# INTRODUCTION TO HTML

HTML5 is the next major revision of the HTML standard superseding HTML 4.01, XHTML 1.0, and XHTML 1.1. HTML5 is a standard for structuring and presenting content on the World Wide Web.

HTML5 is a cooperation between the World Wide Web Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG).

The new standard incorporates features like video playback and drag-and-drop that have been previously dependent on third-party browser plug-ins such as Adobe Flash, Microsoft Silverlight, and Google Gears.

## Difference Between HTML4 and HTML5

| HTML | HTML5 |
|---|---|
| It didn't support audio and video without the use of flash player support. | It supports audio and video controls with the use of <audio> and <video> tags. |
| It uses cookies to store temporary data. | It uses SQL databases and application cache to store offline data. |
| Does not allow JavaScript to run in browser. | Allows JavaScript to run in background. This is possible due to JS Web worker API in HTML5. |
| Vector graphics is possible in HTML with the help of various technologies such as VML, Silver-light, Flash, etc. | Vector graphics is additionally an integral a part of HTML5 like SVG and canvas. |
| It does not allow drag and drop effects. | It allows drag and drop effects. |
| Not possible to draw shapes like circle, rectangle, triangle etc. | HTML5 allows to draw shapes like circle, rectangle, triangle etc. |
| It works with all old browsers. | It supported by all new browser like Firefox, Mozilla, Chrome, Safari, etc. |
| <HTML>,<Body> , and <Head> tags are mandatory while writing a HTML code. | These tags can be omitted while writing HTML code. |
| Older version of HTML are less mobile-friendly. | HTML5 language is more mobile-friendly. |
| Doctype declaration is too long and complicated. | Doctype declaration is quite simple and easy. |
| Elements like nav, header were not present. | New element for web structure like nav, header, footer etc. |
| Character encoding is long and complicated. | Character encoding is simple and easy. |
| It is almost impossible to get true GeoLocation of user with the help of browser. | One can track the GeoLocation of a user easily by using JS GeoLocation API. |
| It can not handle inaccurate syntax. | It is capable of handling inaccurate syntax. |
| Being an older version , it is not fast , flexible , and efficient as compared to HTML5. | It is efficient, flexible and more fast in comparison to HTML. |

## HTML Terminology:

In this lesson, you will learn some basic HTML terminology. HTML is the language used to create webpages. HTML stands for Hypertext Markup Language. HTML documents written with this text (or coding) tell browsers how to interpret and display the data.

HTML documents can be identified by the file extension .htm or .html. HTML standards are set and maintained by an international group of industry leaders such as Microsoft and Apple, called The World Wide Web Consortium (W3C). The rules that govern how HTML is written are called syntax. As new Web technologies emerge, HTML evolves through the W3C with newer versions such as 5.0 that introduced new standards discussed in upcoming chapters.

The "Markup Language" component of HTML refers to the insertion of instructions, called tags. ***Tags*** tell the Web browser how to interpret the data. Tags follow a standard format. Each tag begins with a "less than" symbol (<), immediately followed by the tag text, and ending in a "greater than" symbol (>). Spelling is critical, as tags not recognized by a Web browser are ignored. Tags in HTML can be written in either upper or lowercase. However, it is considered generally good practice to type your tags in lower case.

## HTML DOCUEMENTS STRUCTURE

Html used predefined tags and attributes to tells browser how to display content , means in which formate ,style, font-size , images to display. Html is a case insensitive language. **Case insensitive** means there is no difference in upper case and lower case ( capital and small letters) both treated as same, for r example 'D' and 'd' both are same here.

There are generally two types of tags in HTML:

1. **Paired Tags**: These tags come in pairs. That is they have both opening(< >) and closing(</ >) tags.
2. **Empty Tags**: These tags do not require to be closed.

## Structure of an HTML Document

An HTML Document is mainly divided into two parts:

- **HEAD**: This contains the information about the HTML document. For Example, Title of the page, version of HTML, Meta Data etc.
- **BODY:** This contains everything you want to display on the Web Page.

