A paragraph always starts on a new line, and is usually a block of text.

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 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:

Example

<p>  
This paragraph  
contains a lot of lines  
in the source code,  
but the browser  
ignores it.  
</p>  
  
<p>  
This paragraph  
contains         a lot of spaces  
in the source         code,  
but the        browser  
ignores it.  
</p>

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:

Example

<h1>This is heading 1</h1>  
<p>This is some text.</p>  
<hr>  
<h2>This is heading 2</h2>  
<p>This is some other text.</p>  
<hr>

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:

Example

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

**HTML Styles**

he 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

Sample

<!DOCTYPE html>

<html>

<body>

<p>I am normal</p>

<p style="color:red;">I am red</p>

<p style="color:blue;">I am blue</p>

<p style="font-size:50px;">I am big</p>

</body>

</html>

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

**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
* <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>

Example

<b>This text is bold</b>

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.

You can click on a link and jump to another document.

When you move the mouse over a link, the mouse arrow will turn into a little hand.

**Note:** A link does not have to be text. A link can be an image or any other HTML element!

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.cdscdb.edu.ph/">Visit Colegio de Santo Cristo.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

**Tip:** Links can of course be styled with CSS, to get another look!

HTML Links - The target Attribute

By default, the linked page will be displayed in the current browser window. To change this, you must specify another target for the link.

The target attribute specifies where to open the linked document.

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
* Example

<a href=" https://www.cdscdb.edu.ph /" target="\_blank"> Visit Colegio de Santo Cristo.com!</a>

HTML Images

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

Example

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

Example

<img src="img\_girl.jpg" alt="Girl in a jacket">

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.

**Note:** When a web page loads, it is the browser, at that moment, that gets the image from a web server and inserts it into the page. Therefore, make sure that the image actually stays in the same spot in relation to the web page, otherwise your visitors will get a broken link icon. The broken link icon and the alt text are shown if the browser cannot find 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 Size - Width and Height

You can use the style attribute to specify the width and height of an image.

Example

<img src="img\_girl.jpg" alt="Girl in a jacket" style="width:500px;height:600px;">

Alternatively, you can use the width and height attributes:

Example

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

Common Image Formats

Here are the most common image file types, which are supported in all browsers (Chrome, Edge, Firefox, Safari, Opera):

|  |  |  |
| --- | --- | --- |
| **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 |

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 |

Define an HTML Table

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

Example

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>

Table Cells

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

td stands for table data.

Everything between <td> and </td> are the content of the table cell.

Example

<table>  
  <tr>  
    <td>Emil</td>  
    <td>Tobias</td>  
    <td>Linus</td>  
  </tr>  
</table>

Table Rows

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

tr stands for table row.

Example

<table>  
  <tr>  
    <td>Emil</td>  
    <td>Tobias</td>  
    <td>Linus</td>  
  </tr>  
  <tr>  
    <td>16</td>  
    <td>14</td>  
    <td>10</td>  
  </tr>  
</table>

You can have as many rows as you like in a table; just make sure that the number of cells are the same in each row.

**Note:** There are times when a row can have less or more cells than another. You will learn about that in a later chapter.

Table Headers

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

th stands for table header.

Example

Let the first row be table header cells:

<table>  
  <tr>  
    <th>Person 1</th>  
    <th>Person 2</th>  
    <th>Person 3</th>  
  </tr>  
  <tr>  
    <td>Emil</td>  
    <td>Tobias</td>  
    <td>Linus</td>  
  </tr>  
  <tr>  
    <td>16</td>  
    <td>14</td>  
    <td>10</td>  
  </tr>  
</table>

HTML Lists

HTML lists allow web developers to group a set of related items in lists.

Example

An unordered HTML list:

* Item
* Item
* Item
* Item

An ordered HTML list:

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

Unordered HTML List

An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

The list items will be marked with bullets (small black circles) by default:

Example

<ul>  
  <li>Coffee</li>  
  <li>Tea</li>  
  <li>Milk</li>  
</ul>

Ordered HTML List

An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.

The list items will be marked with numbers by default:

Example

<ol>  
  <li>Coffee</li>  
  <li>Tea</li>  
  <li>Milk</li>  
</ol>

HTML Description Lists

HTML also supports description lists.

A description list is a list of terms, with a description of each term.

