



HTML

Why Learn HTML?

HTML is the foundation of all web pages. Without HTML, you wouldn't be able to organize text or add images or videos to your web pages.

HTML is the beginning of everything you need to know to create engaging web pages!

What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for Web pages
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by <> tags
- HTML is a medium for the website to communicate with the browser.
- The browser reads the markup language and then displays the website according to that. The same website runs on various browsers, but the markup language ensures that it looks the same in all the systems.
- HTML is the primary language to learn Web Designing

- Hypertext: Hypertext is a text with a link embedded in it, clicking on which will take the user to a new page. Apart from text, hypertext may contain tables, lists, forms, images, etc.
- Markup language: A Markup language is the one, that uses tags to define elements within a document. It contains familiar words that are human-readable like forms, tables, links, titles, etc. Every tag in a markup language has a special meaning of its own and performs a particular operation.
- Hypertext: Hypertext is a text with a link embedded in it, clicking on which will take the user to a new page. Apart from text, hypertext may contain [tables](#), [lists](#), [forms](#), [images](#), etc.
- Markup language: A Markup language is the one, that uses tags to define elements within a document. It contains familiar words that are human-readable like [forms](#), [tables](#), [links](#), [titles](#), etc. Every tag in a markup language has a special meaning of its own and performs a particular operation.

Advantages of HTML

Originally, HTML was developed to define the structure of webpages. It had some basic tags just for structural changes like [HTML heading](#), [paragraph](#), [list](#). However, continuous research and the advancement in technology helped HTML progress over the years. Let us see some Advantages of HTML :

- Create a structure of Web Page or Website.
- It has new [tags](#) that optimize the website, boost performance, and give good results.
- It is the base of designing and developing web pages. Once you understand HTML's basics, other related technologies like [Javascript](#), [CSS](#), etc become easier to understand.
- HTML pages are platform-independent and they work on multiple OS and browsers.
- You can create offline pages which can load even with no internet.
- [HTML 5](#) can give support in enhancing the experience in gaming arena.

Do all website use HTML?

Yes, all the websites present on the internet use HTML for their structure. Even different CMS, like [wordpress](#), magento, etc, where coding knowledge is not necessary, also use HTML to create websites.

Is there any alternative for HTML?

No, there is no alternative to HTML. It is a standard for creating webpages on the internet. HTML creates a base of the website. This base is then modified by using CSS, JavaScript, JQuery, Bootstrap, etc to beautify the website and to make it dynamic.

Is HTML a Programming language?

No, HTML is not a programming language. A programming language use logic to produce a result, it use conditional statements, variables, functions, etc. Whereas HTML stands for HyperText Markup Language, i.e., it is a markup language, which uses Tags to mark and define elements.

HTML Versions

HTML Versions	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML 5	2014

A Simple HTML Document

`<!DOCTYPE html>` —————→ *declaration defines that this document is an HTML5 document*

`<html>` —————→ *element is the root element of an HTML page*

`<head>` —————→ *element contains meta information about the HTML page*

`<title>Page Title</title>` —————→ *element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)*

`</head>`

`<body>` —————→ *element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.*

`<h1>My First Heading</h1>` —————→ *element defines a large heading*

`<p>My first paragraph.</p>` —————→ *element defines a paragraph*

`</body>`

`</html>`

HTML Tags

- In HTML, every tag has a special meaning. The full HTML works on HTML Tags, with a specified purpose to each one of those. Each HTML Tag performs its own function and helps in creating the proper structure of a web page. All HTML Tags are predefined.
- HTML has Paired and Unpaired Tags. Both types differ in their syntax. Paired Tags always work in pair, whereas Unpaired tags work individually.
- Types of HTML Tags
- There are two types of HTML Tags which are used by the website developers:
 - Paired Tags
 - Unpaired Tags

Paired Tags

- Paired tags are a set of two tags with the same name. The difference is that one is an opening tag, and the other one is the closing tag.
- It is necessary to close a paired tag; otherwise, it can result in the malfunctioning of the website. When the content is written within paired tags, then it ensures that the effect of those tags would be limited to only the content they are surrounding.
- Notice below, the syntax and then a list of paired tags in HTML. Notice that each tag has a closing tag with a slash(/) before the name of the tag.
- Syntax: <tag> Content </tag>

Unpaired Tags

- Unpaired tags do not have a closing tag. These tags work individually and don't depend on a closing tag. These are also called non-container tags because they do not contain any content.
- It is recommended to close the unpaired tags also. But unfortunately, we do not have the closing pair for those. So, an unpaired tag is closed after adding a slash(/) after the name of the tag. For example: `
`

Some Unpaired Tags are:

`
`

`<hr>`

`<meta>`

`<input>`

HTML Heading Tag

- Heading tag is used to give headings of different sizes in a document.
- There are six different HTML heading tags, which gives different heading sizes and are defined by <h1> to <h6> tags. <h1> gives the largest heading and <h6> gives the smallest one. So <h1> can be used for most important headings and <h6> can be used for a least important one.

```
<!DOCTYPE html>
<html>
<head>
    <title> HTML Heading Tag </title>
</head>
</html>
<body>
    <h1> This is Heading 1 </h1>
    <h2> This is Heading 2 </h2>
    <h3> This is Heading 3 </h3>
    <h4> This is Heading 4 </h4>
    <h5> This is Heading 5 </h5>
    <h6> This is Heading 6 </h6>
</body>
</html>
```

HTML Paragraph Tag

The <p> tag is used to define a paragraph in a document. HTML paragraph or HTML <p> tag gives the text inside it, a paragraph like finishing. It is a notable point that a browser itself add an empty line before and after a paragraph.



```
<!DOCTYPE html>
<html>
<head>
  <title> HTML Paragraph Tag </title>
</head>
```



```
</html>
<body>
  <p> This is First Paragraph </p>
  <p> This is Second Paragraph </p>
  <p> This is Third Paragraph </p>
</body>
</html>
```

HTML Image Tag

- The Image Tag is used to add Images in HTML documents. The HTML tag is used to add image in a document. The 'src' attribute is used to give source(address) of the image. The height and width of the image can be controlled by the attributes - height="px" and width="px".
- The 'alt' attribute is used as an alternative in a case if the image is not shown. Anything written as a value of this attribute will be displayed.

```
<!DOCTYPE html>
<html>
<head>
    <title> HTML Image Tag </title>
</head>
</html>

<body>
    
</body>
</html>
```

HTML Attributes

- HTML attribute defines the characteristics of any HTML element. These attributes provide additional information to the browser about the element like, its size, color, behaviour, etc.

Some important points regarding HTML Attributes:

- Attributes provide additional information about an element.
- Attributes are always specified in the start tag.
- Attributes usually come in name/value pairs like: name="value".
- Ex.- 'src' in tag OR 'href' in <a> tag, etc..

HTML Src Attribute

- The src or (source) attribute is used with tag. This attribute allows us to provide the path for the image to be included on the webpage. it is also used with <audio> tag, <video> tag, <embed> tag, etc. to add the source path of the file to be included.

```
<!DOCTYPE html>
<html>
<head>
    <title> HTML Image Alt Attribute </title>
</head>
</html>
<body>
    
</body>

</html>
```

HTML Formatting Tags

- HTML Formatting Tags are used to change appearance of text for better look and feel than the default text. The formatting tags can make text bold, italic, underlined, etc.
- Some HTML Formatting tags are:
 - ✓ Bold Tag
 - ✓ Italic Tag <i>
 - ✓ Underline Tag <u>
 - ✓ Strong Tag
 - ✓ Small Tag <small>
 - ✓ Big Tag <big>
 - ✓ Mark Tag <mark>
 - ✓ Emphasized Tag
 - ✓ Deleted Tag
 - ✓ Inserted Tag <ins>
 - ✓ Subscripted Tag <sub>
 - ✓ Superscripted Tag <sup>

HTML Lists

Ordered List in HTML

This list is created by using tag. Any series can be used to order the elements, like series of digits, alphabets, roman numerals, etc. All these series gets increased by one with every new element entered in the list.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title> HTML Ordered List Uppercase </title>
  </head>

  <body>
    <ol type="A" start=3>
      <li>Audi</li>
      <li>Mercedes</li>
      <li>Lamborghini</li>
    </ol>
  </body>
</html>
```

Value	Description
type="1"	The list items will be numbered with numbers (default).
type="A"	The list items will be numbered with uppercase letters.
type="a"	The list items will be numbered with lowercase letters.
type="I"	The list items will be numbered with uppercase roman numbers.
type="i"	The list items will be numbered with lowercase roman numbers.

HTML Lists

HTML Unordered List

HTML unordered list is a collection of related items that are listed with no special order or sequence. This list is created by using HTML `` tag. Each item in the list is marked with a bullet. Each item starts with `` tag.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title> Unordered List Disc Attribute </title>
</head>
<body>
  <h2> Unordered List </h2>
    <ul type="disc">
      <li> Harley-Davidson </li>
      <li> Ducati</li>
      <li> BMW </li>
    </ul>
</body>
</html>
```

Value	Description
type="disc"	Sets the list item marker to a bullet (default).
type="circle"	Sets the list item marker to a circle.
type="square"	Sets the list item marker to a square.
type="none"	The list items will not be marked.

HTML Lists

Description List

The definition list created using <dl> tag. The Description <dt> — defines the item in the list, and <dd> describes the items in the list.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title> HTML Definition List </title>
</head>
<body>
    <dl>
        <dt><b>PUBG</b></dt>
        <dd>PlayerUnknown's Battlegrounds (PUBG) developed by PUBG Corporation.</dd>
        <dt><b>God Of War</b></dt>
        <dd>God of War developed by Santa Monica Studio.</dd>
        <dd>God of War developed by Santa Monica Studio.</dd>
    </dl>
</body>
</html>
```

Special character

```
<!DOCTYPE html>
<html>

  <head>
    <meta charset="utf-8">
    <title>Example Page</title>
  </head>

  <body>

    <ul>
      <li>Right single quote: &rsquo;</li>
      <li>Left single quote: &lsquo;</li>
      <li>Right double quote: &rdquo;</li>
      <li>Left double quote: &ldquo;</li>
      <li>Ampersands: &amp;</li>
      <li>Greater than: &gt;</li>
      <li>Less than: &lt;</li>
      <li>Copyright: &copy;</li>
      <li>Registered symbol: &reg;</li>
      <li>Trademark symbol: &trade;</li>
    </ul>
  </body>
</html>
```