HTML

HTML is the standard markup language for Web pages.

With HTML you can create your own Website.

HTML is easy to learn - You will enjoy it!

**HTML Elements**

An **HTML element** is defined by a start tag, some content, and an end tag.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> <br>

<p> hello </p>

|  |  |  |
| --- | --- | --- |
| **Start tag** | **Element content** | **End tag** |
| <h1> | My First Heading | </h1> |
| <p> | My first paragraph. | </p> |
| <br> | *none* | *none* |

Example

<html>  
<body>  
  
<h1>My First Heading</h1>

<br>  
<p>My first paragraph.</p>  
  
</body>  
</html>

**Understanding HTML Tags**

HTML tags are composed of an opening tag, content, and a closing tag. The opening tag marks the beginning of an element, and the closing tag marks the end. The content is the information or structure that falls between the opening and closing tags. Here's the basic structure of an HTML tag:

<tagname> Content... </tagname>

Let's delve into some commonly used HTML tags:

| **Tag Name** | **Description** |
| --- | --- |
| [<html> Tag](https://www.geeksforgeeks.org/html-html-tag/) | The <html> tag is the root element of an HTML document. It encapsulates the entire content of the page. |
| [<head> Tag](https://www.geeksforgeeks.org/html-head-tag/) | The <head> tag contains meta-information about the HTML document, such as the title, links to stylesheets, and character set declaration. |
| [<body> Tag](https://www.geeksforgeeks.org/html-body-tag/) | The <body> tag encloses the main content of the HTML document, including text, images, links, and other elements. |
| [Heading Tags <h1> to <h6>](https://www.geeksforgeeks.org/html-h1-to-h6-tag/) | Heading tags are used to define headings in HTML, ranging from <h1> as the largest to <h6> as the smallest. |
| [Paragraph Tag <p>](https://www.geeksforgeeks.org/html-paragraph/) | The <p> tag is used to define paragraphs of text. |
| [Anchor Tag <a>](https://www.geeksforgeeks.org/html-a-tag/) | The <a> tag creates hyperlinks. The href attribute specifies the URL of the linked page. |
| [Image Tag <img>](https://www.geeksforgeeks.org/html-img-tag/) | The <img> tag is used to embed images. The src attribute specifies the image file. |
| List Tags [<ul>](https://www.geeksforgeeks.org/html-ul-tag/), [<ol>](https://www.geeksforgeeks.org/html-ol-tag/), [<li>](https://www.geeksforgeeks.org/html-li-tag/) | HTML supports both unordered lists (<ul>) and ordered lists (<ol>), with list items (<li>) defining each list item. |
| [bold Tag <b>](https://www.geeksforgeeks.org/html-b-tag/) | The bold tag in HTML is used to specify the bold text without any extra importance. |

HTML Editor

A simple text editor is all you need to learn HTML.

Learn HTML Using Notepad or TextEdit

Web pages can be created and modified by using professional HTML editors.

However, for learning HTML we recommend a simple text editor like Notepad (PC) or TextEdit (Mac).

We believe that using a simple text editor is a good way to learn HTML.

Follow the steps below to create your first web page with Notepad or TextEdit.

Step 1: Open Notepad (PC)

**Windows 8 or later:**

Open the **Start Screen** (the window symbol at the bottom left on your screen). Type **Notepad**.

**Windows 7 or earlier:**

Open **Start** >**Programs >** **Accessories >** **Notepad**

Step 1: Open TextEdit (Mac)

Open **Finder > Applications > TextEdit**

Also change some preferences to get the application to save files correctly. In **Preferences > Format >**choose**"Plain Text"**

Then under "Open and Save", check the box that says "Display HTML files as HTML code instead of formatted text".

**Then open a new document to place the code.**

Step 2: Write Some HTML

Write or copy the following HTML code into Notepad:

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

**Creating a Simple HTML Document**

**<!DOCTYPE html>  
<html>**

**<head>my headdingssss</head>  
<body>  
  
<h1>My First Heading</h1>  
<p>My first paragraph.</p>  
  
</body>  
</html>**

**HTML Attributes**

**HTML attributes** provide additional information about HTML elements.

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:

Example

<a href=”https://dev.mysql.com/downloads/installer/"> click </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">

Example

<img src="img\_girl.jpg" width="500" height="600">

**HTML Text Formatting**

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

Example

**This text is bold**

*This text is italic*

This issubscript and superscript

HTML Formatting Elements

Formatting elements were designed to display special types of text:

* <b> - Bold text
* <strong> - Important text
* <i> - Italic text
* <mark> - Marked text
* <small> - Smaller text
* <del> - Deleted 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 Styles**

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

Example

I am Red

I am Blue

I am Big

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;*">**

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;">**<h1>This is a heading</h1>  
<p>This is a paragraph.</p>  
  
</body>

**HTML Tables**

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

Example

|  |  |  |
| --- | --- | --- |
| **Company** | **Contact** | **Country** |
| Alfreds Futterkiste | Maria Anders | Germany |
| Centro comercial Moctezuma | Francisco Chang | Mexico |
| Ernst Handel | Roland Mendel | Austria |
| Island Trading | Helen Bennett | UK |
| Laughing Bacchus Winecellars | Yoshi Tannamuri | Canada |
| Magazzini Alimentari Riuniti | Giovanni Rovelli | Italy |

**Example**

**<table><tr><th><td>**

**A simple HTML table:**

**<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>**

**Handling Images**

<img src="pic\_trulli.jpg">

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">

**HTML Lists**

**An unordered HTML list:**

* **apple**
* **banana**
* **cherry**
* **watermelon**

**An ordered HTML list:**

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

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title>HTML Lists Example</title>**

**</head>**

**<body>**

**<h1>Unordered List (Bulleted List)</h1>**

**<ul>**

**<li>Item 1</li>**

**<li>Item 2</li>**

**<li>Item 3</li>**

**<li>Item 4**

**<ul>**

**<li>Sub-item 1</li>**

**<li>Sub-item 2</li>**

**</ul>**

**</li>**

**</ul>**

**<h1>Ordered List (Numbered List)</h1>**

**<ol>**

**<li>First Item</li>**

**<li>Second Item</li>**

**<li>Third Item</li>**

**</ol>**

**<h1>Nested Ordered List</h1>**

**<ol>**

**<li>First Item**

**<ol>**

**<li>Sub-item 1</li>**

**<li>Sub-item 2</li>**

**</ol>**

**</li>**

**<li>Second Item</li>**

**</ol>**

**</body>**

**</html>**

**HTML Forms**

A screenshot of a computer

Description automatically generated

An HTML form is used to collect user input. The user input is most often sent to a server for processing.

The <form> Element

The HTML <form> element is used to create an HTML form for user input:

<form>  
.  
*form elements*  
.  
</form>

The <input> Element

The HTML <input> element is the most used form element.

An <input> element can be displayed in many ways, depending on the type attribute.

Here are some examples:

|  |  |
| --- | --- |
| **Type** | **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"> | 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 |

Text Fields

The <input type="text"> defines a single-line input field for text input.

Example

A form with input fields for text:

<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>

A screenshot of a computer

Description automatically generated

The <label> Element

Notice the use of the <label> element in the example above.

The <label> tag defines a label for many form elements.

The <label> element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focuses on the input element.

The <label> element also helps users who have difficulty clicking on very small regions (such as radio buttons or checkboxes) - because when the user clicks the text within the <label> element, it toggles the radio button/checkbox.

The for attribute of the <label> tag should be equal to the id attribute of the <input> element to bind them together.

Radio Buttons

The <input type="radio"> defines a radio button.

Radio buttons let a user select ONE of a limited number of choices.

Example

A form with radio buttons:

<p>Choose your favorite Web language:</p>  
  
<form>  
  <input type="radio" id="html" name="fav\_language" value="HTML">  
  <label for="html">HTML</label><br>  
  <input type="radio" id="css" name="fav\_language" value="CSS">  
  <label for="css">CSS</label><br>  
  <input type="radio" >   
  <label>JavaScript</label>  
</form>

A white background with black text

Description automatically generated

Checkboxes

The <input type="checkbox"> defines a **checkbox**.

Checkboxes let a user select ZERO or MORE options of a limited number of choices.

Example

A form with checkboxes:

<form>  
  <input type="checkbox" id="vehicle1" name="vehicle1" value="Bike">  
  <label for="vehicle1"> I have a bike</label><br>  
  <input type="checkbox" id="vehicle2" name="vehicle2" value="Car">  
  <label for="vehicle2"> I have a car</label><br>  
  <input type="checkbox" id="vehicle3" name="vehicle3" value="Boat">  
  <label for="vehicle3"> I have a boat</label>  
</form>

A white background with black text

Description automatically generated

The Submit Button

The <input type="submit"> defines a button for submitting the form data to a form-handler.

The form-handler is typically a file on the server with a script for processing input data.

The form-handler is specified in the form's action attribute.

Example

A form with a submit button:

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

A screenshot of a computer

Description automatically generated

The Name Attribute for <input>

Notice that each input field must have a name attribute to be submitted.

If the name attribute is omitted, the value of the input field will not be sent at all.

Example

This example will not submit the value of the "First name" input field:

<form>  
  <label for="fname">First name:</label><br>  
  <input type="text" id="fname" value="John"><br><br>  
  <input type="submit" value="Submit">  
</form>