

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.

DESCRIPTION:

Lists are used to store data or information in web pages in ordered or unordered form. HTML supports several types of list elements that can be included in the <BODY>tag of the document. These elements may also be nested, i.e., the onset of elements can be embedded within another. There are three types of lists available in HTML:

- Unordered List
- Ordered List
- Description list

List Item tag

List item tag is used to define each item of a list. Once we define list items with the tag, the list appears in Web browsers in the bulleted form (by default). It is used inside both ordered and unordered lists.

Syntax:

` content `

Ordered List ()

- Displays items in a **numbered sequence**.
- Each item is enclosed in tags.

Unordered List ()

- Displays items with **bullets**.
- Each item uses the tag.

Nested List

- A list placed **inside another list** (an inside another or).
- Used to show hierarchical data.

Ordered List inside Unordered List

- A **combination list**, where an is placed inside a item.
- Shows multi-level steps grouped under a category.

Definition List (<dl>)

- Used for **terms and definitions**.
- Consists of:
 - <dt> → Definition Term
 - <dd> → Description/Definition

CODE:

```
<!DOCTYPE html>
<html>
<head>
  <title>Lists, Links and Images Example</title>
</head>
<body>
  <h2>1. Ordered List</h2>
  <ol>
    <li>HTML</li>
    <li>CSS</li>
    <li>JavaScript</li>
  </ol>
  <h2>2. Unordered List</h2>
  <ul>
```

```

        <li>Apple</li>
        <li>Banana</li>
        <li>Orange</li>
    </ul>
    <h2>3. Nested List</h2>
    <ul>
        <li>Front-end Technologies
            <ul>
                <li>HTML</li>
                <li>CSS</li>
                <li>JavaScript</li>
            </ul>
        </li>
        <li>Back-end Technologies
            <ol>
                <li>Node.js</li>
                <li>Python</li>
                <li>Java</li>
            </ol>
        </li>
    </ul>
    <h2>4. Ordered List inside Unordered List</h2>
    <ul>
        <li>Steps to Build a Webpage:
            <ol>
                <li>Create HTML Structure</li>
                <li>Apply CSS Styling</li>
                <li>Add JavaScript Interactivity</li>
            </ol>
        </li>
    </ul>
    <h2>5. Definition List</h2>
    <dl>
        <dt>HTML</dt>
        <dd>HyperText Markup Language used to create webpage structure. </dd>

        <dt>CSS</dt>
        <dd>Cascading Style Sheets used for styling webpages. </dd>

        <dt>JavaScript</dt>
        <dd>Programming language used to add interactivity to web pages. </dd>
    </dl>
</body>
</html>

```

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

DESCRIPTION:

Hyperlinks are an essential part of web pages because they allow users to navigate from one page to another or to different sections within the same page. In HTML, hyperlinks are created using the **anchor tag <a>**.

Important Attributes of the <a> Tag

1. href (Hypertext Reference)

- Specifies the destination URL or the location to which the link should navigate.

2. target

Determines **where** the linked page will open.

Common values:

- **_blank** → Opens the link in a **new tab/window**
- **_self** → Opens the link in the **same tab** (default)

CODE:

```
<!DOCTYPE html>
<html>
<head>
  <title>Hyperlinks Example</title>
</head>
<body>
  <h1>Hyperlinks using HTML</h1>
  <h2>1. Basic Hyperlink</h2>
  <p>
    Click the link below to visit Google:
    <br>
    <a href="https://www.google.com">Visit Google</a>
  </p>
  <h2>2. Hyperlink with target="_blank"</h2>
  <p>
    This link opens in a new browser tab or window:
    <br>
    <a href="https://www.wikipedia.org" target="_blank">Open Wikipedia in New Tab</a>
  </p>
  <h2>3. Hyperlink with target="_self"</h2>
  <p>
    This link opens in the same tab (default behavior):
    <br>
    <a href="https://www.example.com" target="_self">Open Example in Same Tab</a>
  </p>
  <h2>5. Email Link</h2>
  <p>
    <a href="mailto:info@example.com">Send Email</a>
  </p>
</body>
</html>
```

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.

DESCRIPTION:

HTML provides the tag to insert an image into a webpage. This tag uses attributes such as:

- **src** → specifies the location of the image
- **alt** → displays text if the image cannot load
- **width & height** → control the size of the image

To make an image clickable, we place the tag inside an <a> tag. The <a> tag (anchor tag) is used to create hyperlinks using the href attribute. When an image is wrapped inside an anchor tag, it becomes a hyperlink.

So, when the user clicks the image, the browser opens the webpage mentioned in the href attribute.

Note: Place the images ACET.jpg, and Degree.jpg in images folder, where the images folder is in the same path as that of html files.

CODE:

image.html

```
<!DOCTYPE html>
<head>
  <title>Image Links</title>
</head>
<body>
  <h1>My College and My Friend's College</h1>

  <!-- My College Image -->
  <a href="D:/ACET/HTML/mycollege.html" target="_blank">
    
  </a>
  <p>Click on my college image to view my college profile.</p>

  <!-- Friend's College Image -->
  <a href="D:/ACET/HTML/friendcollege.html" target="_blank">
    
  </a>
  <p>Click on my friend's college image to view their college profile.</p>
</body>
</html>
```

mycollege.html

```
<!DOCTYPE html>
<head>
  <title>My College</title>
</head>
<body>
  <h1>My College</h1>
  <table>
    <tr>
      <th>College Name</th>
      <td>Aditya College of Engineering and Technology</td>
    </tr>
    <tr>
      <th>Location</th>
      <td>Surampalem</td>
    </tr>
    <tr>
      <th>State</th>
      <td>Andhra Pradesh</td>
    </tr>
```

```

        </tr>
        <tr>
            <th>Country</th>
            <td>India</td>
        </tr>
    </table>
</body>
</html>
friendcollege.html
<!DOCTYPE html>
<head>
    <title>Friend's College</title>
</head>
<body>
    <h1>Friend's College</h1>
    <table>
        <tr>
            <th>College Name</th>
            <td>Aditya Degree College</td>
        </tr>
        <tr>
            <th>Location</th>
            <td>Kakinada</td>
        </tr>
        <tr>
            <th>State</th>
            <td>Andhra Pradesh</td>
        </tr>
        <tr>
            <th>Country</th>
            <td>India</td>
        </tr>
    </table>
</body>
</html>

```

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

DESCRIPTION:

In web development, loading large images directly on a webpage can slow down page performance and affect user experience. To overcome this, thumbnails (small-size preview images) are used. These thumbnails reduce loading time and still give users a visual preview. When clicked, each thumbnail opens the full-sized version of the image. In this experiment, an image gallery is created using HTML and CSS. Each image is displayed as a thumbnail by setting its height and width to **100×100 pixels**. The <a> tag is used to link the thumbnail to the original full-sized image, and the target="_blank" attribute ensures the image opens in a new tab.

CODE:

```

<!DOCTYPE html>

```

```
<head>
  <title>Image Gallery</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      margin: 20px;
    }
    .gallery {
      display: flex;
      justify-content: center;
      flex-wrap: wrap;
      gap: 10px;
    }
    .gallery a img {
      border: 1px solid #ccc;
      border-radius: 5px;
      width: 100px;
      height: 100px;
      object-fit: cover;
    }
  </style>
</head>
<body>
  <h1>Image Gallery</h1>
  <p>Click on a thumbnail to view the full-sized image.</p>
  <div class="gallery">
    <!-- Image 1 -->
    <a href="D:\ACET\HTML\images\image1.jpg" target="_blank">
      
    </a>
    <!-- Image 2 -->
    <a href="D:\ACET\HTML\images\image2.jpg" target="_blank">
      
    </a>
    <!-- Image 3 -->
    <a href="D:\ACET\HTML\images\image3.jpg" target="_blank">
      
    </a>
    <!-- Image 4 -->
    <a href="D:\ACET\HTML\images\image4.jpg" target="_blank">
      
    </a>
  </div>
</body>
</html>
```