

Learn HTML

Learning Objectives:

1. Introduction to HTML
2. Basic Structure of an HTML page
3. Text formatting tags in HTML
4. Lists in HTML
5. HTML Links and navigation
6. Adding images to web pages
7. Using images as links
8. Image map
9. Adding video to web pages
10. Adding audio to web pages
11. Tables in HTML
12. HTML FORMS
13. HTML5 enhancements in form
14. Write accessible HTML using Semantic HTML tags



INTERNET AND WEB

Internet, Web, HTML, HTTP

Internet

- Inter-networking: Network of Networks
- Internet Supports lot of diff Services just one of which is World Wide Web (WWW).
- URL to locate data/stuff/resources render by a browser as a web page
(written by html language).
- Web is a virtual space where content is stored that can be accessed through internet like a road which takes you at some point.
- Over the internet using http (protocol) web is accessed.

Internet, Web, HTML, HTTP

Internet Other Services

- Non browser based Emails Server: app like outlook using SMTP or POP which lies outside of the web.
- File transfers Schemes using FTP like bittorrent which do not use http and bypass entirely web.
- Other services like Spotify, Other gaming servers, Voice over Internet Protocol (VoIP)
- Other mobile apps which do not use http port usually port 80

Now a day

Now a day all the services are available on web like email providers i.e. Hotmail, gmail replacing outlook...

Display documents over the internet i.e. Google Scholar website

Provide videos browsing like youtube instead of downloading the video files

Like other apps i.e. Word, google sheet

Web is also now become less popular due to different mobile apps that do not use http

Introduction to HTML

What is HTML?

- HTML was first created by **Tim Berners-Lee**, Robert Cailliau, and others starting in **1989**. It stands for **Hyper Text Markup Language**.
- Originally, the Internet was designed as a means for distributing information across a robust, non centralized network of computers in a **time of national emergency**.
- However, as more organizations and people adopted the Internet, **the need grew for easier access to resources** and for a richer display of information. Publishing HTML-formatted documents on the Internet via the World Wide Web proved to be the answer to these needs.
- **Hypertext means that the document contains links** that allow the reader to jump to other places in the document or to another document altogether. The latest version is known as **HTML5**

What is HTML?

- Markup languages prepare design of a page. These are presentational languages, and it doesn't include any kind of logic or algorithm.
- To do this HTML uses two things: tags and attributes.
- It defines the structure of webpages and determines how data is displayed online.
- HTML is used to indicate what text should be considered a heading, where paragraphs start and end, and what images should appear in the document, and to specify links between different pages.
- It is directly interpreted by the browser.

How HTML works

The code used to make them **visually appealing is known as CSS** and we shall focus on this in a later lesson. For now, we will focus on teaching you how to build rather than design. So basically, it involves formatting data, or it controls the presentation of data.

HTML files have .html extension.

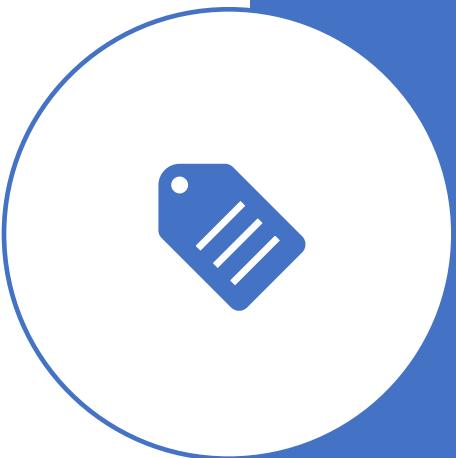
HTML is not case-sensitive, multiple spaces will appear as a single **space blank and new lines are ignored**.

While getting started with HTML, you will likely encounter new and often strange terms. Over time you will become more and more familiar with all of them, but the **three common HTML terms you should begin with are tags, elements, and attributes**.

Tags

- The use of less-than and greater-than angle brackets surrounding an element creates what is known as a tag.
- Tags most commonly occur in pairs of opening and closing tags.
- An opening tag marks the beginning of an element. It consists of a less-than sign followed by an element's name, and then ends with a greater-than sign; for example, <**div**>.
- A closing tag marks the end of an element. It consists of a less-than sign followed by a forward slash and the element's name, and then ends with a greater-than sign; for example, </**div**>.
- The content that falls between the opening and closing tags is the content of that element. An anchor link, for example, will have an opening tag of <a> and a closing tag of . What falls between these two tags will be the content of the anchor link.

