

HTML - HyperText Markup Language

Reference: [HTML DOCS](#)

"Hypertext" refers to links that connect web pages to one another, either within a single website or between websites. **HTML is the primary building block to create and structure website content.**

HTML markup includes special "elements" such as [<head>](#), [<title>](#), [<body>](#), [<header>](#), [<footer>](#), [<article>](#), [<section>](#), [<p>](#), [<div>](#), [](#), [](#), [<aside>](#), [<audio>](#), [<canvas>](#), [<datalist>](#), [<details>](#), [<embed>](#), [<nav>](#), [<output>](#), [<progress>](#), [<video>](#), [](#), [](#), [](#) and many others.

DEFINITION :

- HTML is the standard markup language for web pages.
- It describes the structure of a web page.

Sample:

<pre><!DOCTYPE html> <html> <head> <title>Page Title</title> </head> <body> <h1>This is a Heading</h1> <p>This is a paragraph.</p> </body> </html></pre>	<h1>This is a Heading</h1> <p>This is a paragraph.</p>
--	--

- The **<!DOCTYPE html>** declaration defines that this document is an HTML5 document. It is an "information" to the browser about what document type to expect.
- The **<html>** element is the root element of an HTML page
- The **<head>** element contains meta information about the HTML page
- The **<title>** element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The **<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.
- The **<h1>** element defines a large heading
- The **<p>** element defines a paragraph

Tags:

HTML tags are **like keywords which define how web browser will format and display the content.**

Headings:

<h1> to <h6>

Paragraphs:

<p>

Html Links:

This is a link

Images:

HTML Attributes : provides additional information about the element.

- All HTML elements can have attributes
- Attributes are always specified in the start tag
- Attributes usually come in name/value pairs like: name="value"
- All HTML elements can have attributes
- The **href** attribute of <a> specifies the URL of the page the link goes to
- The **src** attribute of specifies the path to the image to be displayed
- The **width** and **height** attributes of provide size information for images
- The **alt** attribute of provides an alternate text for an image
- The **style** attribute is used to add styles to an element, such as color, font, size, and more
- The **lang** attribute of the <html> tag declares the language of the Web page
- The **title** attribute defines some extra information about an element

Paragraphs:

<pre><pre> This text will be displayed in the same manner as it is written </pre></pre>	<p>This text will be displayed</p> <p>in the same manner as it is written</p>
<pre><pre> My Bonnie lies over the ocean. My Bonnie lies over the sea. My Bonnie lies over the ocean. Oh, bring back my Bonnie to me. </pre></pre>	<p>The pre tag preserves both spaces and line breaks:</p> <p>My Bonnie lies over the ocean.</p> <p>My Bonnie lies over the sea.</p> <p>My Bonnie lies over the ocean.</p> <p>Oh, bring back my Bonnie to me.</p>

displayed in a fixed-width font, and it preserves both spaces and line breaks	
<pre><p> My Bonnie lies over the ocean. My Bonnie lies over the sea. My Bonnie lies over the ocean. Oh, bring back my Bonnie to me. </p></pre> display on a single line	My Bonnie lies over the ocean. My Bonnie lies over the sea. My Bonnie lies over the ocean. Oh, bring back my Bonnie to me.
<pre><p>This is
a paragraph
with line breaks.</p></pre> if you want a line break (a new line) without starting a new paragraph	This is a paragraph with line breaks.

HTML Styles:

`<tagname style="property:value;">`

Example

`<body style="background-color:powderblue;">`

`<h1>This is a heading</h1>`

`<p>This is a paragraph.</p>`

`</body>`

Use the **style** attribute for styling HTML elements

- Use **background-color** for background color
- Use **color** for text colors
- Use **font-family** for text fonts
- Use **font-size** for text sizes
- Use **text-align** for text alignment

HTML Formatting Elements:

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

Formatting elements were designed to display special types of text:

- `` - Bold text
`<p>This text is bold.</p>` => **This text is bold.**
- `` - Important text
`<p>This text is important!</p>` => **This text is important!**
- `<i>` - Italic text
`<p><i>This text is italic.</i></p>` => *This text is italic.*
- `` - Emphasized text (means **to indicate that it is particularly important**)
`<p>This text is emphasized.</p>` => *This text is emphasized.*
- `<mark>` - Marked text
`<p>Do not forget to buy <mark>milk</mark> today.</p>` =>
Do not forget to buy **milk** today.
- `<small>` - Smaller text
`<p><small>This is some smaller text.</small></p>` => This is some smaller text.
- `` - Deleted text
`<p>My favorite color is blue red.</p>` => My favorite color is ~~blue~~-red.
- `<ins>` - Inserted text (a text that has been inserted into a document, Browsers will usually underline inserted text)

<p>My favorite color is blue <ins>red</ins>.</p> =>
My favorite color is ~~blue~~red.

- **<sub>** - Subscript text
<p>H₂O</p> => H₂O
- **<sup>** - Superscript text
<p>This is ^{superscripted} text.</p> => This is ^{superscripted} text.

HTML Quotation Elements:

Tag	Description
<u><abbr></u>	Defines an abbreviation or acronym
<u><address></u>	Defines contact information for the author/owner of a document
<u><bdo></u>	Defines the text direction
<u><blockquote></u>	Defines a section that is quoted from another source
<u><cite></u>	Defines the title of a work
<u><q></u>	Defines a short inline quotation

<abbr> - defines an abbreviation or an acronym

<p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>
=> The WHO was founded in 1948.

<address>- defines the contact information for the author/owner of a document or an article.

<pre><!DOCTYPE html> <html> <body> <p>The HTML address element defines contact information (author/owner) of a document or article.</p> <address> Written by John Doe.
 Visit us at:
 Example.com
 Box 564, Disneyland
 USA </address> </body> </html></pre>	<p>The HTML address element defines contact information (author/owner) of a document or article.</p> <p><i>Written by John Doe. Visit us at: Example.com Box 564, Disneyland USA</i></p>
---	--

`<bdo>`- Bi-Directional Override (used to override the current text direction)

`<bdo dir="rtl">`This line will be written from right to left`</bdo>` =>

tfel ot thgir morf nettirw eb lliw enil sihT

`<bdo dir="ltr">`This line will be written from right to left`</bdo>` =>

This line will be written from right to left

`<blockquote>`- indicates that the enclosed text is an extended quotation

HTML	CSS	OUTPUT
<pre>1 <figure> 2 <blockquote 3 cite="https://www.huxley.net/bnw/four.html"> 4 <p>Words can be like X-rays, if you use them 5 properly—they'll go through anything. You read and 6 you're pierced.</p> 7 </blockquote> 8 <figcaption>—Aldous Huxley, <cite>Brave New 9 World</cite></figcaption> 10 </figure></pre>		<div><p>"Words can be like X-rays, if you use them properly—they'll go through anything. You read and you're pierced."</p><p>—Aldous Huxley, <i>Brave New World</i></p></div>

`<cite>`-defines the title of a creative work

```

<p><cite>The Scream</cite> by Edvard
Munch. Painted in 1893.</p>
```



The Scream by Edvard Munch. Painted in 1893.

`<q>`- defines a short quotation

`<p>`WWF's goal is to: `<q>`Build a future where people live in harmony with nature.`</q></p>`

=> WWF's goal is to: "Build a future where people live in harmony with nature."

Comments:

```
<!-- This is a comment - - >
```

Colors:

```
rgb(red, green, blue)
```

```
hsl(hue, saturation, lightness) hsl(0, 100%, 80%)
```

hex (#rrggbb) hexadecimal values between 00 and ff

HTML CSS:

- Use the HTML `style` attribute for inline styling =>
`<p style="color:red;">A red paragraph.</p>`
- Use the HTML `<style>` element to define internal CSS

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1 {color: blue;}
p {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

- Use the HTML `<link>` element to refer to an external CSS file

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

- Use the HTML `<head>` element to store `<style>` and `<link>` elements
- Use the CSS `color` property for text colors
- Use the CSS `font-family` property for text fonts
- Use the CSS `font-size` property for text sizes
- Use the CSS `border` property for borders
- Use the CSS `padding` property for space inside the border
- Use the CSS `margin` property for space outside the border

HTML Links:(Anchor)

The HTML `<a>` tag defines a hyperlink. The most important attribute of the `<a>` element is the `href` attribute, which indicates the link's destination.

