**HTML5 Form Validation**

**novalidate**

**novalidate attribute is used in form tag to disable HTML5 based Form validation. After using novalidate in form tag, required and type based validation will not work.**

**<form novalidate>**

**<input type="text" required>**

**<input type="submit">**

**</form>**

**autofocus**

**autofocus attribute focus on that single particular form control on page load. autofocus can be used only once in a single webpage.**

**placeholder**

**placeholder attribute shows some hint in input control. Placeholder value will disappear on focus or keypress. Supported controls for placeholder are input controls and textarea. The default color of placeholder is lightgray, i.e (#999).**

**<form>**

**<input type="text" placeholder="Enter Name" required >**

**</form>**

**required**

**required attribute is a boolean attribute used to add validation in form controls like inputs, textarea, radio controls, checkbox and select dropdown. With required, a blank form control can not submit value.**

**Example1**

**<form>**

**<input type="checkbox" required >**

**</form>**

**Example2**

**<form>**

**<input type="radio" name="gender" required > Male**

**<input type="radio" name="gender" required > Female**

**</form>**

**Example3**

**<form>**

**<select required>**

**<option value="">--Choose City--</option>**

**<option>New Delhi</option>**

**<option>Chennai</option>**

**<option>Mumbai</option>**

**<option>Kolkata</option>**

**</select>**

**</form>**

**pattern**

**Create JavaScript regular expression for input controls and textarea. Regex can be used to validate pincode, debit/credit card no, cvv no, atm pin etc.**

**<input type="text" placeholder="Enter Pincode" required pattern="^[0-9]{6}$" title="Enter Valid Pin Code">**

**minlength and maxlength**

**Will submit a form only when this field is filled with minimum n characters.**

**<input type="text" placeholder="Enter Name" required minlength="3" >**

**readonly**

**A control with readonly attribute is not editable by user.**

**<input type="text" value="India" readonly>**

**min , max,step attributes**

**Select Range Number between 10 to 100**

**<input type="number" min="10" max="100" step="2"/><br>**

**Example**

**<!DOCTYPE html>**

**<html>**

**<body>**

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

**<label>Enter your name**

**<input type="text" name="fname" required autofocus>**

**Enter Address**

**<input type="text" name="lname" required></label>**

**<p>**

**<label>Enter your mobile number**

**<input name="tel1" type="text" pattern="[0-9]{3}" placeholder="###" size="3"/>**

**<input name="tel2" type="text" pattern="[0-9]{3}" placeholder="###" size="3" />**

**<input name="tel3" type="text" pattern="[0-9]{4}" placeholder="####" size="4"/>**

**</label>**

**</p>**

**Select Range Number between 10 to 100**

**<input type="number" min="10" max="100" step="2"/><br>**

**Slider**

**<input type="range" size="2" name="st" min="1" max="10" value="3">**

**<input type="text" placeholder="Enter string" required minlength="3">**

**<input type="text" placeholder="Enter City Name" list="citylist" required >**

**<datalist id="citylist">**

**<option>New Delhi</option>**

**<option>Chennai</option>**

**<option>Kolkata</option>**

**<option>Mumbai</option>**

**</datalist>**

**<input type="submit" value="Submit">**

**</form>**

**</body>**

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.

**<!DOCTYPE html>**

**<html>**

**<body>**

**<br>**

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

**<p>**

**<lable>Enter Fruit Name**

**<input list="Fruits">**

**<datalist id="Fruits">**

**<option value="Mango">**

**<option value="Orange">**

**<option value="Banana">**

**<option value="Apple">**

**<option value="Grapes">**

**</datalist>**

**</lable>**

**</p>**

**</form>**

**</form>**

**</body>**

**</html>**

# **HTML <optgroup> Tag**

## Definition and Usage

The <optgroup> tag is used to group related options in a [<select>](https://www.w3schools.com/tags/tag_select.asp) element (drop-down list).

If you have a long list of options, groups of related options are easier to handle for a user.

**<!DOCTYPE html>**

**<html>**

**<body>**

**<br>**

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

**<p>**

**<lable>Select Course:**

**<select name="B.Tech" id="bt">**

**<optgroup label="B.Tech Course">**

**<option value="cse">B.Tech(CSE)</option>**

**<option value="cst">B.Tech(CST)</option>**

**<option value="ce">B.Tech(CE)</option>**

**<option value="ece">B.Tech(ECE)</option>**

**<option value="me">B.Tech(ME)</option>**

**</optgroup>**

**<optgroup label="Life Sciences">**

**<option value="maths">B.SC Maths</option>**

**<option value="english">B.A(English)</option>**

**<option value="history">B.A(History)</option>**

**<option value="hindi">B.A(Hindi)</option>**

**</optgroup>**

**</select>**

**</lable>**

**</p>**

**</form>**

**</form>**

**</body>**

**</html>**

# **HTML <output> Tag**

**<output> –**This tag represents the output of any calculation which is computed on an HTML file

**<!DOCTYPE html>**

**<html>**

**<body>**

**<br>**

**<form oninput="x.value=parseInt(Input1.value)+parseInt(Input2.value)">**

**<input type="number" id="Input1" value="0" min=10 max=100> + <input type="number" id="Input2" value="0" min=10 max=100>**

**=<output name="x" for="Input1 Input2"></output>**

**</form>**

**</body>**

**</html>**

# **HTML <button> Tag**

## Definition and Usage

The <button> tag defines a clickable button.

Inside a <button> element you can put text (and tags like <i>, <b>, <strong>, <br>, <img>, etc.). That is not possible with a button created with the [<input>](https://www.w3schools.com/tags/tag_input.asp) element!

**Tip:** Always specify the type attribute for a <button> element, to tell browsers what type of button it is.

## Example1

## <!DOCTYPE html>

## <html>

## <body>

## <h1>The button Element</h1>

## <button type="button" onclick="alert('Hello world')">Click Button</button>

## </body>

## </html>

## Example2

## <!DOCTYPE html>

## <head>

## <script>

## function googlepage()

## {

## window.open("https://www.google.com/");

## }

## </script>

## </head>

## <html>

## <body>

## <h1>The button Element</h1>

## <button type="button" onclick="googlepage()">Click Button</button>

## </body>

## </html>

## 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 |

## The HTML <video> Element

To show a video in HTML, use the <video> element:

The controls attribute adds video controls, like play, pause, and volume.

It is a good idea to always include width and height attributes. If height and width are not set, the page might flicker while the video loads.

**<!DOCTYPE html>**

**<html>**

**<body>**

**<video width="400" controls>**

**<source src="myvideo.mp4" type="video/mp4">**

**</video>**

**</body>**

**</html>**

## HTML <video> Autoplay

To start a video automatically, use the autoplay attribute:

<video width="320" height="240" autoplay>

Add muted after autoplay to let your video start playing automatically (but muted):

<video width="320" height="240" autoplay muted>

# **HTML Audio**

The HTML <audio> element is used to play an audio file on a web page.

**<!DOCTYPE html>**

**<html>**

**<body>**

**<audio controls>**

**<source src="mfile.mp3" type="audio/mpeg">**

**</audio>**

**</body>**

**</html>**

The controls attribute adds audio controls, like play, pause, and volume.

The <source> element allows you to specify alternative audio files which the browser may choose from. The browser will use the first recognized format.

## HTML <audio> Autoplay

To start an audio file automatically, use the autoplay attribute:

Add muted after autoplay to let your audio file start playing automatically (but muted):

**Attributes:** The various attributes that can be used with the “audio” tag are listed below:

* [**Controls**](https://www.geeksforgeeks.org/html-controls-attribute/)**:** Designates what controls to display with the audio player.
* [**Autoplay**](https://www.geeksforgeeks.org/html-autoplay-attribute/)**:** Designates that the audio file will play immediately after it loads controls.
* [**Loop**](https://www.geeksforgeeks.org/html-loop-attribute/)**:** Designates that the audio file should continuously repeat.
* [**src**](https://www.geeksforgeeks.org/html-src-attribute/)**:** Designates the URL of the audio file.
* [**muted**](https://www.geeksforgeeks.org/html-muted-attribute/)**:** Designates that the audio file should be muted.

