

# The Complete HTML Guide

## Topics covered:

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## Topics in Detail:

### 1. Introduction to HTML:

- HTML is a standard markup language used to create web pages.
- HTML stands for HyperText Markup Language.
- HTML defines the structure of web pages.
- HTML consists of a series of elements that tell the browser how to display the content.

#### 1.1.HTML Tags and Elements:

HTML uses tags to format the content:

Tags	Description
<!DOCTYPE html>	Defines that this document is an HTML5 document
<html>	Root element of an HTML page
<head>	Contains meta-information about the HTML page
<title>	Specifies a title that is shown in the browser title bar
<body>	Defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

An HTML element is defined by a start tag, some content, and an end tag.

Open tag	Closing tag	Description
<h1> to <h6>	</h1> to </h6>	Heading tags, <h1> defines the most important heading. <h6> defines the least important heading.
<p>	</p>	Defines a paragraph
 	No ending tag	Anything following this tag start from the next line

## 1.2. HTML Document Structure:

Simple HTML structure:

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



**Heading 1**

**Heading 2**

**Heading 3**

**Heading 4**

**Heading 5**

**Heading 6**

## 1.3. Important attributes:

- Attributes provide additional information about elements.
- Attributes are always specified in the start tag.
- Attributes usually come as name-value pairs. Ex: name= "value".

Tag	Attribute	Description
<p>	style	To add styles to elements like color, font, size..
<html>	lang	To declare the language of web page Example: <html lang= "en"> <html lang= "en-US">
<p>	title	To provide some additional information about the attribute and this appears as tooltip when mouse is placed over the attribute

## 1.4. HTML Formatting:

Inline tags	Description
<b>	Bold text
<i>	Italic text
<strong>	Important text

<code>&lt;em&gt;</code>	Emphasized text
<code>&lt;mark&gt;</code>	Marked text
<code>&lt;sub&gt;</code>	Subscript text
<code>&lt;sup&gt;</code>	Superscript text

## Code and Output:

```
<!DOCTYPE html>
<html>
  <head>
    <title>HTML Formatting</title>
  </head>
  <body>
    <p><b>This text is bold</b></p>
    <p><strong>This text is Important</strong></p>
    <p><i>This text is italics</i></p>
    <p><em>This text is Emphasized</em></p>
    <p><mark>This text is Marked</mark></p>
    <p>This text has <sub>subscript </sub> and
    <sup>Superscript</sup>.</p>
  </body>
</html>
```

**This text is bold**

**This text is Important**

*This text is italics*

*This text is Emphasized*

**This text is Marked**

This text has subscript and Superscript.

## 1.5. HTML Comments:

- Comments are not displayed in the browser, they are used to document the HTML source code.

```
<!--include about your image link after uploading the image-->
</img>
<!--include about yourself-->
<p>My name is "", about yourself</p>
<!--include about your audio link after uploading the audio-->
```

## 2. Links and List

### 2.1. HTML List:

HTML lists are used to group a set of related items in a list. Types of List:

Unordered list:

- Starts with - `<ul>`; Each list starts with- `<li>`

- **Code and Output:**

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

- Coffee
- Tea
- Milk

Ordered list:

- Starts with - <ol>; Each list starts with - <li>
- **Code and Output (default ordered list):**

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

1. Coffee
2. Tea
3. Milk

- **Code and Output (by using type attribute):**

```
<ol type="A">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

- A. Coffee
- B. Tea
- C. Milk

Description list :

- Starts with - <dl>; Tag name - <dt>; Tag Description - <dd>
- **Code and Output:**

