

## HTML

HTML stands for Hyper Text Markup Language.

HTML describes the structure of Web pages using markup.

HTML elements are the building blocks of HTML pages

HTML elements are represented by tags

HTML tags label pieces of content such as "heading", "paragraph", "table", and so on

Browsers do not display the HTML tags, but use them to render the content of the page

## TAGS

Session 1:

<!DOCTYPE html> version of the HTML5

<html lang= "en-US"> HTML page in english </html>

<meta charset="UTF-8"> ----> data about the HTML document.

<head> Heading of the page </head>

<title> Title of the page, we can see the title in browser </title>

<body> Body of the page </body>

<h1> Large heading no.1 </h1> we can create upto h6.

<p> Paragraph </p>

Session 2:

<a href = "https://www.w3schools.com"> This is the link </a>



(src --> image file

alt --> alternative text when an image cannot be displayed

width --> width of an image

height --> height of an image)

<button> click me </button>

<ul> --> unordered list

<li>Coffee</li>

<li>Tea</li>

<li>Milk</li>

</ul>

<ol> ---> Ordered list

<li>Coffee</li>

<li>Tea</li>

<li>Milk</li>

</ol>

<br> ----> break line.

Session 3:

<p style= "color:red"> specifies the paragraph to be in red color </p>

<p title="Im a tooltip"> Im a tooltip text will display when you mouse over the paragraph </p>  
 <h1 style="font-size: 60px;"> specifies the large heading's font size to be 60px </h1>  
 <hr> ----> line, separate the content.  
 <pre>  
 My Bonnie lies over the ocean. ---> pre tags used for poems.  
 My Bonnie lies over the sea.  
 My Bonnie lies over the ocean.  
 Oh, bring back my Bonnie to me.  
 </pre>  
 <body style="background-color:powderblue;"> specifies the background colour for the page.  
 </body>  
 <h1 style="font-family:verdana;"> Specifies the font style </h1>  
 <h1 style="text-align:center;"> Specifies the text alignment </h1>

#### Session 4:

<b> Bold text </b>  
 <strong> Important text </strong>  
 <i> Italic text</i>  
 <em> Emphasized text </em>  
 <mark> Marked text </mark>  
 <small> Small text </small>  
 <del> Deleted text </del>  
 <ins> Inserted text </ins>  
 <sub> Subscript text </sub>  
 <sup> Superscript text </sup>  
 <q> quotation marked text</q>  
 <blockquote cite="http://www.worldwildlife.org/who/index.html">  
 quoted text from another source </blockquote>  
 <abbr title="World Health Organization">WHO</abbr>

#### Session 5:

<address>  
 Written by John Doe.<br>  
 Visit us at:<br>  
 Example.com<br>  
 Box 564, Disneyland<br>  
 USA  
 </address>  
 <cite>The Scream</cite> --> Title of the work displays in italic.  
 <bdo dir="rtl">This line will be written from right to left</bdo>  
 <!-- This is a comment -->  
 <h1 style="border:2px solid Tomato;">Hello World</h1> ----> border colour of the heading.

#### Session 6:

## Inline CSS

<h1 style="color:blue;">This is a Blue Heading</h1>

## Internal CSS

<style>

body {background-color: powderblue;}

h1 {color: blue;}

p {color: red;}

</style>

## External CSS

<link rel="stylesheet" href="https://www.w3schools.com/html/styles.css"> --->uses full URL

<link rel="stylesheet" href="/html/styles.css"> -->html folder on

the current web site

<link rel="stylesheet" href="styles.css"> ---> same folder

p {

border: 1px solid powderblue;

margin: 50px; ---> margin of the page

padding: 30px; ---> padding between the text and the border

}

<p id="p01">I am different</p> --->defining id

#p01 {

color: blue;

}

<p class="error">I am different</p> ---->defining class

p.error {

color: red;

}

## Session 7:

### HTML link colours

<style>

a:link {

color: green;

background-color: transparent;

text-decoration: none;

}

a:visited {

color: pink;

background-color: transparent;

text-decoration: none;

}

a:hover {

```

    color: red;
    background-color: transparent;
    text-decoration: underline;
}
a:active {
    color: yellow;
    background-color: transparent;
    text-decoration: underline;
}
</style>
<a href="https://www.w3schools.com/" target="_blank">Visit W3Schools!</a>
--->target attribute specifies where to open the linked document.
_blank - Opens the linked document in a new window or tab
_self - Opens the linked document in the same window/tab as it was clicked (this is default)
_parent - Opens the linked document in the parent frame
_top - Opens the linked document in the full body of the window
frameName - Opens the linked document in a named frame

<a href="default.asp"> --->image as link
  
</a>
<a href="https://www.w3schools.com/html/" title="Go to W3Schools HTML section">
Visit our HTML Tutorial</a> --->link title when mouse moves over the element.

```

Session 8:

```



<map name="workmap">    ---> image with clickable areas
  <area shape="rect" coords="34,44,270,350" alt="Computer" href="computer.htm">
  <area shape="rect" coords="290,172,333,250" alt="Phone" href="phone.htm">
  <area shape="circle" coords="337,300,44" alt="Coffee" href="coffee.htm">
</map>

<picture>                --->browser can choose the image that best fits the current
view and/or device.
  <source media="(min-width: 650px)" srcset="img_pink_flowers.jpg">
  <source media="(min-width: 465px)" srcset="img_white_flower.jpg">
  
</picture>

```

Tables:

```

<table style="width:100%">
<caption>Personal details</caption>
<tr>

```

```

    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
</tr>
<tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
</tr>
<tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
</tr>
</table>

```

```

table, th, td {
    border: 1px solid black;
    border-collapse: collapse; --->collapse to single line.
}

