## Anchor

In HTML, an anchor is created using the `<a></a>` tag and is used to Create hyperlinks (link to another page, section, file, or website) , Create anchors within the same page to jump to a specific section.

- opening and closing tags
- Inline element

### The cases of anchor :

- link 👉 blue color
- visited 👉 purple color
- hover you can make in color 👉 green color
- active 👉 red color

### How to Type anchor tag ?

`<a href = "https://www.example.com" target = "_blank" >Visit Example</a>`

anchor has two element attributes & clickable text

Note: we type element attributes in opening tag

- href = " "
- target = " "
- Text between the tags is the clickable link like Google.

### What can Anchor do ?

- Link to Another Website 👉 `<a href="https://www.google.com"> Google </a>` .
- Link to Another Page in Same Website 👉 `<a href="about.html"> About Us </a>` .
- Link to a File by img (e.g., PDF, Image) 👉 ✈
  - You can add img inside anchor rather than text
  - `<a href="../assets/VSCodeUserSetup-x64-1.102.1.exe" download ><img src="../HTML5/img/VScode.png" alt="VS Code" width="30"></a></li>`
- Link to a Section in the Same Page 👉
  - `<h2 id="contact" >Contact Us</h2>`
  - `<a href="#contact" >Go to Contact</a>`
- Open Link in a New Tab 👉 target = "_blank"
- Mail or Phone Links
  - `<a href="mailto:someone@example.com">Send Email</a>`Send Email
  - `<a href="tel:+201234567890">Call Us</a>`Call Us

## Text Formatting

| Tag | Description | Example |
|---|---|---|
| `<b></b>` | just bold for styling | **Welcome** |
| `<strong></strong>` | usually displayed in bold and semantically important | **Welcome** |
| `<u></u>` | This is underlined text | <u>Welcome</u> |
| `<i></i>` | This is italic text | *Welcome* |
| `<em></em>` | This is emphasized text — semantic emphasis, usually italic. | *Welcome* |
| `<mark></mark>` | This is highlighted/marked text | Welcome |
| `<small></small>` | This is small text | Welcome |
| `<del></del>` | used to represent deleted text | ~~Welcome~~ |
| `<sup></sup>` | It is used to display text slightly above the normal line of text, often in a smaller font. | $5^2$ |
| `<sub></sub>` | It is used to display text slightly below the normal line, often in a smaller font. | $H_2O$ |

### Nested Concept in HTML :

In HTML, Nesting refers to placing one HTML element inside another. This is how you build a structured, hierarchical layout for web pages.
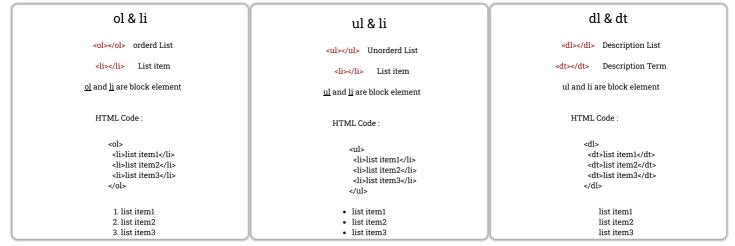
`<p>`This is a `<strong>`nested `</strong>` element. `</p>`

- Here, the `<strong>` tag is nested inside the `<p>` tag.
- The structure is valid because inline elements like `<strong>` can be placed inside block elements like `<p>`.

# List

In HTML, a list is used to group related items together. There are three main types of lists:

1. Unordered List (<ul>)
2. Ordered List (<ol>)
3. Description List (<dl>)

| ol & li | ul & li | dl & dt |
|---|---|---|
| <ol></ol>   orderd List | <ul></ul>   Unorderd List | <dl></dl>   Description List |
| <li></li>   List item | <li></li>   List item | <dt></dt>   Description Term |
| ol and li are block element | ul and li are block element | ul and li are block element |
| HTML Code : | HTML Code : | HTML Code : |
| ```<ol>  <li>list item1</li>  <li>list item2</li>  <li>list item3</li></ol>``` | ```<ul>  <li>list item1</li>  <li>list item2</li>  <li>list item3</li></ul>``` | ```<dl>  <dt>list item1</dt>  <dt>list item2</dt>  <dt>list item3</dt></dl>``` |
| 1. list item1<br>2. list item2<br>3. list item3 | • list item1<br>• list item2<br>• list item3 | list item1<br>list item2<br>list item3 |

Usually used UL tag in header part to create a navigation bar

| ← → C  ⓘ  127.0.0.1:5500/Ex-header.html | ☆ | ♻ 😀 ⬓ |
|---|---|---|
| Home          About          Services          Contact | | |

## nested list :

In HTML, a Sub List (or nested list) is created by placing another <ul> (unordered list) or <ol> (ordered list) inside an <li> (list item) of a main list.

```
<ul>
 <li>HTML
  <ul>
   <li>Elements</li>
   <li>Attributes</li>
   <li>Tags</li>
  </ul>
 </li>
 <li>CSS
  <ul>
   <li>Selectors</li>
   <li>Properties</li>
  </ul>
 </li>
</ul>
```

- HTML
  - Elements
  - Attributes
  - Tags
- CSS
  - Selectors
  - Properties

**Note: you should put ul or ol insede li if you want make a nested list .**

# Image

The <img> tag in HTML is used to display an image on a webpage.