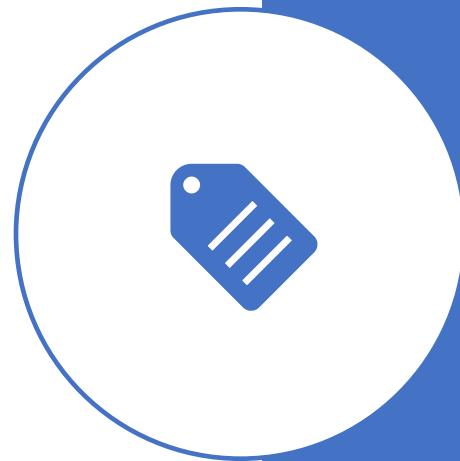
<a>...Content...



Elements

- An HTML element is defined by a start tag, some content, and an end tag.
- Elements are designators that define the structure and content of objects within a page.
- Some of the more frequently used elements include multiple levels of headings (identified as `<h1>` through `<h6>` elements) and
- paragraphs (identified as the `<p>` element);
- the list goes on to include the `<a>`, `<div>`, ``, ``, and `` elements, and many more.

`<p> I am trying to learn web </p>`



Attributes

Attributes:

- Attributes are properties used to provide additional information about an element.
- The most common attributes include
 - id attribute, which identifies an element;
 - class attribute, which classifies an element;
 - src attribute, which specifies a source for embeddable content; and
 - href attribute, which provides a hyperlink reference to a linked resource.
- Attributes are defined within the opening tag, after an element's name. Generally, attributes include a name and a value. The format for these attributes consists of the attribute name followed by an equals sign and then a quoted attribute value. For example, an element including an href attribute would look like the following:

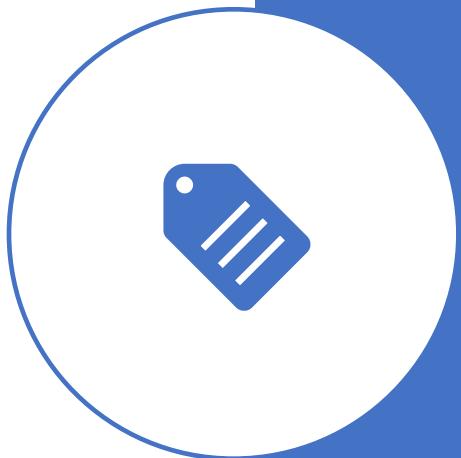
```
<a href="http://somewebsite.com/">Website</a>
```

Or

```

```

- In this instance, the image source (src) and the alt text (alt) are attributes of the tag.



Basic Construction of an HTML Page:

- **<!DOCTYPE html>** — All HTML documents must start with a <!DOCTYPE> declaration.
- The declaration is not an HTML tag. It is an "information" to the browser about what document type to expect.
- In HTML 5, the declaration is simple:
- **<!DOCTYPE html>**.

