**What is HTML?**

HTML (HyperText Markup Language) is the standard language used to create and structure content on the web. It is a markup language consisting of a series of elements, represented by tags, that define the structure of a web page. HTML allows you to embed text, links, images, videos, and other multimedia, and it provides the basic framework that forms the skeleton of a website.

Tim Berners-Lee invented HTML in 1991

HTML uses various tags, such as <h1>, <p>, <a>, <img>, and more, to specify different types of content and their attributes. By combining HTML with CSS and JavaScript, web developers create interactive, styled, and dynamic websites.

**Document Description**

I have created this document as a **comprehensive reference** for **HTML tags**, covering the full spectrum from **basic to advanced** tags. Each tag is defined with a clear **description**, followed by its **syntax** and a practical **example**. This document serves as an educational tool to help you understand the structure and usage of various HTML tags in web development.

The purpose of this file is to provide you with a detailed overview of all important HTML elements, helping you not only learn the theory but also apply the tags in real-world projects.

✅ **1. Basic Structure Tags**

| **Tag** | **Description** |
| --- | --- |
| <!DOCTYPE> | Declares the document type (HTML5) |
| <html> | Root of an HTML document |
| <head> | Container for metadata |
| <title> | Title of the page (shown in browser tab) |
| <meta> | Metadata (charset, viewport, SEO, etc.) |
| <link> | Links to external resources like CSS |
| <style> | Internal CSS styles |
| <script> | JavaScript code inclusion |
| <body> | Main visible content of the document |
|  |  |

📄 **2. Text & Formatting Tags**

| **Tag** | **Description** |
| --- | --- |
| <h1> to <h6> | Headings (largest to smallest) |
| <p> | Paragraph |
| <br> | Line break |
| <hr> | Horizontal rule (divider) |
| <b>, <strong> | Bold text (<strong> is semantic) |
| <i>, <em> | Italic text (<em> is semantic) |
| <u> | Underlined text |
| <mark> | Highlighted text |
| <small> | Smaller text |
| <del> | Deleted (strikethrough) text |
| <ins> | Inserted (underlined) text |
| <sup> | Superscript |
| <sub> | Subscript |
| <pre> | Preformatted text (preserves spacing) |
| <code> | Inline code |
| <blockquote> | Quoted text block |
| <abbr> | Abbreviation with tooltip |
| \*<s> | Renders text with a strikethrough(non-semantic,visual only) |
| \*<cite> | Cites a title of a creative work(e.g. book,article,movie) |
| \*<q> | Inline quotation-browser adds quotation marks automatically |
|  |  |
|  |  |
|  |  |

🔗 **3. Links and Media**

| **Tag** | **Description** |
| --- | --- |
| <a> | Anchor tag (hyperlink) |
| <img> | Embeds an image |
| <audio> | Embeds audio files |
| <video> | Embeds video files |
| <source> | Specifies media file for <audio> or <video> |
| <iframe> | Embeds external web pages |
| <embed> | Embeds external content like PDFs |
| <object> | Embeds multimedia like Flash or PDFs |
| \*<track> | Addes subtitles/caption to <video> or <audio> elements |

\*<picture> Responsive image element-allows different images based on screen size

📋 **4. Lists**

| **Tag** | **Description** |
| --- | --- |
| <ul> | Unordered list |
| <ol> | Ordered list |
| <li> | List item |
| <dl> | Definition list |
| <dt> | Term in a definition list |
| <dd> | Description of the term |

📊 **5. Tables**

| **Tag** | **Description** |
| --- | --- |
| <table> | Creates a table |
| <tr> | Table row |
| <td> | Table cell (data) |
| <th> | Table cell (heading) |
| <thead> | Table header group |
| <tbody> | Table body group |
| <tfoot> | Table footer group |
| <caption> | Table title |
| <colgroup> | Groups columns |
| <col> | Specifies column properties |

🧾 **6. Forms and Input**

| **Tag** | **Description** |
| --- | --- |
| <form> | HTML form element |
| <input> | Input field (text, checkbox, radio, etc.) |
| <textarea> | Multi-line text input |
| <select> | Dropdown list |
| <option> | Option in a dropdown |
| <label> | Defines a label for input |
| <fieldset> | Group related form elements |
| <legend> | Title for a <fieldset> |
| <button> | Clickable button |
| <datalist> | List of suggestions for <input> |
| <output> | Outputs calculation results |
| <meter> | Gauge (e.g. disk usage) |
| <progress> | <progress>Progress bar |

\*<data> Bibdes a machine-readable value to human-readabl content(used in microdata)

🧱 **7. Semantic Tags (HTML5)**

| **Tag** | **Description** |
| --- | --- |
| <header> | Top section of the page |
| <nav> | Navigation menu |
| <main> | Main content area |
| <section> | Thematic grouping of content |
| <article> | Independent, self-contained content |
| <aside> | Sidebar or related content |
| <footer> | Footer of the page |
| <figure> | Self-contained media or graphic |
| <figcaption> | Caption for <figure> |
| <time> | Machine-readable time/date |

🔒 **8. Interactive & Advanced Tags**

| **Tag** | **Description** |
| --- | --- |
| <details> | Creates a disclosure widget |
| <summary> | Summary (click to expand details) |
| <dialog> | Defines a dialog box or popup |
| <canvas> | Draw graphics via JavaScript |
| <svg> | Scalable vector graphics |
| <template> | Defines HTML fragments for JavaScript |
| <slot> | Placeholder inside web components |
| <noscript> | Shown when JavaScript is disabled |

🛠 **9. Meta/Utility Tags**

| **Tag** | **Description** |
| --- | --- |
| <base> | Base URL for all relative URLs |
| <noscript> | Content for non-JS browsers |
| <meta> | Metadata like charset, author, etc. |

🧩 **10** **Less Common / Specialized HTML Tags**

| **Tag** | **Description** |
| --- | --- |
| <base> | Sets base URL for all relative URLs in a page |
| <bdi> | Bi-directional isolation for mixed text direction |
| <bdo> | Overrides text direction (LTR/RTL) |
| <wbr> | Word break opportunity (suggests where to break a word if needed) |
| <ruby> | Annotations for East Asian typography |
| <rt> | Pronunciation (inside <ruby>) |
| <rp> | Fallback for browsers not supporting <ruby> |
| <menu> | Used for context menus (mostly deprecated) |
| <menuitem> | Item inside a <menu> (deprecated) |

🔧 **11 Custom Elements / Web Components (Advanced Use)**

| **Tag** | **Description** |
| --- | --- |
| <slot> | Placeholder in shadow DOM (used in web components) |
| <template> | Declares reusable chunks of HTML (not rendered) |
| <is> | Used for custom elements (very rare) |