- Inline element
- Self closing tag
- type tag <img src="" alt="" width = "" height = "" > Loading ="lazy"
- SRC (source) attribute in the <img> tag is used to specify the path or URL of the image you want to display.
- Alt used if the image cannot be displayed. Important for accessibility and SEO.
- In CSS you can Alternate image by background-image
- you can give image width and height without px or %
- Loading = "lazy" This helps improve page speed and performance, especially when you have many images.

# Table

In HTML, the <table> element is used to create a table for displaying tabular data (data arranged in rows and columns).

# Explanation:

- **&lt;table&gt;**: The table container.
- **&lt;thead&gt;**: (optional) Defines the header section of the table.
- **&lt;tr&gt;** : Table row (used inside &lt;thead&gt;, &lt;tbody&gt;, and &lt;tfoot&gt;).
- **&lt;th&gt;**: Table header cell (bold and centered by default).
- **&lt;td&gt;**: Table data cell (used for regular data).
- **&lt;tbody&gt;**: (optional) Contains the body of the table.
- **&lt;tfoot&gt;** : (optional) Defines the footer section of the table.
- **border="1"**: Adds a simple border (for demonstration; CSS is preferred for styling).

```html
<table border="1">
  <thead>
   <tr>
    <th>Header 1</th>
    <th>Header 2</th>
   </tr>
  </thead>
  <tbody>
   <tr>
    <td>Data 1</td>
    <td>Data 2</td>
   </tr>
   <tr>
    <td>Data 3</td>
    <td>Data 4</td>
   </tr>
  </tbody>
  <tfoot>
   <tr>
    <td>foot1</td>
    <td>foot2</td>
   </tr>
  </tfoot>
</table>
```

| Header 1 | Header 2 |
|----------|----------|
| Data 1   | Data 2   |
| Data 3   | Data 4   |
| foot1    | foot2    |

## To merge cells in an HTML &lt;table&gt;, you use:

- **colspan** colspan Merge columns (cells horizontally)
- **rowspan** Merge rows (cells vertically)

## colspan :

```html
<table border="1">
  <tr>
   <th colspan="3">Merged Column Header</th>
  </tr>
  <tr>
   <td>Cell 1</td>
   <td>Cell 2</td>
   <td>Cell 3</td>
  </tr>
</table>
```

| Merged Column Header | | |
|--------|--------|--------|
| Cell 1 | Cell 2 | Cell 3 |

## rowspan :

```html
<table border="1">
  <tr>
   <th>Name</th>
   <th>Score</th>
  </tr>
  <tr>
   <td rowspan ="2" >Ahmed</td>
   <td>85</td>
  </tr>
  <tr>
   <td>90</td>
  </tr>
</table>
```

| Name  | Score |
|-------|-------|
| Ahmed | 85    |
|       | 90    |

## Div vs Span

### &lt;div&gt; in HTML

The &lt;div&gt; tag stands for "division" and is a block-level container element used to group other HTML elements together for styling or layout purposes.

- Opening and Closing Tag **&lt;div&gt;&lt;/div&gt;**
- Block Element

```html
<div class = "test">
   <h3>Frontend Courses :</h3>
   <ul>
   <li>HTML</li>
   <li>CSS</li>
   <li>JS</li>
   </ul>
</div>
```

### Frontend Courses :

- HTML
- CSS
- JS

### &lt;span&gt; in HTML

In HTML, the &lt;span&gt; tag is an inline container used to mark up a part of a text or a document. It does not have any visual effect by default, but it's commonly used with CSS or JavaScript to apply styles or manipulate parts of the content.

- Inline element

```
#x {
  color : red;
}

#y {
  color : green;
}
```

Lorem ipsum dolor sit amet, consectetur adipisicing elit. acilis amet vitae illo eveniet. Excepturi dolore <span id = "x" > dicta aliquid vitae minus </span> ea temporibus pariatur culpa molestiae ex? <span id = "y" >Explicabo</span>, maiores consectetur.

Note : If you apply a CSS rule targeting the <span> tag directly (without a class or ID), it will affect all <span> elements on the page.

# Assignment

- HTML
- CSS
- JavaScript
  - Vuejs
  - Reactjs
  - Angular
    4. v4.0
    5. v5.0
    6. v6.0
    7. v7.0
    8. v8.0

```
Create links

    1- go to google page
    2- go to section 2 in the same page
    3- go to page number 2 in your project
```

| Year | Group | Language | Done | Passed |
|------|-------|----------|------|--------|
| 2022 | Elzero | HTML | Yes | |
| | | CSS | Yes | |
| | Heroes | JS | Yes | No |
| | | PHP | Yes | |
| | | Python | No | No |

**Create Logo as a link clickable go to W3School**