#### **HTML NOTES W3SCHOOLS**

HTML stands for Hyper Text Markup Language

1989	Tim Berners-Lee invented www
1991	Tim Berners-Lee invented HTML
1993	Dave Raggett drafted HTML+
1995	HTML Working Group defined HTML 2.0
1997	W3C Recommendation: HTML 3.2
1999	W3C Recommendation: HTML 4.01
2000	W3C Recommendation: XHTML 1.0
2008	WHATWG HTML5 First Public Draft
2012	WHATWG HTML5 Living Standard
2014	W3C Recommendation: HTML5
2016	W3C Candidate Recommendation: HTML 5.1
2017	W3C Recommendation: HTML5.1 2nd Edition
2017	W3C Recommendation: HTML5.2

#### Sample Document Page:

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
My first paragraph.
</body>
</html>
```

- The <!DOCTYPE html> declaration defines that this document is an HTML5 document
- 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 element defines a paragraph

Tag	Description
<head></head>	Defines information about the document
<title>&lt;/td&gt;&lt;td&gt;Defines the title of a document&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;base&gt;&lt;/td&gt;&lt;td&gt;Defines a default address or a default target for all links on a page&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;li&gt;&lt;li&gt;&lt;li&gt;&lt;/li&gt;&lt;/ul&gt;&lt;/td&gt;&lt;td&gt;Defines the relationship between a document and an external resource&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;meta&gt;&lt;/td&gt;&lt;td&gt;Defines metadata about an HTML document&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;script&gt;&lt;/td&gt;&lt;td&gt;Defines a client-side script&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;u&gt;&lt;style&gt;&lt;/u&gt;&lt;/td&gt;&lt;td&gt;Defines style information for a document&lt;/td&gt;&lt;/tr&gt;&lt;/tbody&gt;&lt;/table&gt;</title>	

#### <tagname>Content goes here...</tagname>

The <!DOCTYPE> declaration represents the document type, and helps browsers to display web pages correctly.

It must only appear once, at the top of the page (before any HTML tags).

The <!DOCTYPE> declaration is not case sensitive.

The <!DOCTYPE> declaration for HTML5 is:

```
<!DOCTYPE html>
```

HTML headings are defined with the  $\langle h1 \rangle$  to  $\langle h6 \rangle$  tags.

<h1> defines the most important heading. <h6> defines the least important heading:

#### Example

```
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
```

HTML paragraphs are defined with the tag:

#### Example

```
This is a paragraph.
This is another paragraph.
```

There are two ways to specify the URL in the src attribute:

**1. Absolute URL** - Links to an external image that is hosted on another website. Example: src="https://www.w3schools.com/images/img\_girl.jpg".

**Notes:** External images might be under copyright. If you do not get permission to use it, you may be in violation of copyright laws. In addition, you cannot control external images; it can suddenly be removed or changed.

**2. Relative URL** - Links to an image that is hosted within the website. Here, the URL does not include the domain name. If the URL begins without a slash, it will be relative to the current page. Example: src="img\_girl.jpg". If the URL begins with a slash, it will be relative to the domain. Example: src="/images/img\_girl.jpg".

# **HTML Attributes**

```
<a href="https://www.w3schools.com">Visit W3Schools</a>
<img src="img_girl.jpg">
This is a red paragraph.
This is a paragraph.
```

#### PRE TAG

The HTML element defines preformatted text.

The text inside a element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks:

```
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.

