Important HTML Tags

BASIC STUCTURE TAGS: These appear in almost every HTML file.

Code:

```html
<!DOCTYPE html>    <!-- Defines HTML5 document -->
<html lang="en">     <!-- Root of the webpage -->
 <head>                  <!-- Metadata (not visible) -->
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
       <title>Document</title>    <!-- Page title -->
</head>
 <body>                  <!-- Visible content -->
</body>
 </html>
```

`<!DOCTYPE>`: Defines HTML5 document

`<html>`: Root of the webpage

`<head>`: Metadata (not visible)

`<title>`: Page title

`<body>`: Visible content

TEXT & CONTENT TAGS: These tags are used to **display text, structure content, and format text** on a webpage.

- **`<h1>` to `<h6>` — Heading Tags:** Heading tags define titles and subtitles. `<h1>` is the most important heading, `<h6>` is the least.
  - **Example:**   `<h1>Main Website Title</h1>`
- **`<p>` — Paragraph Tag:** Used to define a **paragraph of text**.
  - **Example:** <p>This is a paragraph explaining our services. </p>
- **`<br>` — Line Break Tag:** Creates a **new line** without starting a new paragraph.
  - **Example:** <p>Hello
Welcome to my website</p>
- **`<hr>` — Horizontal Rule:** Creates a **horizontal line** to separate content.
  - **Example:** <hr>
- **`<div>` — Division Tag:**   A **block-level container** used to group elements.
  - **Example:** <div class="card">

    <h2>Product</h2>

    <p>Description</p>

    </div>
- **`<span>` — Inline Container:**   An **inline container** used for styling small parts of text.
  - **Example:** <p>Price: $100</p>
- **`<strong>` — Important Text:** Indicates **important text** (semantic meaning).
  - **Example:** <p>Warning: Do not share your password.</p>
- **`<b>` — Bold Text:** Makes text **bold**, without semantic importance.
  - **Example:** <p>This is bold text.</p>
- **`<em>` — Emphasized Text:** Adds **emphasis** to text (semantic).
  - **Example:** <p>This is very important.</p>
- **`<i>` — Italic Text:** Displays text in **italic style** (no importance).
  - **Example:** <p>This is <i>italic</i> text.</p>
- **`<mark>` — Highlight Text:** Highlights text with a **yellow background**.
  - **Example:** <p>Please read the <mark>important notice</mark>.</p>
- **`<small>` — Smaller Text:** Displays text in **smaller size**.
  - **Example:** <p>Copyright <small>© 2026</small></p>

- **`<sub>` — Subscript:** Displays text **below normal line**.

  Example: `<p>H<sub>2</sub>O</p>`

- **`<sup>` — Superscript:** Displays text **above normal line**.

  Example: `<p>10<sup>2</sup></p>`

LINKS & MEDIA TAGS: Essential for navigation and visuals.

- **`<a>` — Anchor Tag (Link):** The `<a>` tag is used to **create hyperlinks** that navigate to another page, website, file, or section.
  Example: `<a href="https://www.google.com">Go to Google</a>`
  - **Common attributes:**
    - `<a href="about.html">About</a>`
    - `<a href="about.html" target="_blank">New Tab</a>`
    - `<a href="path/to/your/file.pdf" download>Download PDF</a>`
    - `<a href="#section1">Jump to section</a>`
    - `<a href="mailto:test@gmail.com">Send Email</a>`
    - `<a href="tel:+911234567890">Call</a>`

- **`<img>` — Image Tag:** The `<img>` tag is used to **display images** on a webpage.
  Example: `<img src="photo.jpg" alt="Profile Photo">`
  - **Common attributes:**
    - `Src: Image path`
    - `Alt: Text if Image Fails`
    - `Width/Height: Image Size`

- **`<audio>` — Audio Tag:** Used to **embed audio files** (music, voice, sounds)
  Example: `<audio controls>`
  `<source src="song.mp3" type="audio/mpeg">`
  `</audio>`

  - **Common attributes:**
    - `controls`
    - `autoplay`
    - `loop`
    - `muted`

- **`<video>` — Video Tag:** Used to **embed videos** on a webpage.
  Example: `<video controls width="400">`
  `<source src="video.mp4" type="video/mp4">`
  `</video>`

  - **Common attributes:**

- controls
- autoplay
- loop
- poster
- muted

- **`<source>` — Media Source Tag:** Specifies **multiple media formats** for `<audio>` and `<video>`.