HTML links are hyperlinks. You can click on a link and jump to another document.

By default, links will appear as follows in all browsers:

- An unvisited link is underlined and blue
- A visited link is underlined and purple
- An active link is underlined and red

The `target` attribute can have one of the following values:

- `_self` - Default. Opens the document in the same window/tab as it was clicked
- `_blank` - Opens the document in a new window or tab
- `_parent` - Opens the document in the parent frame
- `_top` - Opens the document in the full body of the window

Use `mailto:` inside the `href` attribute to create a link that opens the user's email program (to let them send a new email)

```
<a href="mailto:someone@example.com">Send email</a>
```

HTML Images:

The `` tag has two required attributes:

- `src` - Specifies the path to the image
- `alt` - Specifies an alternate text for the image

```

```

```

```

```

```

Image in another folder:

```

```

HTML Favicon

A favicon is a small image displayed next to the page title in the browser tab.


```

<!DOCTYPE html>
<html>
<head>
  <title>My Page Title</title>
  <link rel="icon" type="image/x-icon" href="/images/favicon.ico">
</head>
<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>

```

HTML Tables

To arrange data into rows and columns

<h2>HTML Table</h2>

```

<table style="width:100%">
  <tr>
    <th>Company</th>
    <th>Contact</th>
    <th>Country</th>
  </tr>
  <tr>
    <td>Alfreds Futterkiste</td>
    <td>Maria Anders</td>
    <td>Germany</td>
  </tr>
  <tr>
    <td>Centro comercial Moctezuma</td>
    <td>Francisco Chang</td>
    <td>Mexico</td>
  </tr>
</table>

```

Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Centro comercial Moctezuma	Francisco Chang	Mexico

Tag	Description
<code><table></code>	Defines a table
<code><th></code>	Defines a header cell in a table
<code><tr></code>	Defines a row in a table
<code><td></code>	Defines a cell in a table
<code><caption></code>	Defines a table caption
<code><colgroup></code>	Specifies a group of one or more columns in a table for formatting
<code><col></code>	Specifies column properties for each column within a <code><colgroup></code> element
<code><thead></code>	Groups the header content in a table
<code><tbody></code>	Groups the body content in a table
<code><tfoot></code>	Groups the footer content in a table

`<td>` - table data | `<tr>` - table row

```

<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <td>Jill</td>
    <td>Eve</td>
  </tr>
  <tr>
    <th>Lastname</th>
    <td>Smith</td>
    <td>Jackson</td>
  </tr>
  <tr>
    <th>Age</th>
    <td>50</td>
    <td>94</td>
  </tr>
</table>

</body>
</html>

```

Firstname	Jill	Eve
Lastname	Smith	Jackson
Age	50	94

```

<table>
  <thead>
    <tr>
      <th>S.N</th>
      <th>Item</th>
      <th>Quantity</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>1</td>
      <td>Apple</td>
      <td>2</td>
    </tr>
    <tr>
      <td>2</td>
      <td>Mango</td>
      <td>2</td>
    </tr>
    <tr>
      <td>3</td>
      <td>Orange</td>
      <td>1</td>
    </tr>
  </tbody>
  <tfoot>
    <tr>
      <td></td>
      <td>Total</td>
      <td>5</td>
    </tr>
  </tfoot>
</table>

```

S.N	Item	Quantity
1	Apple	2
2	Mango	2
3	Orange	1
	Total	5

Table Colspan & Rowspan

The value of the **colspan** attribute represents the number of columns to span.

```

<table style="width:100%">
  <tr>
    <th colspan="2">Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>43</td>
  </tr>

```

To make a cell span more than one column, use the colspan attribute.