The <dl> tag defines the description list, the <dt> tag defines the term (name), and the <dd> tag describes each term:

Example

<dl>  
  <dt>Coffee</dt>  
  <dd>- black hot drink</dd>  
  <dt>Milk</dt>  
  <dd>- white cold drink</dd>  
</dl>

HTML Description Lists

A description list is a list of terms, with a description of each term.

The [<dl>](https://www.w3schools.com/tags/tag_dl.asp) tag defines the description list, the [<dt>](https://www.w3schools.com/tags/tag_dt.asp) tag defines the term (name), and the [<dd>](https://www.w3schools.com/tags/tag_dd.asp) tag describes each term:

Example

<dl>  
  <dt>Coffee</dt>  
  <dd>- black hot drink</dd>  
  <dt>Milk</dt>  
  <dd>- white cold drink</dd>  
</dl>

HTML Forms

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

Example

**A screenshot of a computer

Description automatically generated**

**The <form> Element**

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

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

**The <form> element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.**

**All the different form elements are covered in this chapter:**[**HTML Form Elements**](https://www.w3schools.com/html/html_form_elements.asp)**.**

**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>**

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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" id="javascript" name="fav\_language" value="JavaScript">  
  <label for="javascript">JavaScript</label>  
</form>**

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**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>**

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**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 action="/action\_page.php">  
  <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 action="/action\_page.php">  
  <label for="fname">First name:</label><br>  
  <input type="text" id="fname" value="John"><br><br>  
  <input type="submit" value="Submit">  
</form>**

**HTML Form Attributes**

**The Action Attribute**

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

**Usually, the form data is sent to a file on the server when the user clicks on the submit button.**

**In the example below, the form data is sent to a file called "action\_page.php". This file contains a server-side script that handles the form data:**

**Example**

**On submit, send form data to "action\_page.php":**

**<form action="/action\_page.php">  
  <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>**

**Tip: If the action attribute is omitted, the action is set to the current page.**

**The Target Attribute**

**The target attribute specifies where to display the response that is received after submitting the form.**

**The target attribute can have one of the following values:**

|  |  |
| --- | --- |
| **Value** | **Description** |
| **\_blank** | **The response is displayed in a new window or tab** |
| **\_self** | **The response is displayed in the current window** |
| **\_parent** | **The response is displayed in the parent frame** |
| **\_top** | **The response is displayed in the full body of the window** |
| ***framename*** | **The response is displayed in a named iframe** |

**The default value is \_self which means that the response will open in the current window.**

**Example**

**Here, the submitted result will open in a new browser tab:**

**<form action="/action\_page.php" target="\_blank">**

**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").**

**The default HTTP method when submitting form data is GET.**

**Example**

**This example uses the GET method when submitting the form data:**

**<form action="/action\_page.php" method="get">**

**Example**

**This example uses the POST method when submitting the form data:**

**<form action="/action\_page.php" 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 query 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**

## **List of All <form> Attributes**

|  |  |
| --- | --- |
| **Attribute** | **Description** |
| [accept-charset](https://www.w3schools.com/tags/att_form_accept_charset.asp) | Specifies the character encodings used for form submission |
| [action](https://www.w3schools.com/tags/att_form_action.asp) | Specifies where to send the form-data when a form is submitted |
| [autocomplete](https://www.w3schools.com/tags/att_form_autocomplete.asp) | Specifies whether a form should have autocomplete on or off |
| [enctype](https://www.w3schools.com/tags/att_form_enctype.asp) | Specifies how the form-data should be encoded when submitting it to the server (only for method="post") |
| [method](https://www.w3schools.com/tags/att_form_method.asp) | Specifies the HTTP method to use when sending form-data |
| [name](https://www.w3schools.com/tags/att_form_name.asp) | Specifies the name of the form |
| [novalidate](https://www.w3schools.com/tags/att_form_novalidate.asp) | Specifies that the form should not be validated when submitted |
| [rel](https://www.w3schools.com/tags/att_form_rel.asp) | Specifies the relationship between a linked resource and the current document |
| [target](https://www.w3schools.com/tags/att_form_target.asp) | Specifies where to display the response that is received after submitting the form |

**The HTML <form> Elements**

**The HTML <form> element can contain one or more of the following form elements:**

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

## **The <input> Element**

One of the most used form elements is the <input> element.