STYLE ATTRIBUTE
```

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

## **HTML Text Formatting Elements**

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

## **HTML Quotation and Citation Elements**

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

# **HTML Comment Tag**

You can add comments to your HTML source by using the following syntax:

<!-- Write your comments here -->

## **Using CSS**

CSS can be added to HTML documents in 3 ways:

Inline - by using the style attribute inside HTML elements

```
<h1 style="color:blue;">A Blue Heading</h1>
```

• Internal - by using a <style> element in the <head> section

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
     {color: blue;}
     {color: red;}
</style>
</head>
<body>
<h1>This is a heading</h1>
This is a paragraph.
</body>
</html>
```

• **External** - by using a link> element to link to an external CSS file

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
<h1>This is a heading</h1>
This is a paragraph.
</body>
</html>
```

```
• Use the HTML style attribute for inline styling

    Use the HTML <style> element to define internal CSS

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

    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 - Syntax**

The HTML <a> tag defines a hyperlink. It has the following syntax:

```
<a href="url">link text</a>
```

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

```
<a href="https://www.w3schools.com/" target="_blank">Visit W3Schools!</a>
```

## HTML Links - Use an Image as a Link

To use an image as a link, just put the <img> tag inside the <a> tag:

#### Example

```
<a href="default.asp">
<img src="smiley.gif" alt="HTML
tutorial" style="width:42px;height:42px;">
</a>
```

#### **Link to an Email Address**

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

#### Example

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

## **Button as a Link**

To use an HTML button as a link, you have to add some JavaScript code.

JavaScript allows you to specify what happens at certain events, such as a click of a button:

#### Example

#### **Link Titles**

The **title** attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element.

#### Example

```
<a href="https://www.w3schools.com/html/" title="Go to W3Schools HTML section">Visit our HTML Tutorial</a>
```

#### **HTML Link Colors**

```
<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>
```

#### **Create a Bookmark in HTML**

## **Example**

First, use the id attribute to create a bookmark:

```
<h2 id="C4">Chapter 4</h2>
```

Then, add a link to the bookmark ("Jump to Chapter 4"), from within the same page:

#### Example

```
<a href="#C4">Jump to Chapter 4</a>
```

## **HTML Images Syntax**

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

```
<img src="url" alt="alternatetext">
```

```
<img src="img_girl.jpg" alt="Girl in a
jacket" width="500" height="600">
```

## **Image as a Link**

Abbreviation	File Format	File Extension
APNG	Animated Portable Network Graphics	.apng
GIF	Graphics Interchange Format	.gif
ICO	Microsoft Icon	.ico, .cur
JPEG	Joint Photographic Expert Group image	.jpg, .jpeg, .jfif, .pjpeg, .pjp
PNG	Portable Network Graphics	.png
SVG	Scalable Vector Graphics	.svg

## **Background Image on a HTML element**

```
Or

<style>
body {
  background-image: url('img_girl.jpg');
  background-repeat: no-repeat;
  background-attachment: fixed;
  background-size: cover;
}
</style>
```

## The HTML <picture> Element

The HTML <picture> element gives web developers more flexibility in specifying image resources.

The <picture> element contains one or more <source> elements, each referring to different images through the srcset attribute. This way the browser can choose the image that best fits the current view and/or device.

Each <source> element has a media attribute that defines when the image is the most suitable.

#### Example

Show different images for different screen sizes:

## How To Add a Favicon in HTML

```
<link rel="icon" type="image/x-icon" href="/images/favicon.ico">
```

# **HTML Page Title**

```
<head>
  <title>HTML Tutorial</title>
</head>
```

# **HTML Tables**

td stands for table data.

tr stands for table row.

th stands for table header.

## **HTML Table Tags**

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

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

#### Code:

```
Company
Contact
Country

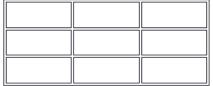
Country

Alfreds Futterkiste
Maria Anders

Cd>Germany
```

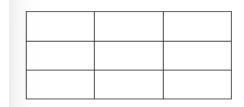
## **How To Add a Border**

```
table, th, td {
  border: 1px solid black;
}
```



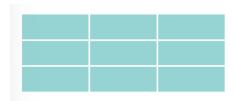
# **Collapsed Table Borders**

```
table, th, td {
  border: 1px solid black;
  border-collapse: collapse;
}
```