Name		Age
Jill	Smith	43
Eve	Jackson	57

<pre> <tr> <td>Eve</td> <td>Jackson</td> <td>57</td> </tr> </table> </pre>	
--	--

The value of the **rowspan** attribute represents the number of rows to span.

<pre> <table style="width:100%"> <tr> <th>Name</th> <td>Jill</td> </tr> <tr> <th rowspan="2">Phone</th> <td>555-1234</td> </tr> <tr> <td>555-8745</td> </tr> </table> </pre>	<p>To make a cell span more than one row, use the rowspan attribute.</p> <table> <tr> <td>Name</td><td>Jill</td></tr> <tr> <td>Phone</td><td>555-1234</td></tr> <tr> <td></td><td>555-8745</td></tr> </table>	Name	Jill	Phone	555-1234		555-8745
Name	Jill						
Phone	555-1234						
	555-8745						

HTML Lists: HTML lists are used to display related information in an easy-to-read and concise way as lists.

An unordered HTML list:

- Item
- Item
- Item
- Item

An ordered HTML list:

1. First item
2. Second item
3. Third item
4. Fourth item

<pre> Coffee Tea Milk </pre>	<pre> Coffee Tea Milk </pre>
--	--

Description Lists

A description list is a list of terms, with a description of each term.

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

<dl> tag defines the description list

<dt> tag defines the term (name)

<dd> tag describes each term

Unordered list	Ordered list
In an unordered list, each item is displayed with a bullet.	In an ordered list, each item is displayed along with the numbers or letters instead of bullets.
 and tags are used.	 and tags are used.

Mixed Lists:

<pre> Prepare the ingredients. Eggs Salt Butter Mix the ingredients and cook on a low flame. Serve hot with garnish. You can use </pre>	<ol style="list-style-type: none"> 1. Prepare the ingredients <ul style="list-style-type: none"> o Eggs o Salt o Butter 2. Mix the ingredients and cook on a low flame. 3. Serve hot with garnish. You can use <ul style="list-style-type: none"> o Chives o Bacon o Coriander
--	---

<pre>Chives Bacon Coriander </pre>	
--	--

Block and Inline Elements

A block-level element always starts on a new line, and the browsers automatically add some space (a margin) before and after the element.

Two commonly used block elements are: `<p>` and `<div>`.

Here are the block-level elements in HTML:

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

Inline Elements

An inline element does not start on a new line.

This is a `` element inside a paragraph.

Here are the inline elements in HTML:

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

HTML Iframes

An HTML iframe is used to display a web page within a web page.

