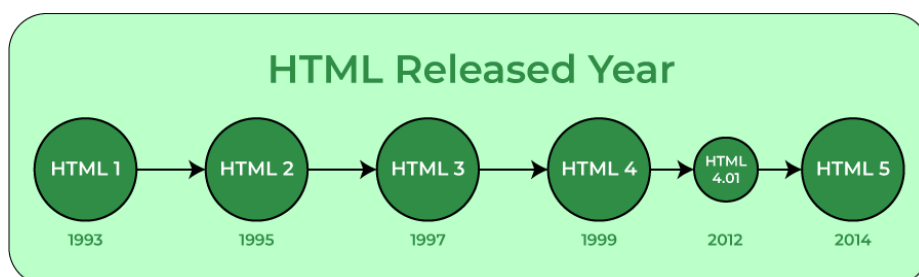


## Introduction of HTML

HTML stands for **HyperText Markup Language**. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between web pages. A markup language is used to define the text document within the tag which defines the structure of web pages.

HTML is a markup language used by the browser to manipulate text, images, and other content, in order to display it in the required format. HTML was created by Tim Berners-Lee in 1991. The first-ever version of HTML was HTML 1.0, but the first standard version was HTML 2.0, published in 1995.



## Features of HTML

---

1. It is a very easy and simple language. It can be easily understood and modified.
2. It is very easy to make an effective presentation with HTML because it has a lot of formatting tags.
3. It is a markup language, so it provides a flexible way to design web pages along with the text.
4. It facilitates programmers to add a link on the web pages (by html anchor tag), so it enhances the interest of browsing of the user.
5. It is platform-independent because it can be displayed on any platform like Windows, Linux, and Macintosh, etc.
6. It facilitates the programmer to add Graphics, Videos, and Sound to the web pages which makes it more attractive and interactive.
7. HTML is a case-insensitive language, which means we can use tags either in lower-case or upper-case.

## HTML Tag

Tags are the HTML code words. Tags are instructions that are embedded directly in to the text of the document.

It is written between < and > brackets.

Purposes of Tags are:

- ✓ create overall structure
- ✓ text formatting
- ✓ give hyperlinks
- ✓ Display graphics
- ✓ Create tables, lists, input forms etc.

### Tag Attributes

Some HTML tags require additional information supplied to them. For instance, when a picture is placed on the screen, information like the height and width of the picture can be specified.

Additional information supplied to an HTML tag is known as attributes of a tag. Attributes are written immediately following the tag, separated by a space. Multiple attributes can be associated with a tag, also separated by a space.

### Syntax:

```
<tag name attribute_name= " attr_value"> content </ tag name>
```

### Types of Tags

HTML tags can be of two types.

1. Paired Tag / Container Tag
2. Singular Tags or Empty Tag

#### 1. Paired Tags

A tag is said to be a paired tag if it come along with a companion tag. In paired tags, the first tag (<B>) is often called the opening tag and the second tag (</B>) is called the closing tag.

The opening tag activates the effect and the closing tag turns the effect off.

For example - <HTML>      </HTML>

## 2. Singular Tags

A tag is said to be a singular tag if it, does not along with a companion tag. A singular tag is also called stand-alone tag. This tag does not require any companion tag.

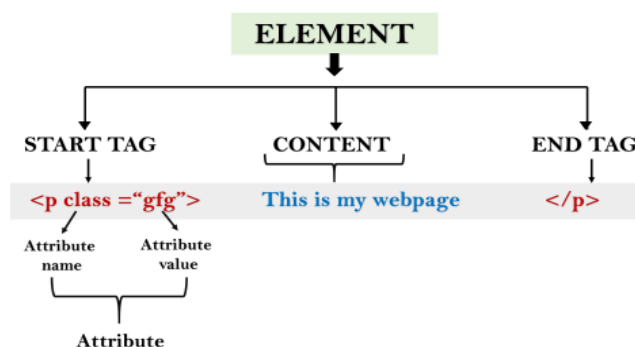
For example - `<BR>`, `<HR>`

## HTML Element

An HTML element is an individual component of an HTML document. It represents semantics, or meaning.

