HTML Styles - CSS

CSS stands for Cascading Style Sheets.

CSS saves a lot of work. It can control the layout of multiple web pages all at once

## **What is CSS?**

Cascading Style Sheets (CSS) is used to format the layout of a webpage.

With CSS, you can control the color, font, the size of text, the spacing between elements, how elements are positioned and laid out, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more!

The word **cascading** means that a style applied to a parent element will also apply to all children elements within the parent. So, if you set the color of the body text to "blue", all headings, paragraphs, and other text elements within the body will also get the same color (unless you specify something else)!

# CSS Syntax

A CSS rule consists of a selector and a declaration block.

## **CSS Syntax**



The selector points to the HTML element you want to style.

The declaration block contains one or more declarations separated by semicolons.

Each declaration includes a CSS property name and a value, separated by a colon.

Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

### **Example**

In this example all <p> elements will be center-aligned, with a red text color:

p {  
  color: red;  
  text-align: center;  
}

#### **Example Explained**

* p is a selector in CSS (it points to the HTML element you want to style: <p>).
* color is a property, and red is the property value
* text-align is a property, and center is the property value

## **CSS Comments**

Comments are used to explain the code, and may help when you edit the source code at a later date.

Comments are ignored by browsers.

A CSS comment is placed inside the <style> element, and starts with /\* and ends with \*/:

### **Example**

/\* This is a single-line comment \*/  
p {  
  color: red;  
}

[Try it Yourself »](https://www.w3schools.com/css/tryit.asp?filename=trycss_comments)

You can add comments wherever you want in the code:

### **Example**

p {  
  color: red;  /\* Set text color to red \*/  
}

## **CSS Selectors**

CSS selectors are used to "find" (or select) the HTML elements you want to style.

We can divide CSS selectors into five categories:

* Simple selectors (select elements based on name, id, class)
* [Combinator selectors](https://www.w3schools.com/css/css_combinators.asp) (select elements based on a specific relationship between them)
* [Pseudo-class selectors](https://www.w3schools.com/css/css_pseudo_classes.asp) (select elements based on a certain state)
* [Pseudo-elements selectors](https://www.w3schools.com/css/css_pseudo_elements.asp) (select and style a part of an element)
* [Attribute selectors](https://www.w3schools.com/css/css_attribute_selectors.asp) (select elements based on an attribute or attribute value)

## **The CSS element Selector**

The element selector selects HTML elements based on the element name.

### **Example**

Here, all <p> elements on the page will be center-aligned, with a red text color:

p {  
  text-align: center;  
  color: red;  
}

## **The CSS id Selector**

The id selector uses the id attribute of an HTML element to select a specific element.

The id of an element is unique within a page, so the id selector is used to select one unique element!

To select an element with a specific id, write a hash (#) character, followed by the id of the element.

### **Example**

The CSS rule below will be applied to the HTML element with id="para1":

#para1 {  
  text-align: center;  
  color: red;  
}

**Note:** An id name cannot start with a number!

## **The CSS class Selector**

The class selector selects HTML elements with a specific class attribute.

To select elements with a specific class, write a period (.) character, followed by the class name.

### **Example**

In this example all HTML elements with class="center" will be red and center-aligned:

<!DOCTYPE html>

<html>

<head>

<style>

.center {

text-align: center;

color: red;

}

</style>

</head>

<body>

<h1 class="center">Red and center-aligned heading</h1>

<p class="center">Red and center-aligned paragraph.</p>

</body>

</html>

HTML elements can also refer to more than one class.

### **Example**

In this example the <p> element will be styled according to class="center" and to class="large":

<p class="center large">This paragraph refers to two classes.</p>

<!DOCTYPE html>

<html>

<head>

<style>

p.center {

text-align: center;

color: red;

}

p.large {

font-size: 300%;

}

</style>

</head>

<body>

<h1 class="center">This heading will not be affected</h1>

<p class="center">This paragraph will be red and center-aligned.</p>

<p class="center large">This paragraph will be red, center-aligned, and in a large font-size.</p>

</body>

</html>

## **The CSS Universal Selector**

The universal selector (\*) selects all HTML elements on the page.

### **Example**

The CSS rule below will affect every HTML element on the page:

<!DOCTYPE html>

<html>

<head>

<style>

\* {

text-align: center;

color: blue;

}

</style>

</head>

<body>

<h1>Hello world!</h1>

<p>Every element on the page will be affected by the style.</p>

<p id="para1">Me too!</p>

<p>And me!</p>

</body>

</html>

## **The CSS Grouping Selector**

The grouping selector selects all the HTML elements with the same style definitions.

Look at the following CSS code (the h1, h2, and p elements have the same style definitions):

h1 {  
  text-align: center;  
  color: red;  
}  
  
h2 {  
  text-align: center;  
  color: red;  
}  
  
p {  
  text-align: center;  
  color: red;  
}

It will be better to group the selectors, to minimize the code.

To group selectors, separate each selector with a comma.

### **Example**

In this example we have grouped the selectors from the code above:

h1, h2, p {  
  text-align: center;  
  color: red;  
}

## **All CSS Simple Selectors**

|  |  |  |
| --- | --- | --- |
| **Selector** | **Example** | **Example description** |
| [#*id*](https://www.w3schools.com/cssref/sel_id.asp) | #firstname | Selects the element with id="firstname" |
| [.*class*](https://www.w3schools.com/cssref/sel_class.asp) | .intro | Selects all elements with class="intro" |
| [*element.class*](https://www.w3schools.com/cssref/sel_element_class.asp) | p.intro | Selects only <p> elements with class="intro" |
| [\*](https://www.w3schools.com/cssref/sel_all.asp) | \* | Selects all elements |
| [*element*](https://www.w3schools.com/cssref/sel_element.asp) | p | Selects all <p> elements |
| [*element,element,..*](https://www.w3schools.com/cssref/sel_element_comma.asp) | div, p | Selects all <div> elements and all <p> elements |

**Using css**

CSS can be added to HTML documents in 3 ways:

* **Inline** - by using the style attribute inside HTML elements
* **Internal** - by using a <style> element in the <head> section
* **External** - by using a <link> element to link to an external CSS file

The most common way to add CSS, is to keep the styles in external CSS files. However, in this tutorial we will use inline and internal styles, because this is easier to demonstrate, and easier for you to try it yourself.

## **Inline CSS**

An inline CSS is used to apply a unique style to a single HTML element.

An inline CSS uses the style attribute of an HTML element.

The following example sets the text color of the <h1> element to blue, and the text color of the <p> element to red:

<!DOCTYPE html>

<html>

<body>

<h1 style="color:blue;">A Blue Heading</h1>

<p style="color:red;">A red paragraph.</p>

</body>

</html>

## **Internal CSS**

An internal CSS is used to define a style for a single HTML page.

An internal CSS is defined in the <head> section of an HTML page, within a <style> element.

The following example sets the text color of ALL the <h1> elements (on that page) to blue, and the text color of ALL the <p> elements to red. In addition, the page will be displayed with a "powderblue" background color:

### **Example**

<!DOCTYPE html>  
<html>  
<head>  
<style>  
body {background-color: powderblue;}  
h1   {color: blue;}  
p    {color: red;}  
</style>  
</head>  
<body>  
  
<h1>This is a heading</h1>  
<p>This is a paragraph.</p>  
  
</body>  
</html>

## **External CSS**

An external style sheet is used to define the style for many HTML pages.

To use an external style sheet, add a link to it in the <head> section of each HTML page:

With an external style sheet, you can change the look of an entire website by changing just one file!

Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.

### **Example**

External styles are defined within the <link> element, inside the <head> section of an HTML page:

<!DOCTYPE html>  
<html>  
<head>  
<link rel="stylesheet" href="mystyle.css">  
</head>  
<body>  
  
<h1>This is a heading</h1>  
<p>This is a paragraph.</p>  
  
</body>  
</html>

**Note:** Do not add a space between the property value (20) and the unit (px):  
Incorrect (space): margin-left: 20 px;  
Correct (no space): margin-left: 20px;

The external style sheet can be written in any text editor. The file must not contain any HTML code, and must be saved with a .css extension.

Here is what the "styles.css" file looks like:

### **"styles.css":**

body {  
  background-color: powderblue;  
}  
h1 {  
  color: blue;  
}  
p {  
  color: red;  
}

**Tip:** With an external style sheet, you can change the look of an entire web site, by changing one file!

## **CSS Colors, Fonts and Sizes**

Here, we will demonstrate some commonly used CSS properties. You will learn more about them later.

The CSS color property defines the text color to be used.

The CSS font-family property defines the font to be used.

The CSS font-size property defines the text size to be used.

### **Example**

Use of CSS color, font-family and font-size properties:

<!DOCTYPE html>  
<html>  
<head>  
<style>  
h1 {  
  color: blue;  
  font-family: verdana;  
  font-size: 300%;  
}  
p {  
  color: red;  
  font-family: courier;  
  font-size: 160%;  
}  
</style>  
</head>  
<body>  
  
<h1>This is a heading</h1>  
<p>This is a paragraph.</p>  
  
</body>  
</html>

## **CSS Border, CSS Padding, CSS Margin**

The CSS border property defines a border around an HTML element.

**Tip:** You can define a border for nearly all HTML elements.

The CSS padding property defines a padding (space) between the text and the border.

The CSS margin property defines a margin (space) outside the border.

<!DOCTYPE html>

<html>

<head>

<style>

p {

border: 2px solid powderblue;

margin: 50px;

padding: 50px;

text-align: center;

background-color: lightgrey;

width: 300px;

}

</style>

</head>

<body>

<h1>This is a heading</h1>

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

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

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

</body>

</html>

# HTML Tables

To understand the example better, we have added borders to the 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.

## **Table Rows**

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

tr stands for table row.

## **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.

<!DOCTYPE html>

<html>

<head>

<style>

table, th, td {

border: 1px solid black;

border-collapse: collapse;

}

</style>

</head>

<body>

<h2>Cell that spans two columns</h2>

<p>To make a cell span more than one column, use the colspan attribute.</p>

<table style="width:100%">

<tr>

<th colspan="2">Name</th>

<th>Age</th>

</tr>

<tr>

<td>Jill</td>

<td>Smith</td>

<td>43</td>

</tr>

<tr>

<td>Eve</td>

<td>Jackson</td>

<td>57</td>

</tr>

</table>

</body>

## </html>

## Cell that spans two columns

To make a cell span more than one column, use the colspan attribute.

|  |  |  |
| --- | --- | --- |
| **Name** | | **Age** |
| Jill | Smith | 43 |
| Eve | Jackson | 57 |

**Example of a table**

<!DOCTYPE html>

<html>

<style>

table, th, td {

border:1px solid black;

}

</style>

<body>

<h2>A basic HTML table</h2>

<table style="width:100%">

<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>

<p>To understand the example better, we have added borders to the table.</p>

</body>

</html>

## A basic HTML table

|  |  |  |
| --- | --- | --- |
| **Company** | **Contact** | **Country** |
| Alfreds Futterkiste | Maria Anders | Germany |
| Centro comercial Moctezuma | Francisco Chang | Mexico |

To understand the example better, we have added borders to the table.

HTML Table Colgroup

The <colgroup> element is used to style specific columns of a table.

<!DOCTYPE html>

<html>

<head>

<style>

table, th, td {

border: 1px solid black;

border-collapse: collapse;

}

</style>

</head>

<body>

<h2>Colgroup</h2>

<p>Add the a colgroup with a col element that spans over two columns to define a style for the two columns:</p>

<table style="width: 100%;">

<colgroup>

<col span="2" style="background-color: #D6EEEE">

</colgroup>

<tr>

<th>MON</th>

<th>TUE</th>

<th>WED</th>

<th>THU</th>

</tr>

<tr>

<td>1</td>

<td>2</td>

<td>3</td>

<td>4</td></tr>

</table>

</body>

</html>

## Colgroup

Add the a colgroup with a col element that spans over two columns to define a style for the two columns:

|  |  |  |  |
| --- | --- | --- | --- |
| **MON** | **TUE** | **WED** | **THU** |
| 1 | 2 | 3 | 4 |