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

### **Example**

<label for="fname">First name:</label>  
<input type="text" id="fname" name="fname">

**All the different values of the type attribute are covered in the next chapter:**[**HTML Input Types**](https://www.w3schools.com/html/html_form_input_types.asp)**.**

**The <label> Element**

**The <label> element defines a label for several form elements.**

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

**The <label> element also help 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.**

**The <select> Element**

**The <select> element defines a drop-down list:**

**Example**

**<label for="cars">Choose a car:</label>  
<select id="cars" name="cars">  
  <option value="volvo">Volvo</option>  
  <option value="saab">Saab</option>  
  <option value="fiat">Fiat</option>  
  <option value="audi">Audi</option>  
</select>**

**The <option> element defines an option that can be selected.**

**By default, the first item in the drop-down list is selected.**

**To define a pre-selected option, add the selected attribute to the option:**

**Example**

**<option value="fiat" selected>Fiat</option>**

**Visible Values:**

**Use the size attribute to specify the number of visible values:**

**Example**

**<label for="cars">Choose a car:</label>  
<select id="cars" name="cars" size="3">  
  <option value="volvo">Volvo</option>  
  <option value="saab">Saab</option>  
  <option value="fiat">Fiat</option>  
  <option value="audi">Audi</option>  
</select>**

**The <textarea> Element**

**The <textarea> element defines a multi-line input field (a text area):**

**Example**

**<textarea name="message" rows="10" cols="30">  
The cat was playing in the garden.  
</textarea>**

**The rows attribute specifies the visible number of lines in a text area.**

**The cols attribute specifies the visible width of a text area.**

**This is how the HTML code above will be displayed in a browser:**

**The <button> Element**

**The <button> element defines a clickable button:**

**Example**

**<button type="button" onclick="alert('Hello World!')">Click Me!</button>**

**The <fieldset> and <legend> Elements**

**The <fieldset> element is used to group related data in a form.**

**The <legend> element defines a caption for the <fieldset> element.**

**Example**

**<form action="/action\_page.php">  
  <fieldset>  
    <legend>Personalia:</legend>  
    <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">  
  </fieldset>  
</form>**

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Description automatically generated** **The <datalist> Element**

**The <datalist> element specifies a list of pre-defined options for an <input> element.**

**Users will see a drop-down list of the pre-defined options as they input data.**

**The list attribute of the <input> element, must refer to the id attribute of the <datalist> element.**

**Example**

**<form action="/action\_page.php">  
  <input list="browsers">  
  <datalist id="browsers">  
    <option value="Edge">  
    <option value="Firefox">  
    <option value="Chrome">  
    <option value="Opera">  
    <option value="Safari">  
  </datalist>  
</form>**

**The <output> Element**

**The <output> element represents the result of a calculation (like one performed by a script).**

**Example**

**Perform a calculation and show the result in an <output> element:**

**<form action="/action\_page.php"  
  oninput="x.value=parseInt(a.value)+parseInt(b.value)">  
  0  
  <input type="range"  id="a" name="a" value="50">  
  100 +  
  <input type="number" id="b" name="b" value="50">  
  =  
  <output name="x" for="a b"></output>  
  <br><br>  
  <input type="submit">  
</form>**

**HTML Form Elements**

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [**<form>**](https://www.w3schools.com/tags/tag_form.asp) | **Defines an HTML form for user input** |
| [**<input>**](https://www.w3schools.com/tags/tag_input.asp) | **Defines an input control** |
| [**<textarea>**](https://www.w3schools.com/tags/tag_textarea.asp) | **Defines a multiline input control (text area)** |
| [**<label>**](https://www.w3schools.com/tags/tag_label.asp) | **Defines a label for an <input> element** |
| [**<fieldset>**](https://www.w3schools.com/tags/tag_fieldset.asp) | **Groups related elements in a form** |
| [**<legend>**](https://www.w3schools.com/tags/tag_legend.asp) | **Defines a caption for a <fieldset> element** |
| [**<select>**](https://www.w3schools.com/tags/tag_select.asp) | **Defines a drop-down list** |
| [**<optgroup>**](https://www.w3schools.com/tags/tag_optgroup.asp) | **Defines a group of related options in a drop-down list** |
| [**<option>**](https://www.w3schools.com/tags/tag_option.asp) | **Defines an option in a drop-down list** |
| [**<button>**](https://www.w3schools.com/tags/tag_button.asp) | **Defines a clickable button** |
| [**<datalist>**](https://www.w3schools.com/tags/tag_datalist.asp) | **Specifies a list of pre-defined options for input controls** |
| [**<output>**](https://www.w3schools.com/tags/tag_output.asp) | **Defines the result of a calculation** |