Most HTML elements are written with a start tag (or opening tag) and an end tag (or closing tag), with content in between. Elements can also contain attributes that defines its additional properties.

For example:



## HTML Structure Tag

### `<html>`

The `<html>` tag is the topmost tag in HTML. It is the root of an HTML document. All other tags of the HTML document lie inside it.

You should always use the lang attribute with the `<html>` tag. It declares the language of the webpage to the browsers and search engines.

It is a container tag.

### `<head>`

The `<head>` tag contains information about the webpage that is not visible to the users. These are machine-readable information like the script, metadata, title, style sheets, etc.

The head of HTML document may contain <title>, <meta>, <style>, <link>, <base>, <script> and <noscript> tags.

### **<title> Tag**

HTML title tag is used to provide a title name for your webpage. It is necessary for Search Engine Optimization (SEO). The HTML title tag must be used inside the <head> tag. The title of the page is displayed on the title bar of the browser.

### **<body> Tag**

The <body> tag contains all the visible parts of the webpage. Anything like text, image, audio, video, animations, etc all lies in the body tag.

In an HTML document there can be only one <body> tag.

### **Structure of HTML Page**

```
<HTML>
  <HEAD>
    <TITLE> Document Title </TITLE>
  </HEAD>
  <BODY>
    Hi!! This is my first web page.
  </BODY>
</HTML>
```

### **Attributes of <BODY> Tag**

Attribute	Description
BGCOLOR	Changes the default background color to whatever color is specified with this tag. The user can specify a color by name or its equivalent hexadecimal number.  Example:  <BODY BGCOLOR = "black" >  <BODY BGCOLOR = "#000000" >  <BODY BGCOLOR = "rgb(0,0,0)" >

BACKGROUND	<p>Specifies the name of the GIF or JPEG file that will be used as the background of document.</p> <p>Example:</p> <pre>&lt;BODY BACKGROUND = "abc.gif" &gt;</pre> <pre>&lt;BODY BACKGROUND = "../das.jpeg" &gt;</pre> <pre>&lt;BODY BACKGROUND = "clouds.gif" &gt;</pre>
TEXT	<p>Changes the body text color from its default value to the color specified with this attribute.</p> <p>Example:</p> <pre>&lt;BODY TEXT = "red" &gt;</pre>

## Paragraph Tag

The <p> tag in HTML defines a paragraph. These have both opening and losing tags. So anything mentioned within <p> and </p> is treated as a paragraph.

Syntax:

```
<p> Content </p>
```

**Attributes of <p> tag:**

Attribute	Value	Description
align	Left, right, center, justify	Specifies the horizontal alignment of the text within a paragraph.

**Example:**

```
<html>
```

```
<head>Example of paragraph tag</head>
```

```
<body>
```

```
<p align="center">This is an example of paragraph tag. </p>
```

```
</body>
```

```
</html>
```

## HTML Heading Tag

The heading tags are used to define HTML headings. There are six levels of headings, from <h1> (most important) to <h6> (least important). These tags are logical block tags that's not only improves the accessibility but also aids in search engine optimization — information in higher heading levels is given more weight.

The basic syntax of the heading tags is given with:

```
<h1>...</h1> to <h6>...</h6>
```

### Example

```
<html>
  <head>Example of heading tag</head>
  <body>
    <h1>Heading level 1</h1>
    <h2>Heading level 2</h2>
    <h3>Heading level 3</h3>
    <h4>Heading level 4</h4>
    <h5>Heading level 5</h5>
    <h6>Heading level 6</h6>
  </body>
</html>
```

## Break Tag

The <br> tag in HTML document is used to create a line break in a text.

