HTML TUTORIAL

HTML is a **markup** language for **describing** web documents (web pages).

* HTML stands for **H**yper **T**ext **M**arkup **L**anguage
* A markup language is a set of **markup tags**
* HTML documents are described by **HTML tags**
* Each HTML tag **describes** different document content

HTML tags are **keywords** (tag names) surrounded by **angle brackets**:

<tagname>content</tagname>

* HTML tags normally come **in pairs** like <p> and </p>
* The first tag in a pair is the **start tag,** the second tag is the **end tag**
* The end tag is written like the start tag, but with a **slash** before the tag name

**Common Declarations**

**HTML5**

<!DOCTYPE html>

**HTML 4.01**

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

**XHTML 1.0**

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

**HTML Versions**

Since the early days of the web, there have been many versions of HTML:

|  |  |
| --- | --- |
| **Version** | **Year** |
| HTML | 1991 |
| HTML 2.0 | 1995 |
| HTML 3.2 | 1997 |
| HTML 4.01 | 1999 |
| XHTML | 2000 |
| HTML5 | 2014 |

EMPTY TAGS

**AREA**  
[Client-side image map area](http://everything2.com/title/Client-side+image+map+area).

**BASE**  
[Document base URL](http://everything2.com/title/Document+base+URL).

**BASEFONT**  
[Base font size](http://everything2.com/title/Base+font+size).

**BR**  
[Forced line break](http://everything2.com/title/Forced+line+break).

**COL**  
[Table column](http://everything2.com/title/Table+column).

**FRAME**  
[Subwindow](http://everything2.com/title/Subwindow).

**HR**  
[Horizontal rule](http://everything2.com/title/Horizontal+rule).

**IMG**  
[Embedded image](http://everything2.com/title/Embedded+image).

**INPUT**  
[Form control](http://everything2.com/title/Form+control).

**ISINDEX**  
[Single line prompt](http://everything2.com/title/Single+line+prompt).

**LINK**  
[A media independent link](http://everything2.com/title/A+media+independent+link).

**META**  
[Generic metainformation](http://everything2.com/title/Generic+metainformation).

**PARAM**  
[Named property value.](http://everything2.com/title/Named+property+value.)

**HTML Attributes**

* HTML elements can have **attributes**
* Attributes provide **additional information** about an element
* Attributes are always specified in **the start tag**
* Attributes come in name/value pairs like: **name="value"**

<htmllang="en-US">

<p title="About W3Schools">

<ahref="http://www.w3schools.com">This is a link</a>

<imgsrc="w3schools.jpg"alt="W3Schools.com"width="104"height="142">

**Single or Double Quotes? - both are acceptable**

**HTML Attributes**

Below is an alphabetical list of some attributes often used in HTML:

|  |  |
| --- | --- |
| **Attribute** | **Description** |
| alt | Specifies an alternative text for an image |
| disabled | Specifies that an input element should be disabled |
| href | Specifies the URL (web address) for a link |
| id | Specifies a unique id for an element |
| src | Specifies the URL (web address) for an image |
| style | Specifies an inline CSS style for an element |
| title | Specifies extra information about an element (displayed as a tool tip) |
| value | Specifies the value (text content) for an input element. |

**HTML Headings**

Headings are defined with the <h1> to <h6> tags.

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

**HTML Horizontal Rules**

The **<hr>** tag creates a horizontal line in an HTML page.

**The HTML <head> Element**

The HTML **<head>** element has nothing to do with HTML headings.

The HTML <head> element contains **meta data**. Meta data are not displayed.

<head>  
 <title>My First HTML</title>  
 <metacharset="UTF-8">

**More Meta Elements**

In the chapter about HTML styles you discover more meta elements:

The HTML **<style>** element is used to define internal CSS style sheets.

The HTML **<link>** element is used to define external CSS style sheets.

**HTML Display**

You cannot be sure how HTML will be displayed.

Large or small screens, and resized windows will create different results.

With HTML, you cannot change the output by adding extra spaces or extra lines in your HTML code.

The browser will remove extra spaces and extra lines when the page is displayed.

Any number of spaces, and any number of new lines, count as **only one space**.

**The HTML <pre> Element**

The HTML <pre> element defines preformatted text.

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

<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>

**HTML Styling**

Every HTML element has a **default style** (background color is white and text color is black).