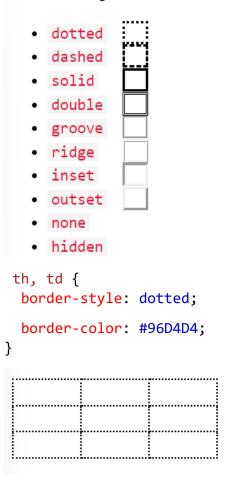


## **Style Table Borders**

```
table, th, td {
  border: 1px solid white;
  border-collapse: collapse;
}
th, td {
  background-color: #96D4D4;
}
```



The following values are allowed



#### 

#### 100% wide HTML Table

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

```
        style="width:70%">Firstname
        Lastname
        Age

        /tr>
        /tr
```

```
Firstname
Lastname
Age
Jill
Smith
50
Eve
Jackson
94
```

## **Vertical Table Headers**

```
Firstname
 Jill
 Eve
Lastname
 Smith
 Jackson
Age
 94
 50
```

Firstname	Jill	Eve
Lastname	Smith	Jackson
Age	50	94

# Align Table Headers

By default, table headers are bold and centered:

Firstname	Lastname	Age
llic	Smith	50
Eve	Jackson	94

```
th {
  text-align: left;
}
```

# Header for Multiple Columns

You can have a header that spans over two or more columns.

Name		Age
Jill	Smith	50
Eve	Jackson	94

To do this, use the colspan attribute on the element:

```
Name
Age
Jill
Smith
50
Eve
Jackson
94
```

# **Table Caption**

You can add a caption that serves as a heading for the entire table.

Monthly savings

Month	Savings
January	\$100
February	\$50

To add a caption to a table, use the <caption> tag:

HTML tables can have cells that span over multiple rows and/or columns.

NAME		

APRIL	

2022		
FIESTA		

```
Name
Age

Phone
</d>
</d>
```

1     2     3     4       5     6     7     8       9     10     11     12	
9 10 11 12	1
	5
10 15	9
13 14 15 16	13
17 18 19 20	17

```
tr:nth-child(even) {
  background-color: #D6EEEE;
}
```

# **HTML Lists**

An unordered HTML list:

- Item
- Item
- Item
- Item

```
Coffee
Tea
Milk
```

# type="1" The list items will be numbered with numbers (default) type="A" The list items will be numbered with uppercase letters type="a" The list items will be numbered with lowercase letters type="I" The list items will be numbered with uppercase roman numbers type="i" The list items will be numbered with lowercase roman numbers

#### An ordered HTML list:

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

```
    Coffee
    Tea
```

```
Milk
```

Value	Description
disc	Sets the list item marker to a bullet (default)
circle	Sets the list item marker to a circle
square	Sets the list item marker to a square
none	The list items will not be marked

## A Description List

Tag	Description
<u><ul></ul></u>	Defines an unordered list
<u><ol></ol></u>	Defines an ordered list
<u><li></li></u>	Defines a list item
<u><dl></dl></u>	Defines a description list
<u><dt></dt></u>	Defines a term in a description list
<u><dd></dd></u>	Describes the term in a description list

The element is a block-level element.

```
<span>Hello World</span>
```

#### **Iframe TAGS**

```
<iframe src="url" title="description"></iframe>
```

## File Path Examples

Path	Description
<img src="picture.jpg"/>	The "picture.jpg" file is located in the same folder as the current page
<img src="images/picture.jpg"/>	The "picture.jpg" file is located in the images folder in the current folder
<img src="/images/picture.jpg"/>	The "picture.jpg" file is located in the images folder at the root of the current web
<img src="/picture.jpg"/>	The "picture.jpg" file is located in the folder one level up from the current folder

## **Relative File Paths**

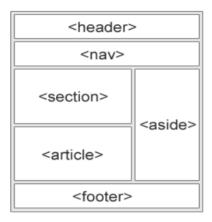
```
<img src="/images/picture.jpg" alt="Mountain">
```

## **Absolute File Paths**

<img src="https://www.w3schools.com/images/picture.jpg" alt="Mountain">

#### **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 <u>HTML</u> <u>Semantics</u> chapter.

## **HTML Entities**

&entity\_name;

OR

&#entity number;

<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	double quotation mark	"	"
•	single quotation mark (apostrophe)	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

## **HTML Forms**

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

```
<form>
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname"><</form>
```

## **Radio Buttons**

#### **Checkboxes**

```
<input type="checkbox" id="vehicle3" name="vehicle3" value="Boat">
  <label for="vehicle3"> I have a boat</label>
</form>

    I have a bike
    I have a car
    I have a boat
```

#### **Submit Button**

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

#### **Action Attribute**

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

## **The Method Attribute**

The method attribute specifies the HTTP method to be used when submitting the form data.

The form-data can be sent as URL variables (with method="get") or as HTTP post transaction (with method="post").

#### **Notes on GET:**

- Appends the form data to the URL, in name/value pairs
- NEVER use GET to send sensitive data! (the submitted form data is visible in the URL!)
- The length of a URL is limited (2048 characters)
- Useful for form submissions where a user wants to bookmark the result
- GET is good for non-secure data, like guery strings in Google

#### **Notes on POST:**

- Appends the form data inside the body of the HTTP request (the submitted form data is not shown in the URL)
- POST has no size limitations, and can be used to send large amounts of data.

Form submissions with POST cannot be bookmarked

#### The HTML <form> Elements

```
<input>
<label>
<label>
<select>
<textarea>
<button>
<fieldset>
<legend>
<datalist>
<output>
<option>
<option>
<optgroup>
```

#### The <select> Element

#### Allow Multiple Selections:

```
<input type="submit" value="Submit">
  </fieldset>
</form>
```

Personalia:	
First name:	
John	
Last name:	
Doe	
Submit	

Tag	Description
<form></form>	Defines an HTML form for user input
<input/>	Defines an input control
<textarea>&lt;/td&gt;&lt;td&gt;Defines a multiline input control (text area)&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;label&gt;&lt;/td&gt;&lt;td&gt;Defines a label for an &lt;input&gt; element&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;fieldset&gt;&lt;/td&gt;&lt;td&gt;Groups related elements in a form&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;legend&gt;&lt;/td&gt;&lt;td&gt;Defines a caption for a &lt;fieldset&gt; element&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;select&gt;&lt;/td&gt;&lt;td&gt;Defines a drop-down list&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;optgroup&gt;&lt;/td&gt;&lt;td&gt;Defines a group of related options in a drop-down list&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;option&gt;&lt;/td&gt;&lt;td&gt;Defines an option in a drop-down list&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;button&gt;&lt;/td&gt;&lt;td&gt;Defines a clickable button&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;datalist&gt;&lt;/td&gt;&lt;td&gt;Specifies a list of pre-defined options for input controls&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;output&gt;&lt;/td&gt;&lt;td&gt;Defines the result of a calculation&lt;/td&gt;&lt;/tr&gt;&lt;/tbody&gt;&lt;/table&gt;</textarea>	

```
<input type="button">
<input type="checkbox">
• <input type="color">
<input type="date">

    <input type="datetime-local">

<input type="email">
• <input type="file">
<input type="hidden">
<input type="image">
• <input type="month">
<input type="number">
<input type="password">
<input type="radio">
<input type="range">
<input type="reset">
<input type="search">
<input type="submit">
<input type="tel">
<input type="text">
< <input type="time">
<input type="url">
<input type="week">
```

## The readonly Attribute

```
<form>
    <label for="fname">First name:</label><br>
    <input type="text" id="fname" name="fname" value="John" readonly><br>
    <label for="lname">Last name:</label><br>
        <input type="text" id="lname" name="lname" value="Doe">
</form>
```

#### disabled Attribute

## required Attribute

```
     <form>
     <label for="username">Username:</label>
          <input type="text" id="username" name="username" required>
</form>
```

#### The min and max Attributes

## The maxlength Attribute

# **HTML Video**