# What is HTML?

HTML (HyperText Markup Language) is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation (CSS) or functionality/behavior (JavaScript).

"**Hypertext**" refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web.

HTML uses "**markup**" to annotate text, images, and other content for display in a Web browser. HTML markup includes special "elements" such as <head>, <title>, <body>, <header>, <footer>, <article>, <section>, <p>, and many others.

# Elements and Attributes of HTML

An HTML **element** is set off from other text in a document by "tags", which consist of the element name surrounded by "<" and ">". The name of an element inside a tag is case-insensitive. That is, it can be written in uppercase, lowercase, or a mixture. For example, the <title> tag can be written as <Title>, <TITLE>, or in any other way. However, the convention and recommended practice is to write tags in lowercase.

HTML elements are defined by a start tag, some content, and an end tag. The HTML element is everything from the start tag to the end tag:

<tagname>Content goes here...</tagname>

Some HTML elements do not require an end tag, for example <br>.

You can put elements inside other elements too — this is called nesting.

Elements in HTML have **attributes**; these are additional values that configure the elements or adjust their behavior in various ways to meet the criteria the users want. Attributes that set a value always have:

* A space between it and the element name (or the previous attribute, if the element already has one or more attributes).
* The attribute name followed by an equal sign.
* The attribute value wrapped by opening and closing quotation marks.

<img src="images/firefox-icon.png" alt="My test image" />

Here, **src** and **alt** are attributes of the **img** element

# Doctype

In HTML, the doctype is the required "<!DOCTYPE html>" preamble found at the top of all documents. Its sole purpose is to prevent a browser from switching into so-called "quirks mode" when rendering a document; that is, the "<!DOCTYPE html>" doctype ensures that the browser makes a best-effort attempt at following the relevant specifications, rather than using a different rendering mode that is incompatible with some specifications.

# HTML Elements

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl** | **Element Name** | **Type** | **Description** |
|  | [<html>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/html) | Main root | Represents the root (top-level element) of an HTML document, so it is also referred to as the root element. All other elements must be descendants of this element. |
|  | [<head>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/head) | Document metadata | Contains machine-readable information (metadata) about the document, like its title, scripts, and style sheets. |
|  | [<link>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/link) | Specifies relationships between the current document and an external resource. This element is most commonly used to link to CSS but is also used to establish site icons (both "favicon" style icons and icons for the home screen and apps on mobile devices) among other things. |
|  | [<meta>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/meta) | Represents metadata that cannot be represented by other HTML meta-related elements, like <base>, <link>, <script>, <style> and <title>. |
|  | [<style>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/style) | Contains style information for a document or part of a document. It contains CSS, which is applied to the contents of the document containing this element. |
|  | [<title>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/title) | Defines the document's title that is shown in a browser's title bar or a page's tab. It only contains text; tags within the element are ignored. |
|  | [<body>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/body) | Sectioning root | Represents the content of an HTML document. There can be only one such element in a document. |
|  | [<header>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/header) | Content sectioning | Represents introductory content, typically a group of introductory or navigational aids. It may contain some heading elements but also a logo, a search form, an author name, and other elements. |
|  | [<footer>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/footer) | Represents a footer for its nearest ancestor sectioning content or sectioning root element. A <footer> typically contains information about the author of the section, copyright data, or links to related documents. |
|  | [<h1>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/Heading_Elements), [<h2>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/Heading_Elements), [<h3>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/Heading_Elements),  [<h4>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/Heading_Elements), [<h5>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/Heading_Elements), [<h6>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/Heading_Elements) | Represent six levels of section headings. <h1> is the highest section level and <h6> is the lowest. |
|  | [<main>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/main) | Represents the dominant content of the body of a document. The main content area consists of content that is directly related to or expands upon the central topic of a document, or the central functionality of an application. |
|  | [<aside>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/aside) | Represents a portion of a document whose content is only indirectly related to the document's main content. Asides are frequently presented as sidebars or call-out boxes. |
|  | [<nav>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/nav) | Represents a section of a page whose purpose is to provide navigation links, either within the current document or to other documents. Common examples of navigation sections are menus, tables of contents, and indexes. |
|  | [<section>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/section) | Represents a generic standalone section of a document, which doesn't have a more specific semantic element to represent it. Sections should always have a heading, with very few exceptions. |
|  | [<search>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/search) | Represents a part that contains a set of form controls or other content related to performing a search or filtering operation. |
|  | [<hgroup>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/hgroup) | Represents a heading grouped with any secondary content, such as subheadings, an alternative title, or a tagline. |
|  | [<p>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/p) | Text content | Represents a paragraph. Paragraphs are usually represented in visual media as blocks of text separated from adjacent blocks by blank lines and/or first-line indentation, but HTML paragraphs can be any structural grouping of related content, such as images or form fields. |
|  | [<ul>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/ul) | Represents an unordered list of items, typically rendered as a bulleted list. |
|  | [<ol>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/ol) | Represents an ordered list of items — typically rendered as a numbered list. |
|  | [<li>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/li) | Represents an item in a list. It must be contained in a parent element: an ordered list (<ol>), an unordered list (<ul>), or a menu (<menu>). In menus and unordered lists, list items are usually displayed using bullet points. In ordered lists, they are usually displayed with an ascending counter on the left, such as a number or letter. |
|  | [<dl>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/dl) | Represents a description list. The element encloses a list of groups of terms (specified using the <dt> element) and descriptions (provided by <dd> elements). Common uses for this element are to implement a glossary or to display metadata (a list of key-value pairs). |
|  | [<dt>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/dt) | Specifies a term in a description or definition list, and as such must be used inside a <dl> element. It is usually followed by a <dd> element; however, multiple <dt> elements in a row indicate several terms that are all defined by the immediate next <dd> element. |
|  | [<dd>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/dd) | Provides the description, definition, or value for the preceding term (<dt>) in a description list (<dl>). |
|  | [<menu>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/menu) | A semantic alternative to <ul>, but treated by browsers (and exposed through the accessibility tree) as no different than <ul>. It represents an unordered list of items (which are represented by <li> elements). |
|  | [<hr>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/hr) | Represents a thematic break between paragraph-level elements: for example, a change of scene in a story, or a shift of topic within a section. |
|  | [<a>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/a) | Inline text semantics | Together with its href attribute, creates a hyperlink to web pages, files, email addresses, locations within the current page, or anything else a URL can address. |
|  | [<abbr>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/abbr) | Represents an abbreviation or acronym. |
|  | [<br>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/br) | Produces a line break in text (carriage-return). It is useful for writing a poem or an address, where the division of lines is significant. |
|  | [<i>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/i) | Represents a range of text that is set off from the normal text for some reason, such as idiomatic text, technical terms, and taxonomical designations, among others. Historically, these have been presented using italicized type, which is the original source of the <i> naming of this element. |