**HTML Input Types**

**Here are the different input types you can use in HTML:**

* **<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">**

**Tip: The default value of the type attribute is "text".**

**Input Type Text**

**<input type="text"> defines a single-line text input field:**

**Example**

**<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 white background with black text

Description automatically generated**

**Input Type Password**

**<input type="password"> defines a password field:**

**Example**

**<form>  
  <label for="username">Username:</label><br>  
  <input type="text" id="username" name="username"><br>  
  <label for="pwd">Password:</label><br>  
  <input type="password" id="pwd" name="pwd">  
</form>**

**A screenshot of a computer

Description automatically generated  
Input Type Submit**

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

**The form-handler is typically a server page with a script for processing input data.**

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

**Example**

**<form action="/action\_page.php">  
  <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 white background with black text

Description automatically generated  
If you omit the submit button's value attribute, the button will get a default text:**

**Example**

**<form action="/action\_page.php">  
  <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">  
</form>**

**Input Type Reset**

**<input type="reset"> defines a reset button that will reset all form values to their default values:**

**Example**

**<form action="/action\_page.php">  
  <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">  
  <input type="reset" value="Reset">  
</form>**

**A screenshot of a computer

Description automatically generated**

**Input Type Radio**

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

**Radio buttons let a user select ONLY ONE of a limited number of choices:**

**Example**

**<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" id="javascript" name="fav\_language" value="JavaScript">  
  <label for="javascript">JavaScript</label>  
</form>**

**A white background with black text

Description automatically generated**

**Input Type Checkbox**

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

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

**Example**

**<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**

**Input Type Button**

**<input type="button"> defines a button:**

**Example**

**<input type="button" onclick="alert('Hello World!')" value="Click Me!">**

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Description automatically generated**

**Input Type Color**

**The <input type="color"> is used for input fields that should contain a color.**

**Depending on browser support, a color picker can show up in the input field.**

**Example**

**<form>  
  <label for="favcolor">Select your favorite color:</label>  
  <input type="color" id="favcolor" name="favcolor">  
</form>**

**Input Type Date**

**The <input type="date"> is used for input fields that should contain a date.**

**Depending on browser support, a date picker can show up in the input field.**

**Example**

**<form>  
  <label for="birthday">Birthday:</label>  
  <input type="date" id="birthday" name="birthday">  
</form>**

**You can also use the min and max attributes to add restrictions to dates:**

**Example**

**<form>  
  <label for="datemax">Enter a date before 1980-01-01:</label>  
  <input type="date" id="datemax" name="datemax" max="1979-12-31"><br><br>  
  <label for="datemin">Enter a date after 2000-01-01:</label>  
  <input type="date" id="datemin" name="datemin" min="2000-01-02">  
</form>**

**Input Type Datetime-local**

**The <input type="datetime-local"> specifies a date and time input field, with no time zone.**

**Depending on browser support, a date picker can show up in the input field.**

**Example**

**<form>  
  <label for="birthdaytime">Birthday (date and time):</label>  
  <input type="datetime-local" id="birthdaytime" name="birthdaytime">  
</form>**

**Input Type Email**

**The <input type="email"> is used for input fields that should contain an e-mail address.**

**Depending on browser support, the e-mail address can be automatically validated when submitted.**

**Some smartphones recognize the email type, and add ".com" to the keyboard to match email input.**

**Example**

**<form>  
  <label for="email">Enter your email:</label>  
  <input type="email" id="email" name="email">  
</form>**

**Input Type Image**

**The <input type="image"> defines an image as a submit button.**

**The path to the image is specified in the src attribute.**

**Example**

**<form>  
<input type="image" src="img\_submit.gif" alt="Submit" width="48" height="48">  
</form>**

**Input Type File**

**The <input type="file"> defines a file-select field and a "Browse" button for file uploads.**

**Example**

**<form>  
  <label for="myfile">Select a file:</label>  
  <input type="file" id="myfile" name="myfile">  
</form>**

**Input Type Hidden**

**The <input type="hidden"> defines a hidden input field (not visible to a user).**

**A hidden field lets web developers include data that cannot be seen or modified by users when a form is submitted.**

**A hidden field often stores what database record that needs to be updated when the form is submitted.**

**Note: While the value is not displayed to the user in the page's content, it is visible (and can be edited) using any browser's developer tools or "View Source" functionality. Do not use hidden inputs as a form of security!**