Changing the default style of an HTML element, can be done with the **style attribute**.

<bodystyle="background-color:lightgrey">  
  
<h1>This is a heading</h1>  
<p>This is a paragraph.</p>  
  
</body>

NOTE :- bgcolor attribute, supported in older versions of HTML, is not valid in HTML5

**HTML Fonts**

<h1style="font-family:verdana">This is a heading</h1>  
<pstyle="font-family:courier">This is a paragraph.</p>

<h1style="font-size:300%">This is a heading</h1>  
<pstyle="font-size:160%">This is a paragraph.</p>

<h1style="text-align:center">Centered Heading</h1>  
<p>This is a paragraph.</p>

The <font> tag, supported in older versions of HTML, is not valid in HTML5.

The <center> tag, supported in older versions of HTML, is not valid in HTML5.

**HTML Formatting Elements**

In the previous chapter, you learned about HTML **styling**, using the HTML **style attribute**.

HTML also defines special **elements**, for defining text with a special **meaning**.

HTML uses elements like <b> and <i> for formatting output, like **bold** or *italic* text.

**Formatting elements were designed to display special types of text:**

* Bold text - b
* Important text - strong
* Italic text - i
* Emphasized text - em
* Marked text - mark
* Small text - small
* Deleted text - deleted
* Inserted text - ins (bydefault underlined)
* Subscripts - sub
* Superscripts -sup

**HTML <q> for Short Quotations**

The HTML **<q>** element defines a short quotation. “”

**HTML <blockquote> for Long Quotations**

The HTML **<blockquote>** element defines a quoted section.

Browsers usually indent <blockquote> elements.

**HTML <abbr> for Abbreviations**

The HTML **<abbr>** element defines an abbreviation or an acronym.

Marking abbreviations can give useful information to browsers, translation systems and search-engines.

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

**HTML <address> for Contact Information**

The HTML **<address>** element defines contact information (author/owner) of a document or article.

The <address> element is usually displayed in italic. Most browsers will add a line break before and after the element.

**HTML <cite> for Work Title**

The HTML **<cite>** element defines the title of a work.

Browsers usually display <cite> elements in italic.

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

**HTML <bdo> for Bi-Directional Override**

The HTML **<bdo>** element defines bi-directional override.

The <bdo> element is used to override the current text direction:

<bdodir="rtl">This text will be written from right to left</bdo>

O/p - This line will be written from right to left

**HTML Computer Code Elements**

Normally, HTML uses **variable** letter size, and variable letter spacing.

This is not wanted when displaying examples of **computer code**.

The **<kbd> keyboard**, **<samp>**, and **<code>** elements all support **fixed** letter size and spacing.

**HTML Code Formatting**

The HTML **<code>** element defines **programming code**:

The <code> element does **not** preserve extra **whitespace** and **line-breaks**:

To fix this, you must wrap the code in a <pre> element:

<code>  
var person = { firstName:"John", lastName:"Doe", age:50, eyeColor:"blue" }  
</code>

**HTML Sample Formatting**

The HTML **<samp>** element defines a **computer output**:

<samp>  
demo.example.com login: Apr 12 09:10:17  
Linux 2.6.10-grsec+gg3+e+fhs6b+nfs+gr0501+++p3+c4a+gr2b-reslog-v6.189  
</samp>

**HTML *Variable* Formatting**

The HTML **<var>** element defines a **mathematical variable**:

<p>Einstein wrote:</p>  
  
<p><var>E = m c<sup>2</sup></var></p>

**Software Program Tags**

HTML comments tags can also be generated by various HTML software programs.

For example <!--webbot bot--> tags wrapped inside HTML comments by FrontPage and Expression Web.

As a rule, let these tags stay, to help support the software that created them.

**HTML Styles - CSS**

<head>  
<style>  
 body {background-color:lightgray}  
h1 {color:blue}  
p {color:green}  
</style>  
</head>  
<body>  
  
<h1>This is a heading</h1>  
<p>This is a paragraph.</p>  
  
</body>

**Styling HTML with CSS**

CSS stands for **C**ascading **S**tyle **S**heets

Styling can be added to HTML elements in 3 ways:

* Inline - using a **style attribute** in HTML elements
* Internal - using a **<style> element** in the HTML <head> section
* External - using one or more **external CSS files**

**CSS Syntax**

*element*{ *property*:*value; property:value }*

The **element** is an HTML element name. The ***property*** is a CSS property. The ***value*** is a CSS value.