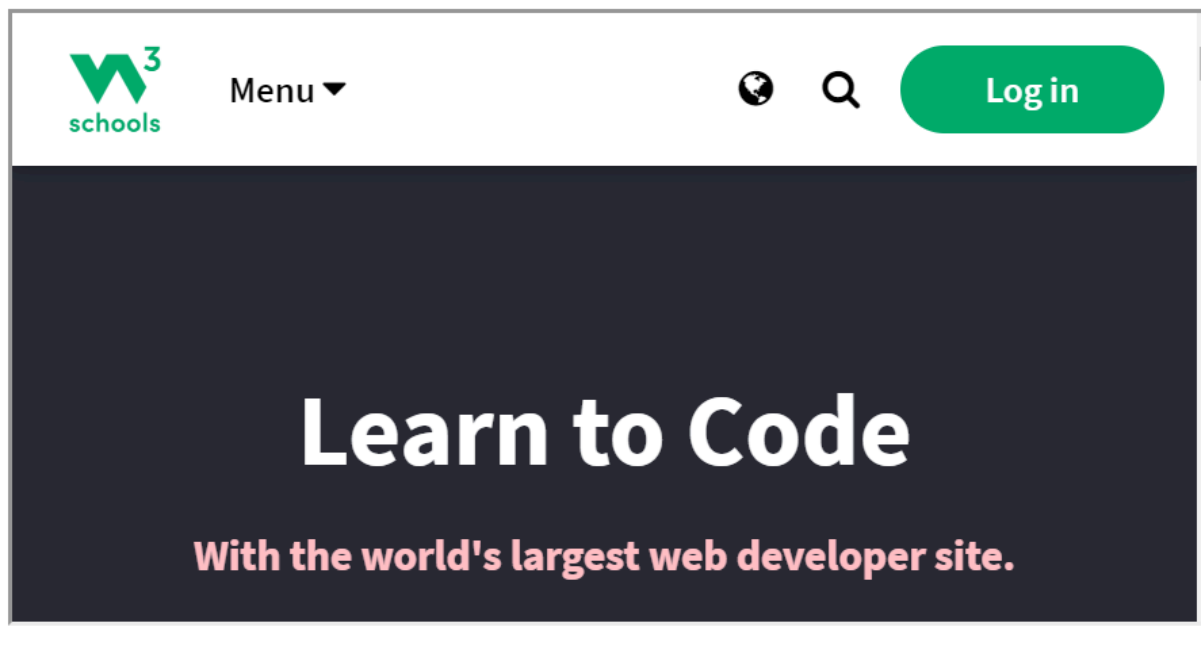
```
<h2>HTML Iframes</h2>
```

```
<p>You can also use the CSS height and width properties to specify the  
size of the iframe:</p>
```

```
<iframe src="https://www.w3schools.com" style="height:300px;width:600px"  
title="Iframe Example"></iframe>
```

HTML Iframes

You can also use the CSS height and width properties to specify the size of the iframe:



HTML Head

1. Setting the viewport to make your website look good on all devices:

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

2.Refresh document every 30 seconds:

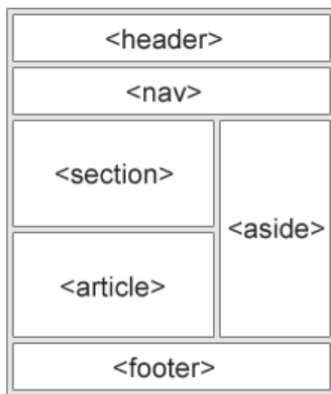
```
<meta http-equiv="refresh" content="30">
```

HTML head Elements

Tag	Description
<code><head></code>	Defines information about the document
<code><title></code>	Defines the title of a document
<code><base></code>	Defines a default address or a default target for all links on a page
<code><link></code>	Defines the relationship between a document and an external resource
<code><meta></code>	Defines metadata about an HTML document
<code><script></code>	Defines a client-side script
<code><style></code>	Defines style information for a document

HTML Layout Elements

HTML has several semantic elements that define the different parts of a web page:



- `<header>` - Defines a header for a document or a section
- `<nav>` - Defines a set of navigation links
- `<section>` - Defines a section in a document
- `<article>` - Defines an independent, self-contained content
- `<aside>` - Defines content aside from the content (like a sidebar)
- `<footer>` - Defines a footer for a document or a section
- `<details>` - Defines additional details that the user can open and close on demand
- `<summary>` - Defines a heading for the `<details>` element

You can read more about semantic elements in our [HTML Semantics](#) chapter.

Computer Code Elements

<code><code></code> x = 5; y = 6; z = x + y; <code></code></code>	x = 5; y = 6; z = x + y;
---	--------------------------

Notice that the `<code>` element does not preserve extra whitespace and line-breaks. To fix this, you can put the `<code>` element inside a `<pre>` element:

<code><pre></code> <code><code></code> x = 5;	x = 5; y = 6; z = x + y;
---	--------------------------------

<pre>y = 6; z = x + y; </code> </pre></pre>	
---	--

<var> For Variables

Example::

<p>The area of a triangle is: $1/2 \times \text{b} \times \text{h}$, where **b** is the base, and **h** is the vertical height.</p>

The area of a triangle is: $1/2 \times b \times h$, where b is the base, and h is the vertical height.