**Example**

**<form>  
  <label for="fname">First name:</label>  
  <input type="text" id="fname" name="fname"><br><br>  
  <input type="hidden" id="custId" name="custId" value="3487">  
  <input type="submit" value="Submit">  
</form>**

**Input Type Month**

**The <input type="month"> allows the user to select a month and year.**

**Depending on browser support, a date picker can show up in the input field.**

**Example**

**<form>  
  <label for="bdaymonth">Birthday (month and year):</label>  
  <input type="month" id="bdaymonth" name="bdaymonth">  
</form>**

**Input Type Number**

**The <input type="number"> defines a numeric input field.**

**You can also set restrictions on what numbers are accepted.**

**The following example displays a numeric input field, where you can enter a value from 1 to 5:**

**Example**

**<form>  
  <label for="quantity">Quantity (between 1 and 5):</label>  
  <input type="number" id="quantity" name="quantity" min="1" max="5">  
</form>**

**Input Restrictions**

**Here is a list of some common input restrictions:**

|  |  |
| --- | --- |
| **Attribute** | **Description** |
| **checked** | **Specifies that an input field should be pre-selected when the page loads (for type="checkbox" or type="radio")** |
| **disabled** | **Specifies that an input field should be disabled** |
| **max** | **Specifies the maximum value for an input field** |
| **maxlength** | **Specifies the maximum number of character for an input field** |
| **min** | **Specifies the minimum value for an input field** |
| **pattern** | **Specifies a regular expression to check the input value against** |
| **readonly** | **Specifies that an input field is read only (cannot be changed)** |
| **required** | **Specifies that an input field is required (must be filled out)** |
| **size** | **Specifies the width (in characters) of an input field** |
| **step** | **Specifies the legal number intervals for an input field** |
| **value** | **Specifies the default value for an input field** |

**The following example displays a numeric input field, where you can enter a value from 0 to 100, in steps of 10. The default value is 30:**

**Example**

**<form>  
  <label for="quantity">Quantity:</label>  
  <input type="number" id="quantity" name="quantity" min="0" max="100" step="10" value="30">  
</form>**

**Input Type Range**

**The <input type="range"> defines a control for entering a number whose exact value is not important (like a slider control). Default range is 0 to 100. However, you can set restrictions on what numbers are accepted with the min, max, and step attributes:**

**Example**

**<form>  
  <label for="vol">Volume (between 0 and 50):</label>  
  <input type="range" id="vol" name="vol" min="0" max="50">  
</form>**

**Input Type Search**

**The <input type="search"> is used for search fields (a search field behaves like a regular text field).**

**Example**

**<form>  
  <label for="gsearch">Search Google:</label>  
  <input type="search" id="gsearch" name="gsearch">  
</form>**

**nput Type Tel**

**The <input type="tel"> is used for input fields that should contain a telephone number.**

**Example**

**<form>  
  <label for="phone">Enter your phone number:</label>  
  <input type="tel" id="phone" name="phone" pattern="[0-9]{3}-[0-9]{2}-[0-9]{3}">  
</form>**

**Input Type Time**

**The <input type="time"> allows the user to select a time (no time zone).**

**Depending on browser support, a time picker can show up in the input field.**

**Example**

**<form>  
  <label for="appt">Select a time:</label>  
  <input type="time" id="appt" name="appt">  
</form>**

**Input Type Url**

**The <input type="url"> is used for input fields that should contain a URL address.**

**Depending on browser support, the url field can be automatically validated when submitted.**

**Some smartphones recognize the url type, and adds ".com" to the keyboard to match url input.**

**Example**

**<form>  
  <label for="homepage">Add your homepage:</label>  
  <input type="url" id="homepage" name="homepage">  
</form>**

**Input Type Week**

**The <input type="week"> allows the user to select a week and year.**

**Depending on browser support, a date picker can show up in the input field.**

**Example**

**<form>  
  <label for="week">Select a week:</label>  
  <input type="week" id="week" name="week">  
</form>**

**The form Attribute**

**The input form attribute specifies the form the <input> element belongs to.**

**The value of this attribute must be equal to the id attribute of the <form> element it belongs to.**

**Example**

**An input field located outside of the HTML form (but still a part of the form):**

**<form action="/action\_page.php" id="form1">  
  <label for="fname">First name:</label>  
  <input type="text" id="fname" name="fname"><br><br>  
  <input type="submit" value="Submit">  
</form>  
  