**Inline Styling (Inline CSS)**

<h1style="color:blue">This is a Blue Heading</h1>

**External Styling (External CSS)**

<linkrel="stylesheet"href="styles.css">

**CSS Fonts**

The CSS **color** property defines the text color to be used for the HTML element.

The CSS **font-family** property defines the font to be used for the HTML element.

The CSS **font-size** property defines the text size to be used for the HTML element.

h1 {  
 color:blue;  
 font-family:verdana;  
 font-size:300%;}

**The CSS Box Model**

Every HTML element has a box around it, even if you cannot see it.The CSS **border** property defines a visible border around an HTML element:

p {  
 border:1px solid black;  
}

The CSS **padding** property defines a padding (space) inside the border:

The CSS **margin** property defines a margin (space) outside the border:

p {  
 border:1px solid black;  
 padding:10px;  
 margin:30px;  
 }

**The id Attribute :-** <pid="p01">I am different</p> “#”

**The class Attribute :-** <pclass="error">I am different</p> “.”

|  |
| --- |
| Without a trailing slash on subfolder addresses, you might generate two requests to the server. Many servers will automatically add a trailing slash to the address, and then create a new request. |

**Local Links**

The example above used an absolute URL (A full web address).

A local link (link to the same web site) is specified with a relative URL (without http://www....).

<ahref="html\_images.asp">HTML Images</a>

**HTML Links - 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>

<ahref="http://www.w3schools.com/"target="\_blank">Visit W3Schools!</a>

|  |  |
| --- | --- |
| \_blank | Opens the linked document in a new window or tab |
| \_self | Opens the linked document in the same frame 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">  
 <img src="smiley.gif" alt="HTML tutorial" style="width:42px;height:42px;border:0">  
</a>

* [HTML](http://www.w3schools.com/html/default.asp)
* [CSS](http://www.w3schools.com/css/default.asp)
* [JAVASCRIPT](http://www.w3schools.com/js/default.asp)
* [SQL](http://www.w3schools.com/sql/default.asp)
* [PHP](http://www.w3schools.com/php/default.asp)
* [jQUERY](http://www.w3schools.com/jquery/default.asp)
* [BOOTSTRAP](http://www.w3schools.com/bootstrap/default.asp)
* [ANGULAR](http://www.w3schools.com/angular/default.asp)
* [XML](http://www.w3schools.com/xml/default.asp)
* [TUTORIALS](http://www.w3schools.com/html/html_links.asp#)
* [REFERENCES](http://www.w3schools.com/html/html_links.asp#)
* [EXAMPLES](http://www.w3schools.com/html/html_links.asp#)
* [FORUM](http://www.w3schools.com/forum/default.asp)

**HTML Tutorial**

[HTML HOME](http://www.w3schools.com/html/default.asp)[HTML Introduction](http://www.w3schools.com/html/html_intro.asp)[HTML Editors](http://www.w3schools.com/html/html_editors.asp)[HTML Basic](http://www.w3schools.com/html/html_basic.asp)[HTML Elements](http://www.w3schools.com/html/html_elements.asp)[HTML Attributes](http://www.w3schools.com/html/html_attributes.asp)[HTML Headings](http://www.w3schools.com/html/html_headings.asp)[HTML Paragraphs](http://www.w3schools.com/html/html_paragraphs.asp)[HTML Styles](http://www.w3schools.com/html/html_styles.asp)[HTML Formatting](http://www.w3schools.com/html/html_formatting.asp)[HTML Quotations](http://www.w3schools.com/html/html_quotation_elements.asp)[HTML Computercode](http://www.w3schools.com/html/html_computercode_elements.asp)[HTML Comments](http://www.w3schools.com/html/html_comments.asp)[HTML CSS](http://www.w3schools.com/html/html_css.asp)[HTML Links](http://www.w3schools.com/html/html_links.asp)[HTML Images](http://www.w3schools.com/html/html_images.asp)[HTML Tables](http://www.w3schools.com/html/html_tables.asp)[HTML Lists](http://www.w3schools.com/html/html_lists.asp)[HTML Blocks](http://www.w3schools.com/html/html_blocks.asp)[HTML Classes](http://www.w3schools.com/html/html_classes.asp)[HTML Layout](http://www.w3schools.com/html/html_layout.asp)[HTML Responsive](http://www.w3schools.com/html/html_responsive.asp)[HTML Iframes](http://www.w3schools.com/html/html_iframe.asp)[HTML Color Names](http://www.w3schools.com/html/html_colornames.asp)[HTML Color Values](http://www.w3schools.com/html/html_colorvalues.asp)[HTML Color Shades](http://www.w3schools.com/html/html_colors.asp)[HTML JavaScript](http://www.w3schools.com/html/html_scripts.asp)[HTML Head](http://www.w3schools.com/html/html_head.asp)[HTML Entities](http://www.w3schools.com/html/html_entities.asp)[HTML Symbols](http://www.w3schools.com/html/html_symbols.asp)[HTML Charset](http://www.w3schools.com/html/html_charset.asp)[HTML URL Encode](http://www.w3schools.com/html/html_urlencode.asp)[HTML XHTML](http://www.w3schools.com/html/html_xhtml.asp)

**HTML Forms**

[HTML Forms](http://www.w3schools.com/html/html_forms.asp)[HTML Form Elements](http://www.w3schools.com/html/html_form_elements.asp)[HTML Input Types](http://www.w3schools.com/html/html_form_input_types.asp)[HTML Input Attributes](http://www.w3schools.com/html/html_form_attributes.asp)

**HTML5**

[HTML5 Intro](http://www.w3schools.com/html/html5_intro.asp)[HTML5 Support](http://www.w3schools.com/html/html5_browsers.asp)[HTML5 Elements](http://www.w3schools.com/html/html5_new_elements.asp)[HTML5 Semantics](http://www.w3schools.com/html/html5_semantic_elements.asp)[HTML5 Migration](http://www.w3schools.com/html/html5_migration.asp)[HTML5 Style Guide](http://www.w3schools.com/html/html5_syntax.asp)

**HTML Graphics**

[HTML Canvas](http://www.w3schools.com/html/html5_canvas.asp)[HTML SVG](http://www.w3schools.com/html/html5_svg.asp)

**HTML Media**

[HTML Media](http://www.w3schools.com/html/html_media.asp)[HTML Video](http://www.w3schools.com/html/html5_video.asp)[HTML Audio](http://www.w3schools.com/html/html5_audio.asp)[HTML Plug-ins](http://www.w3schools.com/html/html_object.asp)[HTML YouTube](http://www.w3schools.com/html/html_youtube.asp)

**HTML APIs**

[HTML Geolocation](http://www.w3schools.com/html/html5_geolocation.asp)[HTML Drag/Drop](http://www.w3schools.com/html/html5_draganddrop.asp)[HTML Local Storage](http://www.w3schools.com/html/html5_webstorage.asp)[HTML App Cache](http://www.w3schools.com/html/html5_app_cache.asp)[HTML Web Workers](http://www.w3schools.com/html/html5_webworkers.asp)[HTML SSE](http://www.w3schools.com/html/html5_serversentevents.asp)

**HTML Examples**

[HTML Examples](http://www.w3schools.com/html/html_examples.asp)[HTML Quiz](http://www.w3schools.com/html/html_quiz.asp)[HTML5 Quiz](http://www.w3schools.com/html/html5_quiz.asp)[HTML Certificate](http://www.w3schools.com/html/html_exam.asp)[HTML5 Certificate](http://www.w3schools.com/html/html5_exam.asp)[HTML Summary](http://www.w3schools.com/html/html_summary.asp)