Semantic Elements

A semantic element **clearly describes its meaning** to both the browser and the developer.

Examples of non-semantic elements: <div> and - Tells nothing about its content.

Examples of semantic elements: <header>, <footer><form>, <table>, and <article> - Clearly defines its content.

HTML Entities

Some characters are reserved in HTML.

If you use the less than (<) or greater than (>) signs in your text, the browser might mix them with tags.

Example :

To display a less than sign (<) we must write: < or <

A commonly used entity in HTML is the non-breaking space: (10 km/h)

Result	Description	Entity Name	Entity Number
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	double quotation mark	"	"
'	single quotation mark (apostrophe)	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

FORMS:

An HTML form is used to collect user input. The user input is most often sent to a server for processing. (Emmet for html press ! in vs code and hit enter.)

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Form</title>
</head>
<body>
  <form>
    <label for="fname">First name:</label><br>
    <input type="text" value="Steve"/><br>
    <label for="lname">Last name:</label><br>
    <input type="text" value="Jobs"/><br>
    <label for="age">Age:</label><br>
    <input type="number" value="32"/><br>
    <button type="submit">Submit</button>
  </form>
</body>
</html>
```

First name:

Last name:

Age:

The `<form>` element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.

`<input>` Element

Each input field **must** have a `name` attribute to be submitted.

Type	Description
<code><input type="text"></code>	Displays a single-line text input field
<code><input type="radio"></code>	Displays a radio button (for selecting one of many choices)
<code><input type="checkbox"></code>	Displays a checkbox (for selecting zero or more of many choices)
<code><input type="submit"></code>	Displays a submit button (for submitting the form)
<code><input type="button"></code>	Displays a clickable button

`<label>` Element

The `<label>` element also help users who have difficulty clicking on very small regions (such as radio buttons or checkboxes) - because when the user clicks the text within the `<label>` element, it toggles the radio button/checkbox.

The `for` attribute of the `<label>` tag should be equal to the `id` attribute of the `<input>` element to bind them together.

Radio Buttons

Radio buttons let a user select ONE of a limited number of choices.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML Exercise</title>
</head>
<body>
  <form>
    <p>Choose your favorite language</p>
    <input type="radio" id="Python" name="fav_language" value="Python"/>
    <label for="Python">Python</label><br>
    <input type="radio" id="JS" name="fav_language" value="JS" />
    <label for="JS">JS</label><br>
    <input type="radio" id="Java" name="fav_language" value="Java" />
    <label for="Java">Java</label><br>
  </form>
</body>
</html>
```

Choose your favorite language

☐ Python

☐ JS

☒ Java

MUST have to add a name for the checkbox.

Checkboxes

Checkboxes let a user select ZERO or MORE options of a limited number of choices.

<pre><!DOCTYPE html> <html lang="en"> <head> <meta charset="UTF-8"> <meta http-equiv="X-UA-Compatible" content="IE=edge"> <meta name="viewport" content="width=device-width, initial-scale=1.0"> <title>HTML Exercise</title> </head> <body> <p>Choose your language</p> <input type="checkbox" /> <label for="Python">Python</label>
 <input type="checkbox" /> <label for="JS">JS</label>
 <input type="checkbox" /> <label for="Java">Java</label>
 </body> </html></pre>	<p>Choose your language</p> <p><input checked="" type="checkbox"/> Python</p> <p><input type="checkbox"/> JS</p> <p><input checked="" type="checkbox"/> Java</p>
---	--

Select

The `<select>` element defines a drop-down list:

Use the `size` attribute to specify the number of visible values

<pre><!DOCTYPE html> <html lang="en"> <head> <meta charset="UTF-8"> <meta http-equiv="X-UA-Compatible" content="IE=edge"> <meta name="viewport" content="width=device-width, initial-scale=1.0"> <title>HTML Exercise</title> </head> <body> <p>Choose your language</p> <select id="language" name="language"> <option value="Python">Python</option> <option value="JS">JS</option> <option value="Java">Java</option> </select> </body> </html></pre>	<p>Choose your language</p> <p>Java ▼</p>
--	---

```
<select id="language" name="language" size="3">
```

Textarea

The `<textarea>` element defines a multi-line input field

The **rows** attribute specifies the visible number of lines in a text area.