It is generally used in poem or address where the division of line is necessary. It is an empty tag, which means it does not need end tag. If you place the <br> tag in the HTML code, then it works the same as pressing the enter key in a word processor.

### Example:

```
<html>
  <head>
```

```

<title> Example of BR tag </title>

</head>

<body>

    <p>If you want to break a line <br> in a paragraph, <br> use
the BR element in <br> your HTML document. </p>

</body>

</html>

```

**Output:**

If you want to break a line  
in a paragraph,  
use the BR element in  
your HTML document.

**Font Tag**

HTML <font> tag is used to define the font style for the text contained within it. It defines the font size, color, and face or the text in an HTML document.

**Syntax**

```
<font size=" " color=" " face=" "> .....Content.... </font>
```

Attribute	Value	Description
face	font_family	It specifies the typeface of the content. (Not Supported in HTML5)
size	number	It specifies the size of the content. (Not Supported in HTML5)
color	rgb(X,X,X) #xxxxxx color_name	It specifies the color of the content.

## Text Formatting Tags

HTML Formatting tags are used to format text for better look and feel. HTML provides us ability to format text without using CSS. There are many formatting tags in HTML. These tags are used to make text bold, italicized, or underlined.

### **<b> Tag**

The HTML `<b>` element is a physical tag which display text in bold font, without any logical importance. If you write anything within `<b>.....</b>` element, is shown in bold letters.

#### **Example:**

```
<p> <b>Write Your First Paragraph in bold text. </b></p>
```

### **<i> Tag**

The HTML `<i>` element is physical element, which display the enclosed content in italic font, without any added importance. If you write anything within `<i>.....</i>` element, is shown in italic letters.

#### **Example:**

```
<p> <i>Write Your First Paragraph in italic text. </i></p>
```

### **<u> Tag**

If you write anything within `<u>.....</u>` element, is shown in underlined text.

#### **Example:**

```
<p> <u>Write Your First Paragraph in underlined text. </u></p>
```

### **<sub> Tag**

If you put the content within `<sub>.....</sub>` element, is shown in subscript; means it is displayed half a character's height below the other characters.

#### **Example:**

```
<p>Hello <sub>Write Your First Paragraph in subscript. </sub></p>
```

### **<sup> Tag**

If you put the content within `<sup>.....</sup>` element, is shown in superscript; means it is displayed half a character's height above the other characters.

Example:

```
<p>Hello <sup>Write Your First Paragraph in superscript. </sup></p>
```

### **<strong> Tag**

The HTML `<strong>` tag is used to display the content in bold font. If you write anything between `<strong>??????. </strong>`, it is shown as important text.

Example:

```
<p>
```

```
<strong>This is an important content</strong>, and this is normal content
```

```
</p>
```

### **<ins> Tag**

Anything that is put within `<ins>.....</ins>` is displayed as inserted text.

Example:

```
<p>
```

```
<del>Delete your first paragraph. </del><ins>Write another paragraph. </ins>
```

```
</p>
```

Output: ~~Delete your first paragraph.~~Write another paragraph.

### **<del> Tag**

Anything that is put within `<del>.....</del>` is displayed as deleted text.

Example:

```
<p>Hello <del>Delete your first paragraph. </del></p>
```

Output: Hello ~~Delete your first paragraph.~~

## **Horizontal Line**

The HTML `<hr>` tag is used for creating a horizontal line. This is also called Horizontal Rule in HTML.

The HTML `<hr>` tag also supports following additional attributes –

Attribute	Value	Description
align	left, right, center	Specifies the alignment of the horizontal rule.

color	rgb(X,X,X) #xxxxxx color_name	Removes the usual shading effect that most browsers display.
size	pixels or %	Specifies the height of the horizontal rule.
width	pixels or %	Specifies the width of the horizontal rule.

## Image Tag

HTML <img> tag is used to display image on the web page. It is an empty tag that contains attributes only, closing tags are not used in HTML image element.

