What is HTML?

* HTML stands for Hyper Text Markup Language
* HTML is the standard markup language for creating Web pages
* HTML describes the structure of a Web page
* HTML consists of a series of elements
* HTML elements tell the browser how to display the content
* HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.
* 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 <p> element defines a paragraph

What is an HTML Element?

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

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

The HTML **element** is everything from the start tag to the end tag: **Note:** Some HTML elements have no content (like the <br> element). These elements are called empty elements. Empty elements do not have an end tag!

Nested HTML Elements

HTML elements can be nested (this means that elements can contain other elements).

All HTML documents consist of nested HTML elements.

The following example contains four HTML elements (<html>, <body>, <h1> and <p>):

Nev er skip an end tag,

HTML elements with no content are called empty elements.

The <br> tag defines a line break, and is an empty element without a closing tag:

<h1>My First Heading</h1>

<p>My first paragraph.</p>

Web Browsers

The purpose of a web browser (Chrome, Edge, Firefox, Safari) is to read HTML documents and display them correctly.

A browser does not display the HTML tags, but uses them to determine how to display the document:

**Note:** The content inside the <body> section (the white area above) will be displayed in a browser. The content inside the <title> element will be shown in the browser's title bar or in the page's tab.

HTML Documents

All HTML documents must start with a document type declaration: <!DOCTYPE html>.

The HTML document itself begins with <html> and ends with </html>.

The visible part of the HTML document is between <body> and </body>.

HTML Headings

HTML headings are defined with the <h1> to <h6> tags.

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

HTML paragraphs are defined with the <p> tag:

HTML links are defined with the <a> tag:

HTML images are defined with the <img> tag.

The source file (src), alternative text (alt), width, and height are provided as attributes:

View HTML Source Code:

Right-click in an HTML page and select "View Page Source" (in Chrome) or "View Source" (in Edge), or similar in other browsers. This will open a window containing the HTML source code of the page.

Inspect an HTML Element:

Right-click on an element (or a blank area), and choose "Inspect" or "Inspect Element" to see what elements are made up of (you will see both the HTML and the CSS). You can also edit the HTML or CSS on-the-fly in the Elements or Styles panel that opens. HTML Attributes

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

The href Attribute

The <a> tag defines a hyperlink. The href attribute specifies the URL of the page the link goes to:

The src Attribute

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

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".

**Tip:** It is almost always best to use relative URLs. They will not break if you change domain.

The width and height Attributes

The <img> tag should also contain the width and height attributes, which specifies the width and height of the image (in pixels):

Chapter Summary

* 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 <img> specifies the path to the image to be displayed
* The width and height attributes of <img> provide size information for images
* The alt attribute of <img> 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

HTML Headings

HTML headings are defined with the <h1> to <h6> tags.

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

Headings Are Important

Search engines use the headings to index the structure and content of your web pages.

Users often skim a page by its headings. It is important to use headings to show the document structure.

<h1> headings should be used for main headings, followed by <h2> headings, then the less important <h3>, and so on.

Bigger Headings

Each HTML heading has a default size. However, you can specify the size for any heading with the style attribute, using the CSS font-size property:

HTML Tag Reference

W3Schools' tag reference contains additional information about these tags and their attributes.

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [<html>](https://www.w3schools.com/tags/tag_html.asp) | Defines the root of an HTML document |
| [<body>](https://www.w3schools.com/tags/tag_body.asp) | Defines the document's body |
| [<h1> to <h6>](https://www.w3schools.com/tags/tag_hn.asp) | Defines HTML headings |

HTML Paragraphs

The HTML <p> element defines a paragraph.

A paragraph always starts on a new line, and browsers automatically add some white space (a margin) before and after a paragraph.

HTML Horizontal Rules

The <hr> tag defines a thematic break in an HTML page, and is most often displayed as a horizontal rule.

The <hr> element is used to separate content (or define a change) in an HTML page: The <hr> tag is an empty tag, which means that it has no end tag.

HTML Line Breaks

The HTML <br> element defines a line break.

Use <br> if you want a line break (a new line) without starting a new paragraph:

The <br> tag is an empty tag, which means that it has no end tag.

Solution - 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:

HTML Tag Reference

W3Schools' tag reference contains additional information about HTML elements and their attributes.

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [<p>](https://www.w3schools.com/tags/tag_p.asp) | Defines a paragraph |
| [<hr>](https://www.w3schools.com/tags/tag_hr.asp) | Defines a thematic change in the content |
| [<br>](https://www.w3schools.com/tags/tag_br.asp) | Inserts a single line break |
| [<pre>](https://www.w3schools.com/tags/tag_pre.asp) | Defines pre-formatted text |

The HTML style attribute is used to add styles to an element, such as color, font, size, and more.

Setting the style of an HTML element, can be done with the style attribute.

The <*tagname* style="*property*:*value;*"> HTML style attribute has the following syntax:

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 display by adding extra spaces or extra lines in your HTML code.

The browser will automatically remove any extra spaces and lines when the page is displayed:

HTML Horizontal Rules

The <hr> tag defines a thematic break in an HTML page, and is most often displayed as a horizontal rule.

The <hr> element is used to separate content (or define a change) in an HTML page:

The HTML <br> element defines a line break.

Use <br> if you want a line break (a new line) without starting a new paragraph:

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:

The HTML style attribute is used to add styles to an element, such as color, font, size, and more.

Setting the style of an HTML element, can be done with the style attribute.

The HTML style attribute has the following syntax:

The ***property*** is a CSS property. The ***value*** is a CSS value.

* 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 contains several elements for defining text with a special meaning.

HTML Formatting Elements

Formatting elements were designed to display special types of text:

* <b> - Bold text
* <strong> - Important text
* <i> - Italic text
* <em> - Emphasized text
* <mark> - Marked text
* <small> - Smaller text
* <del> - Deleted text
* <ins> - Inserted text
* <sub> - Subscript text
* <sup> - Superscript text
* <ins> - Inserted text
* <del> - Deleted text
* <mark> - marked /highlighted text

The HTML <blockquote> element defines a section that is quoted from another source.

The HTML <q> tag defines a short quotation.

Browsers normally insert quotation marks around the quotation.

The HTML <abbr> tag defines an abbreviation or an acronym, like "HTML", "CSS", "Mr.", "Dr.", "ASAP", "ATM".

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

**Tip:** Use the global title attribute to show the description for the abbreviation/acronym when you mouse over the element.

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

The contact information can be an email address, URL, physical address, phone number, social media handle, etc.

The text in the <address> element usually renders in *italic,* and browsers will alw The HTML <cite> tag defines the title of a creative work (e.g. a book, a poem, a song, a movie, a painting, a sculpture, etc.).

**Note:** A person's name is not the title of a work.

The text in the <address> element usually renders in *italic,* and browsers will always add a line break before and after the <address> element.

BDO stands for Bi-Directional Override.

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

HTML comments are not displayed in the browser, but they can help document your HTML source code.

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

<!-- Write your comments here -->

Notice that there is an exclamation point (!) in the start tag, but not in the end tag.

**Note:** Comments are not displayed by the browser, but they can help document your HTML source code.

With comments you can place notifications and reminders in your HTML code:

Comments are also great for debugging HTML, because you can comment out HTML lines of code, one at a time, to search for errors: