .frame {
      flex: 1;
      border: 1px solid #ccc;
      padding: 10px;
    }

    iframe {
      width: 100%;
      height: 100%;
      border: none;
    }

    /* For when no frames are supported */
    .noframes {
      display: none;
    }

    @media (max-width: 768px) {
      .container {
        flex-direction: column;
      }
    }
  </style>
</head>
<body>
```

```

<h1 style="text-align: center;">HTML Frames Example in a Single Page</h1>

<!-- Main container for frames -->
<div class="container">
  <!-- First frame: Image -->
  <div class="frame">
    <iframe src="image.html" title="Image Frame"></iframe>
  </div>

  <!-- Second frame: Paragraph -->
  <div class="frame">
    <iframe src="paragraph.html" title="Paragraph Frame"></iframe>
  </div>

  <!-- Third frame: Hyperlink -->
  <div class="frame">
    <iframe src="link.html" title="Link Frame"></iframe>
  </div>
</div>

<div class="noframes">
  <p>Your browser does not support iframes. You can view the content below:</p>
  <ul>
    <li><a href="image.html" target="_blank">Image</a></li>
    <li><a href="paragraph.html" target="_blank">Paragraph</a></li>
    <li><a href="link.html" target="_blank">Link</a></li>
  </ul>
</div>

</body>
</html>

```

Output:

Experiment-3

Aim:

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>, <div>, tags.

Source Code:

```

<!DOCTYPE html>
<html lang="en">

```

```
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML Tags Example</title>
  <style>
    body {
      font-family: Arial, sans-serif;
    }
    header, footer {
      background-color: #f4f4f4;
      padding: 10px;
      text-align: center;
    }
    nav {
      background-color: #333;
      color: white;
      padding: 10px;
    }
    nav a {
      color: white;
      margin: 0 15px;
      text-decoration: none;
    }
    main {
      display: flex;
      justify-content: space-between;
      padding: 20px;
    }
    article, aside, section {
      border: 1px solid #ddd;
      padding: 15px;
      margin: 10px;
      width: 30%;
    }
    figure {
      text-align: center;
    }
    figcaption {
      font-style: italic;
    }
  </style>
</head>
```

```
</style>
</head>

<body>

  <header>
    <h1>Welcome to My Website</h1>
    <p>Your go-to place for awesome articles!</p>
  </header>

  <nav>
    <a href="#home">Home</a>
    <a href="#about">About</a>
    <a href="#contact">Contact</a>
  </nav>

  <main>
    <article>
      <header>
        <h2>Understanding HTML5 Semantic Tags</h2>
        <p>By Jane Doe | February 21, 2025</p>
      </header>
      <section>
        <h3>Introduction</h3>
        <p>HTML5 introduced several semantic tags that help structure content meaningfully.
These tags make web content more accessible and easier to understand by both users and search
engines.</p>
      </section>
      <section>
        <h3>Benefits of Using Semantic HTML Tags</h3>
        <p>Using semantic tags like <code>&lt;header&gt;</code>,
<code>&lt;footer&gt;</code>, and <code>&lt;article&gt;</code> provides clarity about the
content's structure, improving SEO and accessibility.</p>
      </section>
    </article>

    <aside>
      <h3>Related Resources</h3>
      <p>If you're new to web development, check out these resources:</p>
      <ul>
```



```

        <li><a href="#">HTML5 for Beginners</a></li>
        <li><a href="#">CSS Basics</a></li>
        <li><a href="#">JavaScript Introduction</a></li>
    </ul>
</aside>

<section>
    <header>
        <h2>Featured Image</h2>
    </header>
    <figure>
        
        <figcaption>This is an example of a featured image with a caption.</figcaption>
    </figure>
</section>
</main>

<footer>
    <p>&copy; 2025 My Website. All Rights Reserved.</p>
</footer>

</body>

</html>

```

Output:

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

Source Code:

```

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Audio and Video Embedding Example</title>
</head>

<body>

```

```

<h1>Embed Audio and Video</h1>

<!-- Audio Embed -->
<section>
  <h2>Audio Example</h2>
  <p>Click the play button to listen to the audio:</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 Embed -->
<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/mov_bbb.mp4" type="video/mp4">
    Your browser does not support the video element.
  </video>
</section>

</body>

</html>

```

Output:

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).

Source Code:

```

<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">

```

```
<title>Styles Example: Inline, Internal, External</title>
```

```
<!-- Internal Style (within the head section) -->
```

```
<style>
```

```
  /* Internal style */
```

```
  h1 {
```

```
    color: blue; /* Property: color, Value: blue */
```

```
    text-align: center; /* Property: text-align, Value: center */
```

```
  }
```

```
  .intro {
```

```
    font-size: 18px; /* Property: font-size, Value: 18px */
```

```
    color: green; /* Property: color, Value: green */
```

```
  }
```

```
  p {
```

```
    line-height: 1.6; /* Property: line-height, Value: 1.6 */
```

```
    font-family: Arial, sans-serif; /* Property: font-family, Value: Arial, sans-serif */
```

```
  }
```

```
  .highlight {
```

```
    background-color: yellow; /* Property: background-color, Value: yellow */
```

```
    font-weight: bold; /* Property: font-weight, Value: bold */
```

```
  }
```

```
</style>
```

```
<!-- External Style (via link to external stylesheet) -->
```

```
<link rel="stylesheet" href="styles.css">
```

```
</head>
```

```
<body>
```

```
<h1 style="color: red; text-decoration: underline;">Inline Styled Header</h1>
```

```
<p style="font-size: 20px; font-family: 'Times New Roman', serif;">This paragraph has inline  
styles applied directly to it.</p>
```

```
<div class="intro">
```

```
<p>This paragraph uses an internal class to style it.</p>
```

</div>

<p class="highlight">This paragraph uses an internal style with a specific class applied to it.</p>

<h2>External Styles</h2>

<p>This is an example of external styling. It is linked from the "styles.css" file.</p>

</body>

</html>

Output:

Experiment-4:

Aim:

4. Selector forms a. Write a program to apply different types of selector forms

i. Simple selector (element, id, class, group, universal)

ii. Combinator selector (descendant, child, adjacent sibling, general sibling)

iii. Pseudo-class selector iv. Pseudo-element selector v. Attribute selector

Source Code:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>CSS Selector Types</title>
```

```
<style>
```

```
  /* Simple Selectors */
```

```
  /* Element selector */
```

```
  h1 {
```

```
    color: green; /* Applies to all h1 elements */
```

```
  }
```

```
  /* ID selector */
```

```
  #unique {
```

```
    color: blue; /* Applies to element with id="unique" */
```

```
  }
```

```
  /* Class selector */
```

```
  .highlight {
```

```

    background-color: yellow; /* Applies to elements with class="highlight" */
    font-weight: bold;
}

/* Grouping selector (multiple elements) */
h2, p {
    font-family: Arial, sans-serif; /* Applies to all h2 and p elements */
}

/* Universal selector */
* {
    margin: 0; /* Resets margin for all elements */
    padding: 0; /* Resets padding for all elements */
}

/* Combinator Selectors */
/* Descendant selector */
div p {
    color: red; /* Applies to all p elements inside a div */
}

/* Child selector */
div > p {
    color: orange; /* Applies to p elements that are direct children of div */
}

/* Adjacent sibling selector */
h2 + p {
    font-style: italic; /* Applies to the first p element immediately following an h2 */
}

/* General sibling selector */
h2 ~ p {
    text-decoration: underline; /* Applies to all p elements that are siblings of h2 */
}

/* Pseudo-Class Selectors */
a:hover {
    color: red; /* Applies when the user hovers over the link */
}

p:first-child {
    color: purple; /* Applies to the first p element within its parent */
}

```

```

/* Pseudo-Element Selectors */
p::first-letter {
    font-size: 2em; /* Applies to the first letter of every p element */
    font-weight: bold;
}

p::after {
    content: " - Read More"; /* Adds content after each p element */
    font-style: italic;
}

/* Attribute Selectors */
a[href^="https"] {
    color: green; /* Applies to links with href attribute starting with "https" */
}

a[href$=".pdf"] {
    color: blue; /* Applies to links with href attribute ending with ".pdf" */
}

a[href*="example"] {
    color: orange; /* Applies to links containing the word "example" in their href */
}
</style>
</head>

<body>

<h1>CSS Selectors Demonstration</h1>

<p>This paragraph is styled using simple element selector.</p>

<p id="unique">This paragraph is styled using the ID selector (unique).</p>

<p class="highlight">This paragraph is styled using the class selector (highlight).</p>

<h2>This is a Heading 2</h2>
<p>This paragraph follows the heading and is styled using the adjacent sibling selector.</p>
<p>This is another paragraph styled using the general sibling selector, which is a sibling of
the previous h2.</p>

<div>

```

<p>This paragraph is a descendant of the div element and is styled using the descendant selector.</p>

<p>This paragraph is a child of the div element and is styled using the child selector.</p>
</div>

External Link (https)

PDF Link

Example Link

<p>This paragraph has a bold first letter using a pseudo-element selector.</p>

<p>This paragraph has "Read More" text added using a pseudo-element.</p>

</body>

</html>

Output:

Experiment-5

Aim:

5. CSS with Color, Background, Font, Text and CSS Box Model

a. Write a program to demonstrate the various ways you can reference a color in CSS.

Source Code:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>Color References in CSS</title>
```

```
<style>
```

```
.color-example {
```

```
padding: 20px;
```

```
color: #ff6347; /* Hexadecimal color */
```

```
background-color: rgb(0, 255, 0); /* RGB color */
```

```
border: 2px solid rgba(0, 0, 255, 0.5); /* RGBA color with transparency */
```

```
background-color: hsl(120, 100%, 50%); /* HSL color */
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<div class="color-example">
```

```
<h1>This demonstrates different ways to use colors in CSS.</h1>
```

```
</div>
```

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

Output:

b. Write a CSS rule that places a background image halfway down the page, tilting it horizontally. The image should remain in place when the user scrolls up or down.

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Fixed Background Image</title>
  <style>
    body {
      margin: 0;
      height: 2000px; /* To demonstrate scrolling */
    }

    .background {
      position: fixed;
      top: 50%; /* Place the background halfway down */
      left: 50%;
      transform: translate(-50%, -50%) rotate(15deg); /* Horizontal tilt */
      background-image: url('https://via.placeholder.com/150'); /* Your image URL */
      background-size: cover;
      width: 100%;
      height: 100%;
      z-index: -1; /* Ensure it stays behind the content */
    }
  </style>
</head>
<body>
  <div class="background"></div>
  <div class="content">
    <h1>Scroll Down to See the Background Fixed and Tilted</h1>
  </div>
</body>
</html>
```

Output:

c. Write a program using the following terms related to CSS font and text:

- i. font-size
- ii. font-weight
- iii. font-style
- iv. text-decoration
- v. text-transformation
- vi. text-alignment

Source Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>CSS Font and Text Properties</title>
  <style>
    .font-example {
      font-size: 24px; /* Font size */
      font-weight: bold; /* Font weight */
      font-style: italic; /* Font style */
      text-decoration: underline; /* Text decoration */
      text-transform: uppercase; /* Text transformation */
      text-align: center; /* Text alignment */
      color: #333;
    }
  </style>
</head>
<body>
  <div class="font-example">
    <p>This is a demonstration of font and text properties.</p>
  </div>
</body>
</html>
```

Output:

d. Write a program, to explain the importance of CSS Box model using

- i. Content
- ii. Border
- iii. Margin
- iv. padding

Source Code:

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

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>CSS Box Model</title>
<style>
  .box-model {
    width: 300px;
    height: 200px;
    background-color: lightblue;
    padding: 20px; /* Padding inside the box */
    border: 5px solid darkblue; /* Border around the box */
    margin: 30px; /* Space outside the box */
    box-sizing: border-box; /* Ensures padding and border are included in the width/height */
  }
</style>
</head>
<body>
  <div class="box-model">
    <p>This box demonstrates the CSS Box Model.</p>
  </div>
</body>
</html>
```

Output:

