**Html:**

HTML is the standard markup language for creating Web pages.

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.

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:

<h1>My First Heading</h1>

<p>My first paragraph.</p>

**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!.

**HTML Page Structure:**

Below is a visualization of an HTML page structure:

<html>

<head>

<title>Page title</title>

</head>

<body>

<h1>This is a heading</h1>

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

<p>This is another paragraph.</p>

</body>

</html>

**Note:** The content inside the <body> section 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.

**Tip:** You can use either .htm or .html as file extension. There is no difference; it is up to you.

**The <!DOCTYPE> Declaration:**

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:

**Ex:<!**DOCTYPE html>

**HTML Headings**

HTML headings are defined with the <h1> to <h6> 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**

HTML paragraphs are defined with the <p> tag:

Example

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

**HTML Links**

HTML links are defined with the <a> tag:

Example

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

Link to navigate between the pages.

Link is to navigate with the page also.

**HTML Images**

HTML images are defined with the <img> tag.

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

Example

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

**HTML Elements**

The HTML **element** is everything from the start tag to the end tag:

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

Examples of some HTML elements:

<h1>My First Heading</h1>

<p>My first paragraph.</p>

**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.

**Ex:** (<html>, <body>, <h1> and <p>):

HTML attributes provide additional information about HTML elements.

**HTML Attributes**

* All HTML elements can have attributes
* Attributes provide additionalinformation about elements
* Attributes are always specified in thestarttag
* 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:

**Example**

<a href="https://www.w3schools.com">Visit W3Schools</a>

**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:

**Example**

<img src="img\_girl.jpg">

**HTML Headings**

HTML headings are titles or subtitles that you want to display on a webpage.

. <h6> defines the least important heading.

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

<h1> defines the most important heading

<h1>Heading 1</h1>  
<h2>Heading 2</h2>  
<h3>Heading 3</h3>  
<h4>Heading 4</h4>  
<h5>Heading 5</h5>  
<h6>Heading 6</h6>

**Note:** Browsers automatically add some white space (a margin) before and after a heading.

**Example**

<h1 style="font-size:60px;">Heading 1</h1>

**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.

**Example**

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

**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:

**Example**

<p>This is<br>a paragraph<br>with line breaks.</p>

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

**HTML** **Style**

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

**The HTML Style Attribute**

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

The HTML style attribute has the following syntax:

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

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

**Background Color**

The CSS background-color property defines the background color for an HTML element.

**Example**

Set the background color for a page to powderblue:

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

**Text** **Color:**

The CSS color property defines the text color for an HTML element:

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

**Fonts**

The CSS font-family property defines the font to be used for an HTML element:

<h1 style="font-family:verdana;">This is a heading</h1>

**Text Size**

The CSS font-size property defines the text size for an HTML element:

<h1 style="font-size:300%;">This is a heading</h1>

**Text Alignment**

The CSS text-align property defines the horizontal text alignment for an HTML element:

Example

<h1 style="text-align:center;">Centered Heading</h1>

**HTML Text Formatting**

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

**HTML <b> and <strong> Elements**

The HTML <b> element defines bold text, without any extra importance.

**Example**

<b>This text is bold</b>

The HTML <strong> element defines text with strong importance. The content inside is typically displayed in bold.

**Example**

<strong>This text is important!</strong>

**HTML <i> and <em> Elements**

The HTML <i> element defines a part of text in an alternate voice or mood. The content inside is typically displayed in italic.

Tip: The <i> tag is often used to indicate a technical term, a phrase from another language, a thought, a ship name, etc.

**Example**

<i>This text is italic</i>

The HTML <em> element defines emphasized text. The content inside is typically displayed in italic.

**Example**

<em>This text is emphasized</em>

**HTML <small> Element**

The HTML <small> element defines smaller text:

**Example**

<small>This is some smaller text.</small>

**HTML <mark> Element**

The HTML <mark> element defines text that should be marked or highlighted:

**Example**

<p>Do not forget to buy <mark>milk</mark> today.</p>

**HTML <del> Element**

The HTML <del> element defines text that has been deleted from a document. Browsers will usually strike a line through deleted text:

**Example**

<p>My favorite color is <del>blue</del> red.</p>

**HTML <ins> Element**

The HTML <ins> element defines a text that has been inserted into a document. Browsers will usually underline inserted text:

**Example**

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

**HTML <sub> Element**

The HTML <sub> element defines subscript text. Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font. Subscript text can be used for chemical formulas, like H2O:

**Example**

<p>This is <sub>subscripted</sub> text.</p>

**HTML <sup> Element**

The HTML <sup> element defines superscript text. Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font.

**Example**

<p>This is <sup>superscripted</sup> text.</p>

**HTML Comment Tag**

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

<!-- Write your comments here -->

**Add Comments**

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

Example

<!-- This is a comment -->  
  
<p>This is a paragraph.</p>  
  
<!-- Remember to add more information here -->

**HTML Colors**

HTML colors are specified with predefined color names, or with RGB, HEX, HSL, RGBA, or HSLA values

**Color Names**

In HTML, a color can be specified by using a color name:

1. Tomato
2. Orange
3. DodgerBlue
4. MediumSeaGreen
5. Gray
6. SlateBlue
7. Violet
8. LightGray

**Example**

<h1 style="color:Tomato;">Hello World</h1>

<p style="color:DodgerBlue;">Lorem ipsum...</p>

<p style="color:MediumSeaGreen;">Ut wisi enim...</p>

**HTML Links**

- Syntax

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

<a href="*url*">*link text*</a>

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

The *link text* is the part that will be visible to the reader.

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

**Example**

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

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
* Use the <a> element to define a link
* Use the href attribute to define the link address
* Use the target attribute to define where to open the linked document
* Use the <img> element (inside <a>) to use an image as a link
* Use the mailto: scheme inside the href attribute to create a link that opens the user's email program

**HTML Images**

Images can improve the design and the appearance of a web page.

**Example**

<img src="pic\_trulli.jpg" alt="Italian Trulli">

**HTML Images Syntax**

The HTML <img> tag is used to embed an image in a web page.

Images are not technically inserted into a web page; images are linked to web pages. The <img> tag creates a holding space for the referenced image.

The <img> tag is empty, it contains attributes only, and does not have a closing tag.

The <img> tag has two required attributes:

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

**Syntax**

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

**The src Attribute**

The required src attribute specifies the path (URL) to the image.

**Example**

<img src="img\_chania.jpg" alt="Flowers in Chania">

**The alt Attribute**

The required alt attribute provides an alternate text for an image, if the user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).

The value of the alt attribute should describe the image:

**Example**

<img src="img\_chania.jpg" alt="Flowers in Chania">

**Image Map**

Then, add a <map> element.

The <map> element is used to create an image map, and is linked to the image by using the required name attribute:

<map name="workmap">

**Background Image on a HTML element**

To add a background image on an HTML element, use the HTML style attribute and the CSS background-image property:Add a background image on a HTML element:

**Example**

<p style="background-image: url('img\_girl.jpg');

**Background Image on a Page**

If you want the entire page to have a background image, you must specify the background image on the <body> element:

**Syntax:**

<style>  
body {  
  background-image: url('img\_girl.jpg');  
}

**Background Repeat**

If the background image is smaller than the element, the image will repeat itself, horizontally and vertically, until it reaches the end of the element:

To avoid the background image from repeating itself, set the background-repeat property to no-repeat

If you want the background image to cover the entire element, you can set the background-size property to cover.

Also, to make sure the entire element is always covered, set the background-attachment property to fixed:

**Example**

<style>  
body {  
  background-image: url('example\_img\_girl.jpg');  
}  
</style>

**HTML Tables**

HTML tables allow web developers to arrange data into rows and columns.

Define an HTML Table

A table in HTML consists of table cells inside rows and columns.

Example

**A simple HTML table:**

**Table Cells**

Each table cell is defined by a <td> and a </td> tag.

**Table Rows**

Each table row starts with a <tr> and ends with a </tr> tag.

**Table Headers**

Sometimes you want your cells to be table header cells. In those cases use the <th> tag instead of the <td> tag:

**HTML Table Borders**

HTML tables can have borders of different styles and shapes. To add a border, use the CSS border property on table, th, and td elements: With the border-style property, you can set the appearance of the border.

The following values are allowed: dotted, dashed , solid ,double ,groove ,ridge and none

<table>  
  <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>