**HTML References**

[HTML Tag List](http://www.w3schools.com/tags/default.asp)[HTML Attributes](http://www.w3schools.com/tags/ref_standardattributes.asp)[HTML Events](http://www.w3schools.com/tags/ref_eventattributes.asp)[HTML Canvas](http://www.w3schools.com/tags/ref_canvas.asp)[HTML Audio/Video](http://www.w3schools.com/tags/ref_av_dom.asp)[HTML Doctypes](http://www.w3schools.com/tags/ref_html_dtd.asp)[HTML Colornames](http://www.w3schools.com/tags/ref_colornames.asp)[HTML Colorgroups](http://www.w3schools.com/tags/ref_colorgroups.asp)[HTML Colorpicker](http://www.w3schools.com/tags/ref_colorpicker.asp)[HTML Colormixer](http://www.w3schools.com/tags/ref_colormixer.asp)[HTML Character Sets](http://www.w3schools.com/charsets/default.asp)[HTML URL Encode](http://www.w3schools.com/tags/ref_urlencode.asp)[HTML Lang Codes](http://www.w3schools.com/tags/ref_language_codes.asp)[HTTP Messages](http://www.w3schools.com/tags/ref_httpmessages.asp)[HTTP Methods](http://www.w3schools.com/tags/ref_httpmethods.asp)[PX to EM Converter](http://www.w3schools.com/tags/ref_pxtoemconversion.asp)[Keyboard Shortcuts](http://www.w3schools.com/tags/ref_keyboardshortcuts.asp)

**HTML Links**

[« Previous](http://www.w3schools.com/html/html_css.asp)

[Next Chapter »](http://www.w3schools.com/html/html_images.asp)

Links are found in nearly all web pages. Links allow users to click their way from page to page.

**HTML Links - Hyperlinks**

HTML links are hyperlinks.

A hyperlink is a text or an image you can click on, and jump to another document.

**HTML Links - Syntax**

In HTML, links are defined with the **<a>** tag:

<ahref="*url*">*link text*</a>

**Example**

<ahref="http://www.w3schools.com/html/">Visit our HTML tutorial</a>

[Try it Yourself »](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_links_w3schools)

The **href** attribute specifies the destination address (http://www.w3schools.com/html/)

The **link text** is the visible part (Visit our HTML tutorial).

Clicking on the link text, will send you to the specified address.

|  |  |
| --- | --- |
|  | The link text does not have to be text. It can be an HTML image or any other HTML element. |

|  |  |
| --- | --- |
|  | Without a trailing slash on subfolder addresses, you might generate two requests to the server. Many servers will automatically add a trailing slash to the address, and then create a new request. |

**Local Links**

The example above used an absolute URL (A full web address).

A local link (link to the same web site) is specified with a relative URL (without http://www....).

**Example**

<ahref="html\_images.asp">HTML Images</a>

[Try it Yourself »](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_links)

**HTML Links - Colors**

When you move the mouse over a link, two things will normally happen:

* The mouse arrow will turn into a little hand
* The color of the link element will change

By default, a link will appear like this (in all browsers):

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

You can change the default colors, by using styles:

**Example**

<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>

[Try it Yourself »](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_links_colors)

**HTML Links - The target Attribute**

The **target** attribute specifies where to open the linked document.

This example will open the linked document in a new browser window or in a new tab:

**Example**

<ahref="http://www.w3schools.com/"target="\_blank">Visit W3Schools!</a>

[Try it Yourself »](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_links_target)

|  |  |
| --- | --- |
| **Target Value** | **Description** |
| \_blank | Opens the linked document in a new window or tab |
| \_self | Opens the linked document in the same frame 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 |

If your webpage is locked in a frame, you can use target="\_top" to break out of the frame:

**Example**

<ahref="http://www.w3schools.com/html/"target="\_top">HTML5 tutorial!</a>

[Try it Yourself »](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_links_target_top)

**HTML Links - Image as Link**

It is common to use images as links:

**Example**

<ahref="default.asp">  
 <img src="smiley.gif" alt="HTML tutorial" style="width:42px;height:42px;border:0">  
</a>

[Try it Yourself »](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_links_image)

|  |  |
| --- | --- |
|  | border:0 is added to prevent IE9 (and earlier) from displaying a border around the image. |

**HTML Links - Create a Bookmark**

HTML bookmarks are used to allow readers to jump to specific parts of a Web page.

Bookmarks are practical if your website has long pages.

To make a bookmark, you must first create the bookmark, and then add a link to it.

When the link is clicked, the page will scroll to the location with the bookmark.

<p><a href="#C4">Jump to Chapter 4</a></p><h2 id="C4">Chapter 4</h2><p>This chapter explains ba bla bla</p>

<h2>Chapter 17</h2>

<p>This chapter explains ba bla bla</p>

**HTML Images**

<!DOCTYPEhtml>  
<html>  
<body>  
  
<h2>Spectacular Mountain</h2>  
<imgsrc="pic\_mountain.jpg"alt="Mountain View"style="width:304px;height:228px;">  
  
</body>  
</html>