  Example: <video controls>

  <source src="video.mp4" type="video/mp4">

  <source src="video.webm" type="video/webm">

  </video>

- **`<iframe>` — Inline Frame:** Used to **embed another webpage** inside the current page.

  Example: <iframe src="https://www.youtube.com/embed/VIDEO_ID"> </iframe>

- **`<picture>` — Responsive Images:** Allows **different images for different screen sizes**.

  Example: <picture>

  <source media="(max-width: 600px)" srcset="small.jpg">

  <img src="large.jpg" alt="Responsive image">

  </picture>

- **`<track>` — Subtitle / Caption:** Adds **subtitles or captions** to videos.

  Example: <video controls>

  <source src="movie.mp4">

  <track src="subtitles.vtt" kind="subtitles" srclang="en">

  </video>

HTML LIST TAGS: HTML lists are used to **group related items** together in an organized way.

There are **3 main types of lists**:

1. Unordered List
2. Ordered List
3. Description List

- **`<ul>` — Unordered List:** The `<ul>` tag creates a **list of items with bullets** (no specific order).
  Example:
  　　　　　Home
  　　　　　About
  　　　　　Contact
  　　　

  Attributes:

  - <ul type="disc">...
  - <ul type="square">...
  - <ul type="circle">...

- **`<ol>` — Ordered List:** The `<ol>` tag creates a **numbered list** (order matters).
  Example:
  　　　　　Turn on computer
  　　　　　Open browser
  　　　　　Visit website
  　　　

  Attributes:

  - <ol type="A"> <!-- A, B, C -->
  - <ol type="i"> <!-- i, ii, iii -->
  - <ol start="5"> <!-- starts from 5 -->

- **`<dl>` — Description List:** The `<dl>` tag creates a **list of terms with descriptions**.
  - `<dt>` — Description Term
  - `<dd>` — Description Details

    Example: <dl>

                                                                                   <dt>HTML</dt>

    <dd>Markup language for web pages</dd>

    <dt>CSS</dt>

    <dd>Styles the web pages</dd>

    </dl>

HTML TABLE TAGS: HTML tables are used to **display data in rows and columns** (like Excel)

- **`<table>` — Table Tag:** The `<table>` tag is the **container** for the entire table.
  Example: <table>
  </table>
- **`<tr>` — Table Row:** The `<tr>` tag defines **one row** in a table.
  Example: <tr>
  <td>John</td>
  <td>20</td>
  </tr>
- **`<th>` — Table Header Cell:** The `<th>` tag defines a **header cell** (bold + centered by default).
  Example: <tr>
  <th>Name</th>
  <th>Age</th>
  </tr>
- **`<td>` — Table Data Cell:** The `<td>` tag defines a **normal data cell**.
  Example: <tr>
  <td>John</td>
  <td>20</td>
  </tr>
- **`<thead>` — Table Head:** The `<thead>` tag groups **header rows**.
  Example: <thead>
  <tr>
  <th>Name</th>
  <th>Age</th>
  </tr>
  </thead>

- **`<tbody>` — Table Body:** The `<tbody>` tag groups the **main content rows**.
  Example: <tbody>
  <tr>

```
<td>John</td>
<td>20</td>
</tr>
</tbody>
```

- **`<tfoot>` — Table Footer:** The `<tfoot>` tag groups **summary/footer rows**.
Example:
```
<tfoot>
<tr>
<td>Total Students: 50</td>
</tr>
</tfoot>
```