<label for="lname">Last name:</label>  
<input type="text" id="lname" name="lname" form="form1">**

**The formaction Attribute**

**The input formaction attribute specifies the URL of the file that will process the input when the form is submitted.**

**Note: This attribute overrides the action attribute of the <form> element.**

**The formaction attribute works with the following input types: submit and image.**

**Example**

**An HTML form with two submit buttons, with different actions:**

**<form action="/action\_page.php">  
  <label for="fname">First name:</label>  
  <input type="text" id="fname" name="fname"><br><br>  
  <label for="lname">Last name:</label>  
  <input type="text" id="lname" name="lname"><br><br>  
  <input type="submit" value="Submit">  
  <input type="submit" formaction="/action\_page2.php" value="Submit as Admin">  
</form>**

**The formenctype Attribute**

**The input formenctype attribute specifies how the form-data should be encoded when submitted (only for forms with method="post").**

**Note: This attribute overrides the enctype attribute of the <form> element.**

**The formenctype attribute works with the following input types: submit and image.**

**Example**

**A form with two submit buttons. The first sends the form-data with default encoding, the second sends the form-data encoded as "multipart/form-data":**

**<form action="/action\_page\_binary.asp" method="post">  
  <label for="fname">First name:</label>  
  <input type="text" id="fname" name="fname"><br><br>  
  <input type="submit" value="Submit">  
  <input type="submit" formenctype="multipart/form-data"  
  value="Submit as Multipart/form-data">  
</form>**

**The formmethod Attribute**

**The input formmethod attribute defines the HTTP method for sending form-data to the action URL.**

**Note: This attribute overrides the method attribute of the <form> element.**

**The formmethod attribute works with the following input types: submit and image.**

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

**Notes on the "get" method:**

* **This method appends the form-data to the URL in name/value pairs**
* **This method is useful for form submissions where a user want to bookmark the result**
* **There is a limit to how much data you can place in a URL (varies between browsers), therefore, you cannot be sure that all of the form-data will be correctly transferred**
* **Never use the "get" method to pass sensitive information! (password or other sensitive information will be visible in the browser's address bar)**

**Notes on the "post" method:**

* **This method sends the form-data as an HTTP post transaction**
* **Form submissions with the "post" method cannot be bookmarked**
* **The "post" method is more robust and secure than "get", and "post" does not have size limitations**

**Example**

**A form with two submit buttons. The first sends the form-data with method="get". The second sends the form-data with method="post":**

**<form action="/action\_page.php" method="get">  
  <label for="fname">First name:</label>  
  <input type="text" id="fname" name="fname"><br><br>  
  <label for="lname">Last name:</label>  
  <input type="text" id="lname" name="lname"><br><br>  
  <input type="submit" value="Submit using GET">  
  <input type="submit" formmethod="post" value="Submit using POST">  
</form>**

**The formtarget Attribute**

**The input formtarget attribute specifies a name or a keyword that indicates where to display the response that is received after submitting the form.**

**Note: This attribute overrides the target attribute of the <form> element.**

**The formtarget attribute works with the following input types: submit and image.**

**Example**

**A form with two submit buttons, with different target windows:**

**<form action="/action\_page.php">  
  <label for="fname">First name:</label>  
  <input type="text" id="fname" name="fname"><br><br>  
  <label for="lname">Last name:</label>  
  <input type="text" id="lname" name="lname"><br><br>  
  <input type="submit" value="Submit">  
  <input type="submit" formtarget="\_blank" value="Submit to a new window/tab">  
</form>**

**The formnovalidate Attribute**

**The input formnovalidate attribute specifies that an <input> element should not be validated when submitted.**

**Note: This attribute overrides the novalidate attribute of the <form> element.**

**The formnovalidate attribute works with the following input types: submit.**

**Example**

**A form with two submit buttons (with and without validation):**

**<form action="/action\_page.php">  
  <label for="email">Enter your email:</label>  
  <input type="email" id="email" name="email"><br><br>  
  <input type="submit" value="Submit">  
  <input type="submit" formnovalidate="formnovalidate"  
  value="Submit without validation">  
</form>**