**HTML 5 semantic Tag**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>HTML5</title>

<!--[if lt IE 9]>

<script src="https://oss.maxcdn.com/libs/html5shiv/3.7.0/html5shiv.js"></script>

</script>

<![endif]-->

<style>

body {

font-family: Verdana,sans-serif;

font-size: 0.9em;

}

header, footer {

padding: 10px;

color: white;

background-color: black;

}

section {

margin: 5px;

padding: 10px;

background-color: lightgrey;

}

article {

margin: 5px;

padding: 10px;

background-color: white;

}

nav ul {

padding: 0;

}

nav ul li {

display: inline;

margin: 5px;

}

</style>

</head>

<body>

<header>

<h1>Monday Times</h1>

</header>

<nav>

<ul>

<li>News</li>

<li>Sports</li>

<li>Weather</li>

</ul>

</nav>

<section>

<h2>News Section</h2>

<article>

<h2>News Article</h2>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque in porta lorem. Morbi condimentum est nibh, et consectetur tortor feugiat at.</p>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque in porta lorem. Morbi condimentum est nibh, et consectetur tortor feugiat at.</p>

</article>

<article>

<h2>News Article</h2>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque in porta lorem. Morbi condimentum est nibh, et consectetur tortor feugiat at.</p>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque in porta lorem. Morbi condimentum est nibh, et consectetur tortor feugiat at.</p>

</article>

</section>

<footer>

<p>&copy; 2014 Monday Times. All rights reserved.</p>

</footer>

</body>

</html>

**Drag and Drop**

<html>

<head>

<style>

#div1 {

width: 350px;

height: 70px;

padding: 10px;

border: 1px solid #aaaaaa;

}

</style>

<script>

function allowDrop(ev) {

ev.preventDefault();

}

function drag(ev) {

ev.dataTransfer.setData("text", ev.target.id);

}

function drop(ev) {

ev.preventDefault();

var data = ev.dataTransfer.getData("text");

ev.target.appendChild(document.getElementById(data));

}

</script>

</head>

<body>

<p>Drag the W3Schools image into the rectangle:</p>

<div id="div1" ondrop="drop(event)" ondragover="allowDrop(event)"></div>

<br>

<img id="drag1" src="img\_logo.gif" draggable="true" ondragstart="drag(event)" width="336" height="69">

</body>

</html>

Geolocation

<html>

<body>

<p>Click the button to get your coordinates.</p>

<button onclick="getLocation()">Try It</button>

<p id="demo"></p>

<script>

var x = document.getElementById("demo");

function getLocation() {

if (navigator.geolocation) {

navigator.geolocation.getCurrentPosition(showPosition);

} else {

x.innerHTML = "Geolocation is not supported by this browser.";

}

}

function showPosition(position) {

x.innerHTML = "Latitude: " + position.coords.latitude +

"<br>Longitude: " + position.coords.longitude;

}

</script>

</body>

</html>

JavaScript Form Validation

<!DOCTYPE html>

<html>

<head>

<script>

function validateForm() {

var x = document.forms["myForm"]["fname"].value;

if (x == "") {

alert("Name must be filled out");

return false;

}

}

</script>

</head>

<body>

<form name="myForm" action="/action\_page.php" onsubmit="return validateForm()" method="post">

Name: <input type="text" name="fname">

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

</form>

</body>

</html>

Constraint Validation HTML Input Attributes

|  |  |
| --- | --- |
| **Attribute** | **Description** |
| disabled | Specifies that the input element should be disabled |
| max | Specifies the maximum value of an input element |
| min | Specifies the minimum value of an input element |
| pattern | Specifies the value pattern of an input element |
| step |  |
| required | Specifies that the input field requires an element |
| type | Specifies the type of an input element |

Constraint Validation CSS Pseudo Selectors

|  |  |
| --- | --- |
| **Selector** | **Description** |
| :disabled | Selects input elements with the "disabled" attribute specified |
| :invalid | Selects input elements with invalid values |
| :optional | Selects input elements with no "required" attribute specified |
| :required | Selects input elements with the "required" attribute specified |
| :valid | Selects input elements with valid values |

Constraint Validation DOM Methods

|  |  |
| --- | --- |
| **Property** | **Description** |
| checkValidity() | Returns true if an input element contains valid data. |
| setCustomValidity() | Sets the validationMessage property of an input element. |

<!DOCTYPE html>

<html>

<body>

<p>Enter a number and click OK:</p>

<input id="id1" type="number" min="100" max="300" required>

<button onclick="myFunction()">OK</button>

<p>If the number is less than 100 or greater than 300, an error message will be displayed.</p>

<p id="demo"></p>

<script>

function myFunction() {

var inpObj = document.getElementById("id1");

if (!inpObj.checkValidity()) {

document.getElementById("demo").innerHTML = inpObj.validationMessage;

} else {

document.getElementById("demo").innerHTML = "Input OK";

}

}

</script>

</body>

</html>

## The pattern Attribute

The pattern attribute specifies a regular expression that the <input> element's value is checked against.

The pattern attribute works with the following input types: text, search, url, tel, email, and password.

**Tip:** Use the global [title](https://www.w3schools.com/tags/att_global_title.asp) attribute to describe the pattern to help the user.

**Tip:** Learn more about [regular expressions](https://www.w3schools.com/js/js_regexp.asp) in our JavaScript tutorial.

<!DOCTYPE html>

<html>

<body>

<h2>The pattern Attribute</h2>

<p>The pattern attribute specifies a regular expression that the input element's value is checked against.</p>

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

Country code: <input type="text" name="country\_code" pattern="[A-Za-z]{3}" title="Three letter country code">

<input type="submit">

</form>

<p><strong>Note:</strong> The pattern attribute of the input tag is not supported in Internet Explorer 9 and earlier versions, or in Safari 10 and earler versions.</p>

</body>

</html>

## The placeholder Attribute

The placeholder attribute specifies a hint that describes the expected value of an input field (a sample value or a short description of the format).

The hint is displayed in the input field before the user enters a value.

The placeholder attribute works with the following input types: text, search, url, tel, email, and password.

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

<input type="text" name="fname" placeholder="First name"><br>

<input type="text" name="lname" placeholder="Last name"><br>

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

</form>

<https://www.w3schools.com/html/html_form_attributes.asp>