```
<dl>
  <dt>Coffee</dt>
  <dd>- black hot drink</dd>
  <dt>Milk</dt>
  <dd>- white cold drink</dd>
</dl>
```

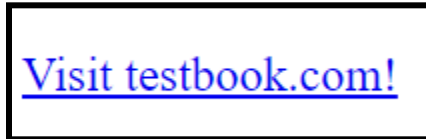
Coffee	- black hot drink
Milk	- white cold drink

## 2.2. href attribute:

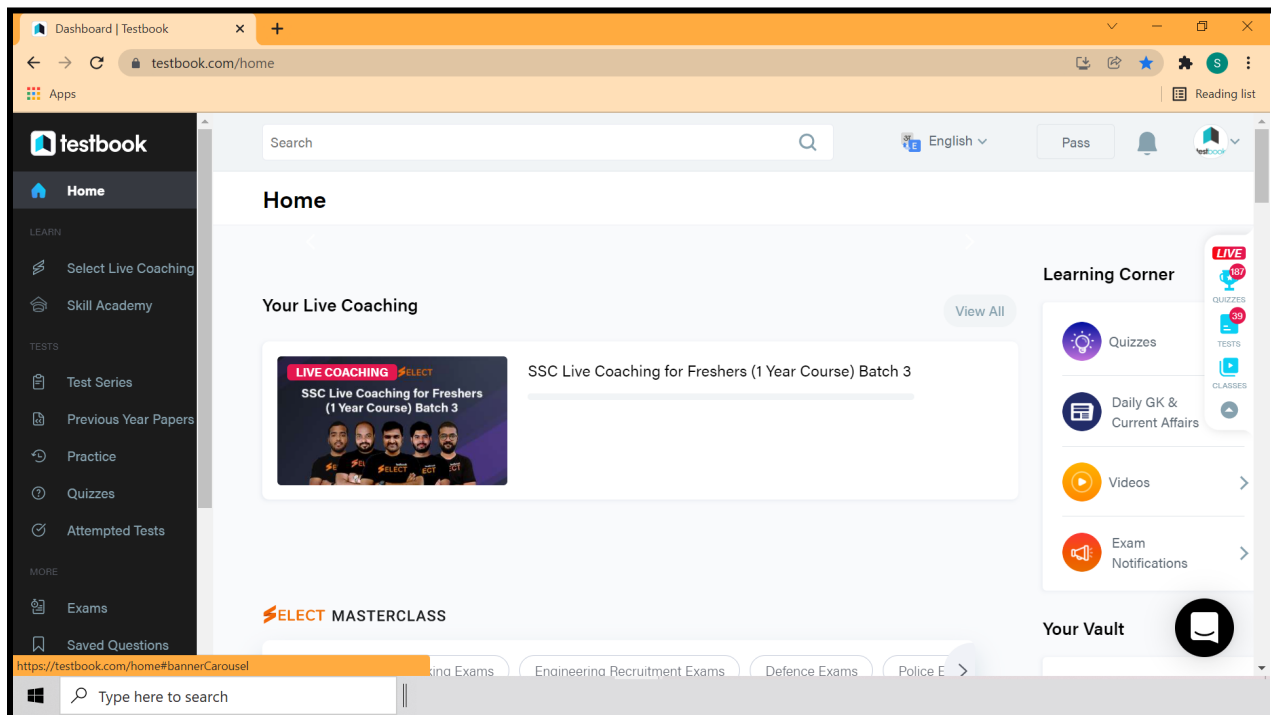
- <a> tag defines the hyperlink and the href attribute specifies the URL link of the page.
- Code:

```
<a href="https://www.testbook.com/">Visit testbook.com!</a>
```

- Output:



- When clicked the link:



## 3. Media

### 3.1. src attribute:

- `<img>` tag is used to embed an image in an HTML page. The `src` attribute specifies the path of the image to be displayed.
- Code:

```
<!DOCTYPE html>
<html>
  <head>
    <title>HTML Media</title>
  </head>
  <body>
    <!--Include your image path-->
    </img>
  </body>
</html>
```

- Image file added in the same folder of the html file:



- Output:



Important attributes of <img> tag:

Tag	Attribute	Description
<img>	width, height	To specify width and height of the image in pixels
<img>	alt	Specifies alternate text for image(not loaded)

### 3.2. HTML Iframes:

- HTML Iframes are used to display a webpage within a webpage.
- <iframe> is an inline level tag.
- Height and width attributes can be used to specify the size of other web pages included.
- Example Code:

```
<iframe width="560" height="315" src="https://www.youtube.com/embed/LGehGKhJXSU" title="YouTube video player" frameborder="0" allow="accelerometer; autoplay; clipboard-write; encrypted-media; gyroscope; picture-in-picture" allowfullscreen></iframe>
```

Output:

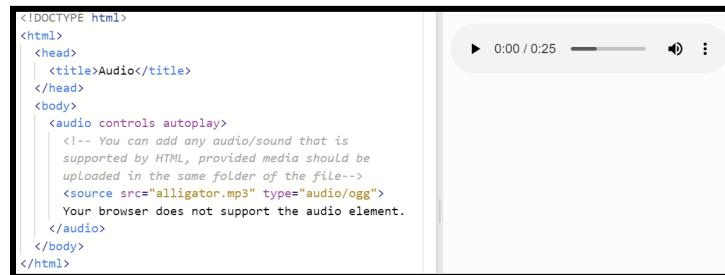


### 3.3. HTML video/audio:

- HTML <video> element is used to show video.
- HTML <audio> element is used to play an audio file in a web page.
- a good idea to always include width and height attributes. If height and width are not set, the page might flicker while the video loads.
- The controls attribute adds video controls, like play, pause, and volume.
- The <source> element allows you to specify alternative video/audio files which the browser may choose from. The browser will use the first recognized format.
- Example:



*video file should be included in the same folder of the html file*



*audio file should be included in the same folder of the html file*

## 4. HTML Tables:

HTML tables are used to arrange data in rows and columns.

Tags	Description
<table>	Defines HTML table
<tr>	Defines row
<th>	Defines table header, has bold and center style as default
<td>	Defines table data cell, has regular alignment



Example:

Table caption

Heading 1	Heading 2	Heading 3
Row 1 Cell 1	Row 1 Cell 2	Row 1 Cell 3
Row 2 Cell 1	Row 2 Cell 2	Row 2 Cell 3
Row 3 Cell 1	Row 3 Cell 2	Row 3 Cell 3

*The border is appearing because of the style included.*

## 5. HTML Grouping elements:

### 5.1. HTML Block and Inline Elements:

- HTML blocks and inline elements are used for displaying values.
- A block level element always takes up the full width available.
- An inline level element does not start in a new line and takes up as much width as necessary.
- A block level element has a top and bottom margin, whereas inline elements do not.

- Block Level elements:

<address>	<article>	<aside>	<blockquote>	<canvas>	<dd>
<div>	<dl>	<dt>	<fieldset>	<figcaption>	<figure>
<footer>	<form>	<h1>-<h6>	<header>	<hr>	<li>
<main>	<nav>	<noscript>	<ol>	<p>	<pre>
<section>	<table>	<tfoot>	<ul>	<video>	

- Inline level elements:

<a>	<abbr>	<acronym>	<b>	<bdo>	<big>
 	<button>	<cite>	<code>	<dfn>	<em>
<i>	<img>	<input>	<kbd>	<label>	<map>
<object>	<output>	<q>	<samp>	<script>	<select>
<small>	<span>	<strong>	<sub>	<sup>	<textarea>
<time>	<tt>	<var>			

- Important Block and Inline level element:

Tag	Description	Level
<div>	Defines the section in document	Block level
<span>	Defines a section inside the section in a document	Inline level

- Example:

```
<div class="header">
  <h1>Latest News</h1>
  <h4>Covid-19: Molnupiravir benefits outweigh risks, say top medical
  experts</h4>
</div>
```

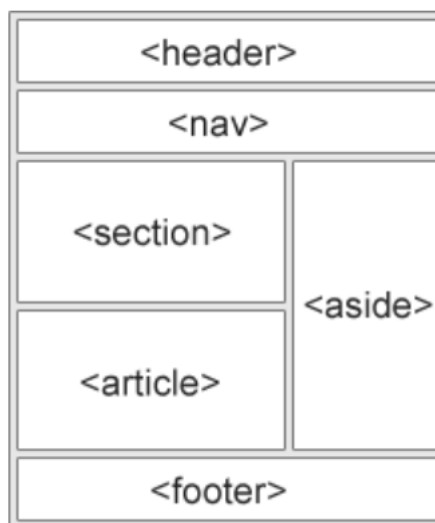
*div tag*

```
<p>
  Everybody knows that <span class="highlights">face masks are key </span>
  to preventing the spread of the pandemic. But not all masks hold up well
  in the face of the highly transmissible Omicron variant
</p>
```

*span tag*

## 5.2. HTML Semantic and Non elements:

- Semantic elements are the elements with meaning.
- Semantic elements example: <form>, <table>.
- Non semantic elements example: <div>, <span>.



### 5.3. HTML Classes:

- HTML class attribute is used to specify a class for an HTML element.
- Multiple HTML elements can share the same class.
- Often the class attribute is used to point to the class name in a style sheet.
- Example:
- **div with class name**

```
<div class="header">
  <h1>Latest News</h1>
  <h4>Covid-19: Molnupiravir benefits outweigh risks, say top medical
  experts</h4>
</div>
```

- **Style for the class**

```
.header, .highlights{
  color: red;
}
```

### 5.4. HTML ID:

- HTML ID attribute is used to specify the unique id of the element.
- Multiple elements cannot have the same id.
- Id attribute is used to give specific style and also used by JavaScript to access and manipulate the HTML elements.

## 6. HTML Form:

- HTML form is used to collect user input.
- Important Form attributes:

Attributes	Description
action	Defines the action to be performed when the form is submitted.
target	Specifies where to display the response received after submitting the form.
method	Specifies the HTTP method (get/post) to be used when submitting the form data.
onsubmit	Specifies what should happen on submit of form

- Important Form Elements:

Elements	Purpose
<input>	Used to get inputs from the user, can be used in many ways depending on the type(may be "number" or "name" ...)attribute of input.
<label>	Used to give some information about the input field. Can be used for good user experience.
<select>	For dropdown list.
<option>	Gives option for dropdown list used along with <select>.
<textarea>	Defines multiple line input field area.
<button>	Defines the clickable button.

- Example:

```

<form>
  <!-- Label for getting user information-->
  <label for="username">User Name</label><br>
  <!--input element - mandatory field -->
  <input type="text" name="username" required placeholder="Enter your name">
  <br><br>
  <!-- Label for getting user information-->
  <label for="email_id">Email id</label><br>
  <!--input element - mandatory field -->
  <input type="email" name="email_id" required placeholder="Enter your email id">
  <br><br>
  <!-- Label for getting user information-->
  <label for="passwrld">Password</label><br>
  <!--input element - mandatory field -->
  <input type="password" name="passwrld" required placeholder="Enter your password">
  <br><br>
  <!--button is used with alert function -->
  <button onclick="alert('Server validating')">Validate</button>
</form>

```

- Output:

User Name

Email id

Password