### Syntax:

```
<img src = "Image URL" ... attributes-list/>
```

### Attributes of <img> tag are:

Attributes	Description
BORDER	Specifies the size of the border to place around the image.
WIDTH	Specifies the width of the image in pixels.
HEIGHT	Specifies the height of the image in pixels.
HSPACE	Indicates the amount of space to the left & right of the image.
VSPACE	Indicates the amount of space to the top and bottom of the image.
ALT	Indicates the text to be displaced in case the browser is unable to display the image specified in the SRC attribute.
SRC	Used to define the source/Path of a image

## Marquee Tag

The HTML <marquee> tag is used for scrolling piece of text or image displayed either horizontally across or vertically down your web site page depending on the settings.

Attributes of marquee tag are:

Attribute	Description
behavior	It facilitates user to set the behavior of the marquee to one of the three different types: scroll, slide and alternate.
direction	defines direction for scrolling content. It may be left, right, up and down.
width	defines width of marquee in pixels or %.
height	defines height of marquee in pixels or %.
scrollamount	defines scroll amount in number.
loop	defines loop for marquee content in number.
bgcolor	defines background color. It is now <i>deprecated</i> .

Example:

```
<html>
  <head>Marquee Tag Example</head>
  <body>
    <marquee direction="right" behavior="slide" scrollamount="30"
      bgcolor="yellow" width="600" height="300">
      This is an example of scrolling text
    </marquee>
  </body>
</html>
```

## HTML Lists

HTML lists are used to present list of information in well formed and semantic way. There are three different types of list in HTML and each one has a specific purpose and meaning.

1. Unordered list — Used to create a list of related items, in no particular order.
2. Ordered list — Used to create a list of related items, in a specific order.
3. Description list — Used to create a list of terms and their descriptions.

### 1. HTML Unordered Lists

An unordered list created using the `<ul>` element, and each list item starts with the `<li>` element. The list items in unordered lists are marked with bullets.

Attributes of unordered list:

1. Type : This attribute is used to define style of list and values are **disc**, **square**, **circle**. By default, it is disc.

**For example:**

```
<ul>
  <li>Chocolate Cake</li>
  <li>Black Forest Cake</li>
  <li>Pineapple Cake</li>
</ul>
```

### 2. HTML Ordered Lists

An ordered list created using the `<ol>` element, and each list item starts with the `<li>` element. Ordered lists are used when the order of the list's items is important.

We can use ordered list to represent items either in numerical order format or alphabetical order format, or any format where an order is emphasized. There can be different types of numbered list:

- Numeric Number (1, 2, 3)
- Capital Roman Number (I II III)
- Small Roman Number (i ii iii)
- Capital Alphabet (A B C)
- Small Alphabet (a b c)

Attributes of <ol> tag are:

1. Type: define the type of order and values are 1 for numeric, A for capital alphabet, a for small alphabet, I for small roman number and I for capital roman number.
2. Start: It define the start position.

For Example:

```
<ol type="a" start="3">  
  <li>C Language</li>  
  <li>HTML</li>  
  <li>Python</li>  
  <li>Java</li>  
</ol>
```

Output :

- c. C Language
- d. HTML
- e. Python
- f. Java

### 3. HTML Definition/Description Lists

A description list is a list of items with a description or definition of each item.

The description list is created using <dl> element. The <dl> element is used in conjunction with the <dt> element which specify a term, and the <dd> element which specify the term's definition.

Browsers usually render the definition lists by placing the terms and definitions in separate lines, where the term's definitions are slightly indented.

**For example:**

```
<dl>  
  <dt>What is HTML? </dt>  
  <dd>HTML is the standard markup language for creating Web  
  pages.</dd>
```

<dt>What is C Language? </dt>

<dd>The C programming language is a procedural and general-purpose language that provides low-level access to system memory.</dd>

</dl>