Let us now have a look at the basic structure of HTML. That is the code that is a must for every webpage to have:

```
<!DOCTYPE html>
<html>

<head>
    <title>Page Title</title>
</head>

<body>
    <h2>Heading Content</h2>
    <p>Paragraph Content</p>
</body>

</html>
```

***HTML Document Structure***

## HTML Entities

HTML character entities are used as a replacement of reserved characters in HTML. You can also replace characters that are not present on your keyboard by entities.

These characters are replaced because some characters are reserved in HTML. HTML entities provide a wide range of characters which can allow you to add icons, geometric shapes, mathematical operators, etc.

For example: if you use less than (<) or greater than (>) symbols in your text, the browser can mix them with tags that's why character entities are used in HTML to display reserved characters.

**How to use an entity:**

You can use an entity in your HTML document by name or by a numerical character reference. Each entity starts with symbol ampersand (&) and ends with a semicolon (;).

Syntax:

&entity_name;

OR

&#entity_number;

**Most used HTML Character Entities**

| Result | Description | Entity Name | Entity Number |
|---|---|---|---|
| | non-breaking space |   | 160 |
| < | less than | < | 60 |
| > | greater than | > | 62 |
| & | ampersand | & | 38 |
| " | double quotation mark | " | 34 |
| ' | single quotation mark (apostrophe) | ' | 39 |
| ¢ | cent | ¢ | 162 |
| £ | pound | £ | 163 |
| ¥ | yen | ¥ | 165 |
| € | Euro | € | 8364 |
| © | copyright | © | 169 |
| ® | registered trademark | ® | 174 |

**Avantage of entity name:** An entity name is easy to remember.

**Disadvantage of entity name**: Browsers may not support all entity names, but the support for numbers is good.

**HTML Formatting Elements**

Formatting elements were designed to display special types of text:

- <b> - Bold text
-  - Important text
- <i> - Italic text
-  - Emphasized text
- <mark> - Marked text
- <small> - Smaller text

- <del> - Deleted text
- <ins> - Inserted text
- <sub> - Subscript text
- <sup> - Superscript text

## HTML  and  Elements

The HTML  element defines bold text, without any extra importance.

Example : - This text is bold

The HTML  element defines text with strong importance. The content inside is typically displayed in bold.

Example : - This text is important!

## HTML  and  Elements

The HTML  element defines a part of text in an alternate voice or mood. The content inside is typically displayed in italic.

Tip: The  tag is often used to indicate a technical term, a phrase from another language, a thought, a ship name, etc.

Example : - This text is italic

The HTML  element defines emphasized text. The content inside is typically displayed in italic.

Tip: A screen reader will pronounce the words in  with an emphasis, using verbal stress.

Example : - This text is emphasized

## HTML <small> Element

The HTML <small> element defines smaller text:

Example : - <small>This is some smaller text.</small>

## HTML <mark> Element

The HTML <mark> element defines text that should be marked or highlighted:

Example : - Do not forget to buy <mark>milk</mark> today.

## HTML <del> Element

The HTML <del> element defines text that has been deleted from a document. Browsers will usually strike a line through deleted text:

Example : - My favorite color is <del>blue</del> red.

## HTML <ins> Element

The HTML <ins> element defines a text that has been inserted into a document. Browsers will usually underline inserted text:

Example : - My favorite color is <del>blue</del> <ins>red</ins>.

## HTML <sub> Element

The HTML <sub> element defines subscript text. Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font. Subscript text can be used for chemical formulas, like H2O:

Example : - This is <sub>subscripted</sub> text.

## HTML <sup> Element

The HTML <sup> element defines superscript text. Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font. Superscript text can be used for footnotes, like WWW[1]:

Example : - This is <sup>superscripted</sup> text.

## HTML Text Formatting Elements

| Tag | Description |
|---|---|
| <b> | Defines bold text |
|  | Defines emphasized text |
| <i> | Defines a part of text in an alternate voice or mood |
| <small> | Defines smaller text |
|  | Defines important text |
| <sub> | Defines subscripted text |
| <sup> | Defines superscripted text |
| <ins> | Defines inserted text |
| <del> | Defines deleted text |
| <mark> | Defines marked/highlighted text |