The **cols** attribute specifies the visible width of a text area.

Also define the size of the text area by using CSS

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML Exercise</title>
  <style>
    body{
      text-align: center;
      margin-bottom: 500px;
    }
    textarea{
      margin: 300px 0px 0px 0px;
    }
  </style>
</head>
<body>
  <textarea name="comments" rows="10" cols="50">
    The cat was playing in the garden.
    Mostly used for comments...
  </textarea>
</body>
</html>
```

The cat was playing in the garden.
Mostly used for comments...

Input Type Datetime-local

`<form>`

`<label for="birthdaytime">Birthday (date and time):</label>`

`<input type="datetime-local" id="birthdaytime" name="birthdaytime">`

`</form>`

Input Type File

`<form>`

`<label for="myfile">Select a file:</label>`

`<input type="file" id="myfile" name="myfile">`

`</form>`

Input Type Week

`<form>`

`<label for="week">Select a week:</label>`

```
<input type="week" id="week" name="week">
```

```
</form>
```

Input Type Url

```
<form>
```

```
<label for="homepage">Add your homepage:</label>
```

```
<input type="url" id="homepage" name="homepage">
```

```
</form>
```

Input Type Tel

```
<form>
```

```
<label for="phone">Enter your phone number:</label>
```

```
<input type="tel" id="phone" name="phone" pattern="[0-9]{3}-[0-9]{2}-[0-9]{3}">
```

```
</form>
```

Input Type Search

```
<form>
```

```
<label for="gsearch">Search Google:</label>
```

```
<input type="search" id="gsearch" name="gsearch">
```

```
</form>
```

Input Type Range

```
<form>
```

```
<label for="vol">Volume (between 0 and 50):</label>
```

```
<input type="range" id="vol" name="vol" min="0" max="50">
```

```
</form>
```

Volume (between 0 and 50):

Submit

Attribute	Description
checked	Specifies that an input field should be pre-selected when the page loads (for type="checkbox" or type="radio")
disabled	Specifies that an input field should be disabled
max	Specifies the maximum value for an input field
maxlength	Specifies the maximum number of character for an input field
min	Specifies the minimum value for an input field
pattern	Specifies a regular expression to check the input value against
readonly	Specifies that an input field is read only (cannot be changed)
required	Specifies that an input field is required (must be filled out)
size	Specifies the width (in characters) of an input field
step	Specifies the legal number intervals for an input field
value	Specifies the default value for an input field

Local Storage:

Local storage is a property that allows javascript sites and apps to save key value pairs in a web browser with no expiration.

```
<!DOCTYPE html>
<html>
<body>

<div id="result"></div>

<script>
// Check browser support
if (typeof(Storage) !==
"undefined") {
    // Store

localStorage.setItem("lastname"
, "Smith");
    // Retrieve

document.getElementById("result
").innerHTML =
localStorage.getItem("lastname"
);
} else {

document.getElementById("result
").innerHTML = "Sorry, your
browser does not support Web
Storage...";
}
</script>
```

Smith

<pre></body> </html></pre>	
--	--

There are four basic JavaScript localStorage methods you can use to access and work with localStorage:

- *setItem()* - takes a key-value pair and adds it to localStorage
- *getItem()* - takes a key and returns the corresponding value
- *removeItem()* - takes a key and removes the corresponding key-value pair
- *clear()* - clears localStorage (for the domain)

Session storage:

Session storage is a property that allows you to store data in the browser until the browser is closed.