**(Adding audio with multiple sources):**Multiple sources of audios are specified so that if the browser is unable to play the first source, then it will automatically jump to the second source and try to play it.

**<audio controls autoplay>**

**<source src="test.mp3" type="audio/mp3">**

**<source src="test.ogg" type="audio/ogg">**

**<source src="test.opus" type="audio/ogg">**

**</audio>**

The **HTML loop Attribute**is used to *restart the audio and video again and again after finishing it*. It contains the Boolean value.

**Applicable**

* <audio>
* <video>
* <marquee>

**Example1**

**<!DOCTYPE html>**

**<html>**

**<body>**

**<audio controls loop>**

**<source src="mfile.mp3" type="audio/mpeg">**

**</audio>**

**</body>**

**</html>**

**Example2**

**<!DOCTYPE html>**

**<html>**

**<body>**

**<video width="400" controls loop>**

**<source src="myvideo.mp4" type="video/mp4">**

**</video>**

**</body>**

**</html>**

**Example3**

# HTML <marquee> Tag

The <marquee> tag in HTML is used to create scrolling text or image in a webpages. It scrolls either from horizontally left to right or right to left, or vertically top to bottom or bottom to top.

**Syntax :**

The marquee element comes in pairs. It means that the tag has opening and closing elements.

**<marquee>**

**<--- contents --->**

**</marquee>**

|  |  |
| --- | --- |
| Attribute | Description |
| width | provides the width or breadth of a marquee. For example width="10" or width="20%" |
| height | provides the height or length of a marquee. For example height="20" or height="30%" |
| direction | provides the direction or way in which your marquee will allow you to scroll. The value of this attribute can be: left, right, up or down |
| scrolldelay | provides a feature whose value will be used for delaying among each jump. |
| scrollamount | provides value for speeding the marquee feature |
| behavior | provides the scrolling type in a marquee. That scrolling can be like sliding, scrolling or alternate |
| loop | provides how many times the marquee will loop |
| bgcolor | provides a background color where the value will be either the name of the color or the hexadecimal color-code. |
| vspace | provides a vertical space and its value can be like: vspace="20" or vspace="30%" |
| hspace | provides a horizontal space and its value can be like: hspace="20" or hspace="30%" |

**<!DOCTYPE html>**

**<html>**

**<body>**

**<marquee class="marq" bgcolor = "Green" direction = "left" loop=2>**

**<p> Hello Every Body</p>**

**</marquee>**

**</body>**

**</html>**

Marquee speed can be changed using the "scrollmount" attribute. For example, if you are using scrollmount="1" then it sets the marque to scroll very slowly, and as you increase the "scrollmount," the scrolling speed will also increase.

**<!DOCTYPE html>**

**<html>**

**<body>**

**<marquee behavior="scroll" direction="up" scrollamount="1" bgcolor = "Green">Slow Scrolling</marquee>**

**<marquee behavior="scroll" direction="right" scrollamount="12" bgcolor = "blue" >Little Fast Scrolling</marquee>**

**<marquee behavior="scroll" direction="left" scrollamount="20" bgcolor = "red" >Fast Scrolling</marquee>**

**<marquee behavior="scroll" direction="right" scrollamount="50" bgcolor = "yellow" >Very Fast Scrolling</marquee>**

**</body>**

**</html>**

**<!DOCTYPE html>**

**<html>**

**<body>**

**<table>**

**<form>**

**<tr>**

**<td>**

**<label for="name">**

**Name**

**</label>**

**</td>**

**<td><input type="text" id="name" />**

**</td>**

**</tr>**

**<tr>**

**<td><label for="email">**

**Email**

**</label>**

**</td>**

**<td><input type="email" id="email" />**

**</td>**

**</tr>**

**<tr>**

**<td><label for="telnum">**

**Tel No.**

**</label>**

**</td>**

**<td><input type="telnum" id="telnum" />**

**</td>**

**</tr>**

**<tr>**

**<td><label for="Roll No.">**

**Roll No.**

**</label>**

**</td>**

**<td><input type="number" id="rollno" />**

**</td>**

**</tr>**

**</form>**

**</table>**

**</body>**

**</html>**