HTML 4.01:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
```

The <!DOCTYPE> declaration is NOT case sensitive.

- **<html>** — This tag signals that from here on we are going to write in HTML code and signifies the beginning of the document.
- **<head>** — Inside the <html> element, the <head> element identifies the top of the document, including any metadata (accompanying information about the page) goes — stuff mostly meant for search engines and other computer programs. The content inside the <head> element is not displayed on the web page itself. Instead, it may include the document title (which is displayed on the title bar in the browser window), links to any external files, or any other beneficial metadata.
- **<body>** — This is where the visible content of the page goes.

Basic Construction of an HTML Page:

- **Further Tags:**
 - Inside the `<head>` tag, there is one tag that is always included: `<title>`, but there are others that are just as important:
 - `<title>` - This is where we insert the page name as it will appear at the top of the browser window or tab.
 - `<meta>` - This is where information about the document is stored: character encoding, name (page context), description.
 - The `charset` attribute specifies the character encoding for the HTML document. The HTML5 specification encourages web developers to use the UTF-8 character set, which covers almost all of the characters and symbols in the world

Basic Construction of an HTML Page:

How to Add HTML Headings To Your Web Page:

In HTML, headings are written in the following elements:

- As you might have guessed `<h1>` and `<h2>` should be used for the most important titles, while the remaining tags should be used for sub-headings and less important text.
- **Search engine bots** use this order when deciphering which information is most important on a page.
- We will save this file as “index.html” in a new folder called “my webpage.”

Basic Construction of an HTML Page:

How To Add Text In HTML:

- Adding text to our HTML page is simple using an element opened with the tag `<p>` which creates a new paragraph. We place all of our regular text inside the element `<p>`.
- When we write text in HTML, we also have a number of other elements we can use to control the text or make it appear in a certain way.

Note:

- Because both the heading and paragraph are nested within the `<body>` element, they are visible on the web page.
- When an element is placed inside of another element, also known as nested, it is a good idea to indent that element to keep the document structure well organized and legible.
- In the previous code, both the `<head>` and `<body>` elements were nested and indented inside the `<html>` element. The pattern of indenting for elements continues as new elements are added inside the `<head>` and `<body>` elements.

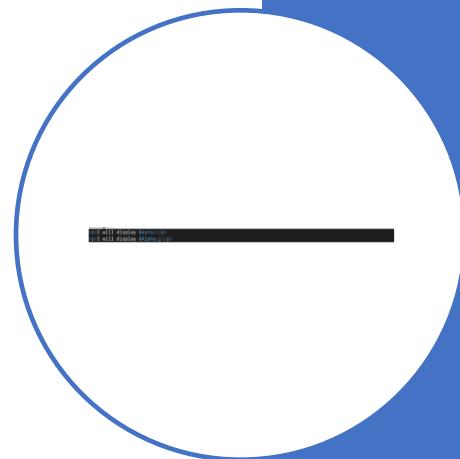
Element	Meaning	Purpose
	Bold	Highlight important information
	Strong	Similarly to bold, to highlight key text
<i>	Italic	To denote text
	Emphasised Text	Usually used as image captions
<mark>	Marked Text	Highlight the background of the text
<small>	Small Text	To shrink the text
<strike>	Striked Out Text	To place a horizontal line across the text
<u>	Underlined Text	Used for links or text highlights
<ins>	Inserted Text	Displayed with an underline to show an inserted text
<sub>	Subscript Text	Typographical stylistic choice
<sup>	Superscript Text	Another typographical presentation style

These tags must be opened and closed around the text in question.

Basic Construction of an HTML Page:

Special Characters:

- We can add special characters or symbol entities using Html as many mathematical, technical, and currency symbols, are not present on a normal keyboard.



Basic Construction of an HTML Page:

Special Characters:

- We can add special characters or symbol entities using Html as many mathematical, technical, and currency symbols, are not present on a normal keyboard.

Char	Entity	Description
	&nbsp	Non-breaking space
∀	&forall	FOR ALL
∂	&part	PARTIAL DIFFERENTIAL
∃	&exist	THERE EXISTS
∅	&empty	EMPTY SETS
A	&Alpha	GREEK CAPITAL LETTER ALPHA
B	&Beta	GREEK CAPITAL LETTER BETA
Γ	&Gamma	GREEK CAPITAL LETTER GAMMA
Δ	&Delta	GREEK CAPITAL LETTER DELTA
©	&copy	COPYRIGHT SIGN
®	&reg	REGISTERED SIGN
€	&euro	EURO SIGN
™	&trade	TRADEMARK
>	&gt	Greater-than sign

Basic Construction of an HTML Page:

Comments:

You can put comments between any tags in your HTML documents. Comments use the following syntax:

```
//single line comment  
  
<!-- Multiple  
lines comments  
-->
```

Anything after will not be displayed. It can still be seen in the source code for the document, but it is not shown on screen.

Note:

- It is good practice to comment your code, especially in complex documents
- Comments help you and others understand your code.

Basic Construction of an HTML Page:

Lists in HTML:

Html has tags and attributes to create un-ordered and ordered lists.

A. Un-ordered Lists:

- Starting Tag , Ending Tag
- List Items

```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Basic Construction of an HTML Page:

B. Ordered Lists:

- Starting Tag , Ending Tag
- List Items
 - Type (“1”, “A”, “a”, “I”, “i”)
 - Start (Alerts the numbering Sequence)
 - Value (Changes the number sequence in the middle of an ordered list)
 - reversed

```
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```