```
<!DOCTYPE html>
<html>
<head>
<script>
function clickCounter() {
  if (typeof(Storage) !==
"undefined") {
    if
(sessionStorage.clickcount) {
      sessionStorage.clickcount
=
Number(sessionStorage.clickcoun
t)+1;
    } else {
      sessionStorage.clickcount
= 1;
    }
  }

  document.getElementById("result
").innerHTML = "You have
clicked the button " +
sessionStorage.clickcount + "
time(s) in this session.";
  } else {

  document.getElementById("result
").innerHTML = "Sorry, your
```

Click me!

You have clicked the button 4 time(s) in this session.

Click the button to see the counter increase.

Close the browser tab (or window), and try again, and the counter is reset.

<pre> browser does not support web storage..."; } } </script> </head> <body> <p><button onclick="clickCounter()" type="button">Click me!</button></p> <div id="result"></div> <p>Click the button to see the counter increase.</p> <p>Close the browser tab (or window), and try again, and the counter is reset.</p> </body> </html> </pre>	
--	--

<p>// Save data to sessionStorage</p>
--

<pre>sessionStorage.setItem("key", "value");</pre>
--

<p>// Get saved data from sessionStorage</p>

<pre>let data = sessionStorage.getItem("key");</pre>
--

<p>// Remove saved data from sessionStorage</p>
--

<pre>sessionStorage.removeItem("key");</pre>
--

<p>// Remove all saved data from sessionStorage</p>
--

<pre>sessionStorage.clear();</pre>

Meta elements:

Meta elements can be used to specify the page description, character set, viewport settings, and language settings.

Attributes of metadata:

charset attribute , **name** attribute , **http-equiv** attribute

The **charset** attribute defines the character encoding for the HTML document.

```
<meta charset="UTF-8">
```

The **name** attribute defines the name of metadata for the HTML document.

The **content** attribute defines the value of the metadata for the HTML document.

```
<meta name="description" content=" In this article you will learn about meta tags.">
```

The **http-equiv** attribute is used to provide an HTTP header for the information of the content attribute.

content-security-policy: Specifies a content policy for the document. It is used to specify allowed server URLs.

```
<meta http-equiv="content-security-policy" content="default-src 'self';" />
```

content-type: Specifies the character encoding for the document. It is the same as using the **charset** attribute. It is used to set the character encoding for the HTML document.

```
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
```

default-style: Specifies the preferred style sheet to use.

```
<meta http-equiv="default-style" content="stylesheet-1">
```

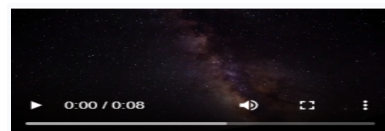
refresh: Defines a time interval for the document to refresh itself

```
<meta http-equiv="refresh" content="3" />
```

HTML Video:

The HTML **<video>** tag is used to embed a media player which supports video playback into the HTML page. We use the HTML **<video>** tag and the **<source>** tag to show the video.

```
<video width="320" height="190" controls>
  <source src="video.mp4"
  type="video/mp4">
</video>
```



Attributes of HTML Video tag:

- Controls - The **control** attribute allows the user to control the video.
- Poster - thumbnail to the video
- Autoplay - automatically plays the video
- Height and Width - specify the size of the video player in pixels
- Loop - will automatically play the video from the beginning once it ends
- Muted - sets the volume of the video to 0
- Src - location of the video file
- Preload - specifies how the video file should be loaded after the page loads for a better user experience. It may have one of the following values

```
<video preload="none" src="/videos/sample.mp4"></video>
```

none: Indicates that the video should not be preloaded.

```
<video preload="metadata" src="/videos/sample.mp4"></video>
```

metadata :Indicates that only video metadata is fetched.

```
<video preload="auto" src="/videos/sample.mp4"></video>
```

auto: Indicates that the entire video file will be loaded when the page loads

HTML Audio:

The HTML **<audio>** tag is used to embed a media player which supports audio playback into the HTML page.

```
<audio controls>  
  <source src="audio.mp3"  
  type="audio/mp3">  
</audio>
```



Attributes for audio are the same as video tags .