- **`<caption>` — Table Caption:** The `<caption>` tag gives a **title** to the table.
  Example:
```
<table>
<caption>Student Details</caption>
</table>
```

Complete Table Example

```
<table border="1">
    <caption>Student Marks</caption>
    <thead>
      <tr>
        <th>Name</th>
        <th>Marks</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>Alice</td>
        <td>85</td>
```

```
            </tr>
            <tr>
                <td>Bob</td>
                <td>90</td>
            </tr>
        </tbody>
        <tfoot>
            <tr>
                <td colspan="2">Total Students: 2</td>
            </tr>
        </tfoot>
</table>
```

IMPORTANT HTML TABLE ATTRIBUTES: These attributes are mainly used with **<table>**, **<th>**, and **<td>** tags to control layout and meaning.

- **border Attribute:** Adds a **border around the table and its cells**.

Example: <table border="1">

- **colspan Attribute:** Used to **merge multiple columns into one cell**.

Example: <td colspan="2">Total Marks</td>

Full Example: <tr>

                        <td colspan="2">Total Students: 50</td>

            </tr>

- **rowspan Attribute:** Used to **merge multiple rows into one cell**.

Example: <td rowspan="2">Frontend</td>

Full Example: <tr>

                <td rowspan="2">Frontend</td>

                <td>HTML</td>

        </tr>

        <tr>

                <td>CSS</td>

```
</tr>
```

- **width & height (Basic Control):** Controls **cell or table size**.

Example: <table width="400">

                                        <td width="200">Data</td>

- **align Attribute:** Aligns text horizontally.

Example: <td align="center">50</td>

HTML FORM & INPUT TAGS: Forms are used to **collect user data** (login, signup, contact, search, payments).

- **`<form>` — Form Tag:** The `<form>` tag is a **container** used to collect and send user input to a server.
    Example: <form action="submit.php" method="post">
                            <input type="text">
            </form>
    Important Attributes:
        - **Action:** Where data is sent
        - **Method:** GET or POST
        - **Autocomplete:** Auto fill
        - **Novalidate:** Disable validation

- **`<input>` — Input Tag:** The `<input>` tag is used to **take user data**.
    Example: <input type="">

COMMON INPUT TYPES
    - **type="text":** Single-line text input.
        - <input type="text" placeholder="Enter name">
    - **type="email":** Accepts **email format only**.
        - <input type="email">
    - **`type="password"`:** Hides typed characters.
        - <input type="password">
    - **`type="number"`:** Accepts only numbers.
        - <input type="number">
    - **type="checkbox":** Allows **multiple selections**.
        - <input type="checkbox"> HTML
    - **type="radio":** Allows **only one selection** (same name).
        - <input type="radio" name="gender"> Male
        - <input type="radio" name="gender"> Female
    - **type="submit":** Submits the form.
        - <input type="submit" value="Submit">
    - **type="reset"** Clears all input fields.
        - <input type="reset">

- **type="file":** Uploads files.
  - `<input type="file">`

- **`<label>` — Label Tag:** Connects **text description** to an input field.
  Example: `<label for="username">Username</label>`
  `<input id="username" type="text">`
- **`<textarea>` — Multi-line Input:** Used for **long text input**.
  Example: `<textarea rows="4" cols="30"></textarea>`
- **`<button>` — Button Tag:** Creates a **clickable button**.
  Example: `<button type="submit">Send</button>`
- **`<select>` — Dropdown Menu:** Creates a **dropdown list**
  Example: `<select>`
  `<option>Delhi</option>`
  `<option>Mumbai</option>`
  `</select>`
- **`<option>` — Dropdown Item:** Defines **items inside `<select>`**.
  Example: `<option value="in">India</option>`
- **`<fieldset>` — Group Inputs:** Groups related form elements.
  Example: `<fieldset>`
  `<legend>Personal Info</legend>`
  `</fieldset>`
- **`<legend>` — Fieldset Title:** Gives a **title** to `<fieldset>`.
  Example: `<legend>Login</legend>`