|  | [<small>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/small) | Represents side-comments and small print, like copyright and legal text, independent of its styled presentation. By default, it renders text within it one font size smaller, such as from small to x-small. |
|  | [<strong>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/strong) | Indicates that its contents have strong importance, seriousness, or urgency. Browsers typically render the contents in bold type. |
|  | [<sub>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/sub) | Specifies inline text which should be displayed as subscript for solely typographical reasons. Subscripts are typically rendered with a lowered baseline using smaller text. |
|  | [<sup>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/sup) | Specifies inline text which is to be displayed as superscript for solely typographical reasons. Superscripts are usually rendered with a raised baseline using smaller text. |
|  | [<time>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/time) | Represents a specific period in time. It may include the datetime attribute to translate dates into machine-readable format, allowing for better search engine results or custom features such as reminders. |
|  | [<u>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/u) | Represents a span of inline text which should be rendered in a way that indicates that it has a non-textual annotation. This is rendered by default as a simple solid underline but may be altered using CSS. |
|  | [<img>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/img) | Image and multimedia | Embeds an image into the document. |
|  | [<audio>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/audio) | Used to embed sound content in documents. It may contain one or more audio sources, represented using the src attribute or the source element: the browser will choose the most suitable one. It can also be the destination for streamed media, using a MediaStream. |
|  | [<video>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video) | Embeds a media player which supports video playback into the document. You can also use <video> for audio content, but the audio element may provide a more appropriate user experience. |
|  | [<area>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/area) | Defines an area inside an image map that has predefined clickable areas. An image map allows geometric areas on an image to be associated with hyperlink. |
|  | [<table>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/table) | Table content | Represents tabular data — that is, information presented in a two-dimensional table comprised of rows and columns of cells containing data. |
|  | [<tr>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/tr) | Defines a row of cells in a table. The row's cells can then be established using a mix of <td> (data cell) and <th> (header cell) elements. |
|  | [<th>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/th) | Defines a cell as a header of a group of table cells. The exact nature of this group is defined by the scope and headers attributes. |
|  | [<td>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/td) | Defines a cell of a table that contains data. It participates in the table model. |
|  | [<colgroup>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/colgroup) | Defines a group of columns within a table. |
|  | [<col>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/col) | Defines a column within a table and is used for defining common semantics on all common cells. It is generally found within a <colgroup> element. |
|  | [<caption>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/caption) | Specifies the caption (or title) of a table. |
|  | [<form>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/form) | Forms | Represents a document section containing interactive controls for submitting information. |
|  | [**<input>**](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input) | Used to create interactive controls for web-based forms to accept data from the user; a wide variety of types of input data and control widgets are available, depending on the device and user agent. The <input> element is one of the most powerful and complex in all of HTML due to the sheer number of combinations of input types and attributes. |
|  | [<label>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/label) | Represents a caption for an item in a user interface. |
|  | [<fieldset>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/fieldset) | Used to group several controls as well as labels (<label>) within a web form. |
|  | [<legend>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/legend) | Represents a caption for the content of its parent <fieldset>. |
|  | [<datalist>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/datalist) | Contains a set of <option> elements that represent the permissible or recommended options available to choose from within other controls. |
|  | [<select>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/select) | Represents a control that provides a menu of options. |
|  | [<option>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/option) | Used to define an item contained in a select, an <optgroup>, or a <datalist> element. As such, <option> can represent menu items in popups and other lists of items in an HTML document. |
|  | [<progress>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/progress) | Displays an indicator showing the completion progress of a task, typically displayed as a progress bar. |
|  | [<optgroup>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/optgroup) | Creates a grouping of options within a <select> element. |
|  | [<button>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/button) | An interactive element activated by a user with a mouse, keyboard, finger, voice command, or other assistive technology. Once activated, it performs an action, such as submitting a form or opening a dialog. |
|  | [<textarea>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/textarea) | Represents a multi-line plain-text editing control, useful when you want to allow users to enter a sizeable amount of free-form text, for example, a comment on a review or feedback form. |
|  | [<output>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/output) | Container element into which a site or app can inject the results of a calculation or the outcome of a user action. |
|  | [<summary>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/summary) | Interactive elements | Specifies a summary, caption, or legend for a details element's disclosure box. Clicking the <summary> element toggles the state of the parent <details> element open and closed. |
|  | [<details>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/details) | Creates a disclosure widget in which information is visible only when the widget is toggled into an "open" state. A summary or label must be provided using the <summary> element. |

# HTML Comments

HTML comments don't get displayed in the browser. This means that any comments you add to your HTML source code will not be shown when the document gets rendered in a web browser. However, keep in mind that anyone can view the source code of practically every website published on the Internet by going to View -> Developer -> View Source – and this also includes all comments!

A single-line comment only spans one line. As mentioned earlier, that line will not get displayed in the browser. Anything you wrap inside <!-- -->, becomes a comment.

The Keyboard shortcut is **Command /** for Mac users or **Control /** for Windows and Linux users.