```

```

<caption>Adding a caption</caption>
<tr>
    <th rowspan="2">Telephone:</th> taking many rows
    <td>55577854</td>
</tr>

```

colspan ---> taking many columns

session 9:

lists:

```

<ul style="list-style-type: disc"> style can be disc,circle,square,none

```

```

<ol type="1"> can be type="A" or "a" or "I" or "i"

```

```

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

```

```

<ol start="50"> control listing strats from 50
    <li>Coffee</li>
    <li>Tea</li>
    <li>Milk</li>

```

</ol>

<div>hello</div> --> takes up the full width available (block level element)

<span>Hello</span> ---> prints in same line (inline element)

<span>world</span>

Using class

<style>

.city {

background-color: tomato;

color: white;

padding: 10px;

}

</style>

<h2 class="city">London</h2>

<p>London is the capital of England.</p>

Using id

<style>

#myHeader {

background-color: lightblue;

color: black;

padding: 40px;

text-align: center;

}

</style>

<h1 id="myHeader">My Header</h1>

Class vs id

An HTML element can only have one unique id that belongs to that single element, while a class name can be used by multiple elements:

<iframe src="URL"></iframe> --> used to display a web page within a web page.

Absolute file path

An absolute file path is the full URL to an internet file:



Relative file path

A relative file path points to a file relative to the current page. (best practice)

```

```

`<style>` style element for a single HTML page

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

External stylesheet link

```
<link rel="stylesheet" href="mystyle.css">
```

The `<meta>` element is used to specify which character set is used, page description, keywords, author, and other metadata.

Metadata is used by browsers (how to display content), by search engines (keywords), and other web services.

`<meta charset="UTF-8">` ---> defines character set used.

`<meta name="description" content="Free Web tutorials">` --> description of the web page.

`<meta name="keywords" content="HTML, CSS, XML, JavaScript">` ---> defines keywords for search engine

`<meta name="author" content="John Doe">` ---> author of the content

`<meta http-equiv="refresh" content="30">` ---> refresh document every 30 seconds.

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

`<base href="https://www.w3schools.com/images/" target="_blank">` --> the base URL and base target for all relative URLs in a page:

## Session 10

According to the HTML5 standard; the `<html>`, the `<body>`, and the `<head>` tag can be omitted.

`<header>` - Defines a header for a document or a section

`<nav>` - Defines a container for navigation links

`<section>` - Defines a section in a document

`<article>` - Defines an independent self-contained article

`<aside>` - Defines content aside from the content (like a sidebar)

`<footer>` - Defines a footer for a document or a section

`<details>` - Defines additional details

`<summary>` - Defines a heading for the `<details>` element

A responsive web page should look good on large desktop screens and small mobile phones.

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

<kbd> element represents user input, like keyboard input or voice commands.

<p>Save the document by pressing <kbd>Ctrl + S</kbd></p> --> takes input

<samp> element represents output from a program or computing system.

<p>If you input wrong value, the program will return <samp>Error!</samp></p> -->output

Einstein wrote: <var>E</var> = <var>mc</var><sup>2</sup>.

Einstein wrote: E = mc<sup>2</sup>.

<form> element defines a form that is used to collect user input:

<input type="text"> Defines a one-line text input field

```
<form>
First name:<br>
<input type="text" name="firstname"><br>
Last name:<br>
<input type="text" name="lastname">
</form>
```

<input type="radio"> Defines a radio button (for selecting one of many choices)

```
<form>
<input type="radio" name="gender" value="male" checked> Male<br>
<input type="radio" name="gender" value="female"> Female<br>
<input type="radio" name="gender" value="other"> Other
</form>
```

<input type="checkbox">

```
<form>
<input type="checkbox" name="vehicle1" value="Bike"> I have a bike<br>
<input type="checkbox" name="vehicle2" value="Car"> I have a car
</form>
```

<input type="submit"> Defines a submit button (for submitting the form)



`<input type="submit" value="Submit">`

`<input type="password">` defines a password field:

`<input type="reset">` defines a reset button that will reset all form values to their default values:

action attribute defines the action to be performed when the form is submitted.

`<form action="/action_page.php" target="_blank">`

dropdownlist:

```
<select name="cars" size="3" multiple>
  <option value="volvo" selected>Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
```

Textarea:

```
<textarea name="message" rows="10" cols="30">
The cat was playing in the garden.
</textarea>
```

button:

`<button type="button" onclick="alert('Hello World!')">Click Me!</button>`

Pre-defined options

```
<input list="browsers" name="browser">
<datalist id="browsers">
  <option value="Internet Explorer">
  <option value="Firefox">
  <option value="Chrome">
  <option value="Opera">
  <option value="Safari">
</datalist>
```

HTML5 added several new input types:

color

date

datetime-local

email ----> type="email" is not supported in IE9 and earlier.

month

number

range ---> type="range" is not supported in Internet Explorer 9 and earlier versions.

search

tel -->type="tel" is only supported in Safari 8 and newer versions.

time

url ---> The type="url" is not supported in IE9 and earlier versions.

week

HTML5 added the following attributes for <input>:

autocomplete

autofocus

form

formaction

formenctype

formmethod

formnovalidate

formtarget

height and width

list

min and max

multiple

pattern (regexp)

placeholder

required

step

and the following attributes for <form>:

autocomplete

novalidate

The most interesting new HTML5 elements are:

New semantic elements like <header>, <footer>, <article>, and <section>.

New attributes of form elements like number, date, time, calendar, and range.

New graphic elements: <svg> and <canvas>.

New multimedia elements: <audio> and <video>.

The most interesting new API's in HTML5 are:

HTML Geolocation

HTML Drag and Drop

HTML Local Storage

HTML Application Cache

HTML Web Workers

HTML SSE

