<https://www.w3schools.com/css/css_intro.asp>

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# What is CSS?

* CSS is the language we use to style a Web page.
* CSS stands for Cascading Style Sheets
* CSS describes how HTML elements are to be displayed on screen, paper, or in other media
* CSS saves a lot of work. It can control the layout of multiple web pages all at once
* External stylesheets are stored in CSS files

## **Why Use CSS?**

CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

**Example**:

<!DOCTYPE html>

<html>

<head>

<style>

body {

background-color: lightblue;

}

h1 {

color: white;

text-align: center;

}

p {

font-family: verdana;

font-size: 20px;

}

</style>

</head>

<body>

<h1>My First CSS Example</h1>

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

</body>

</html>

## CSS Solved a Big Problem

HTML was NEVER intended to contain tags for formatting a web page!

HTML was created to describe the content of a web page, like:

<h1>This is a heading</h1>

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

When tags like <font>, and color attributes were added to the HTML 3.2 specification, it started a nightmare for web developers. Development of large websites, where fonts and color information were added to every single page, became a long and expensive process.

To solve this problem, the World Wide Web Consortium (W3C) created CSS.

CSS removed the style formatting from the HTML page!

## CSS Saves a Lot of Work!

The style definitions are normally saved in external .css files.

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

# CSS - Syntax

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



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**:

<!DOCTYPE html>

<html>

<head>

<style>

p {

color: red;

text-align: center;

}

</style>

</head>

<body>

<p>Hello World!</p>

<p>These paragraphs are styled with CSS.</p>

</body>

</html>

**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 - Selectors

A CSS selector selects the HTML element(s) you want to style.

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:

<!DOCTYPE html>

<html>

<head>

<style>

p {

text-align: center;

color: red;

}

</style>

</head>

<body>

<p>Every paragraph will be affected by the style.</p>

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

<p>And me!</p>

</body>

</html>

## 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":

<!DOCTYPE html>

<html>

<head>

<style>

#para1 {

text-align: center;

color: red;

}

</style>

</head>

<body>

<p id="para1">Hello World!</p>

<p>This paragraph is not affected by the style.</p>

</body>

</html>

**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>

You can also specify that only specific HTML elements should be affected by a class.

**Example**: In this example only <p> elements with class="center" will be red and center-aligned:

<!DOCTYPE html>

<html>

<head>

<style>

p.center {

text-align: center;

color: red;

}

</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>

</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":

<!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):

**Example**:

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:

<!DOCTYPE html>

<html>

<head>

<style>

h1, h2, p {

text-align: center;

color: red;

}

</style>

</head>

<body>

<h1>Hello World!</h1>

<h2>Smaller heading!</h2>

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

</body>

</html>

## 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 |

# CSS - Responsive Web Design

<https://www.w3schools.com/css/css_rwd_intro.asp>

## What is Responsive Web Design?

* Responsive web design makes your web page look good on all devices.
* Responsive web design uses only HTML and CSS.
* Responsive web design is not a program or a JavaScript.

## Designing For The Best Experience For All Users

Web pages can be viewed using many different devices: desktops, tablets, and phones. Your web page should look good, and be easy to use, regardless of the device.

Web pages should not leave out information to fit smaller devices, but rather adapt its content to fit any device:

|  |  |  |
| --- | --- | --- |
| **Desktop** | **Tablet** | **Phone** |
|  |  |  |

It is called responsive web design when you use CSS and HTML to resize, hide, shrink, enlarge, or move the content to make it look good on any screen.

**Example**:

<!DOCTYPE html>

<html>

<head>

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<style>

\* {

box-sizing: border-box;

}

.row::after {

content: "";

clear: both;

display: table;

}

[class\*="col-"] {

float: left;

padding: 15px;

}

html {

font-family: "Lucida Sans", sans-serif;

}

.header {

background-color: #9933cc;

color: #ffffff;

padding: 15px;

}

.menu ul {

list-style-type: none;

margin: 0;

padding: 0;

}

.menu li {

padding: 8px;

margin-bottom: 7px;

background-color: #33b5e5;

color: #ffffff;

box-shadow: 0 1px 3px rgba(0,0,0,0.12), 0 1px 2px rgba(0,0,0,0.24);

}

.menu li:hover {

background-color: #0099cc;

}

.aside {

background-color: #33b5e5;

padding: 15px;

color: #ffffff;

text-align: center;

font-size: 14px;

box-shadow: 0 1px 3px rgba(0,0,0,0.12), 0 1px 2px rgba(0,0,0,0.24);

}

.footer {

background-color: #0099cc;

color: #ffffff;

text-align: center;

font-size: 12px;

padding: 15px;

}

/\* For mobile phones: \*/

[class\*="col-"] {

width: 100%;

}

@media only screen and (min-width: 600px) {

/\* For tablets: \*/

.col-s-1 {width: 8.33%;}

.col-s-2 {width: 16.66%;}

.col-s-3 {width: 25%;}

.col-s-4 {width: 33.33%;}

.col-s-5 {width: 41.66%;}

.col-s-6 {width: 50%;}

.col-s-7 {width: 58.33%;}

.col-s-8 {width: 66.66%;}

.col-s-9 {width: 75%;}

.col-s-10 {width: 83.33%;}

.col-s-11 {width: 91.66%;}

.col-s-12 {width: 100%;}

}

@media only screen and (min-width: 768px) {

/\* For desktop: \*/

.col-1 {width: 8.33%;}

.col-2 {width: 16.66%;}

.col-3 {width: 25%;}

.col-4 {width: 33.33%;}

.col-5 {width: 41.66%;}

.col-6 {width: 50%;}

.col-7 {width: 58.33%;}

.col-8 {width: 66.66%;}

.col-9 {width: 75%;}

.col-10 {width: 83.33%;}

.col-11 {width: 91.66%;}

.col-12 {width: 100%;}

}

</style>

</head>

<body>

<div class="header">

<h1>Chania</h1>

</div>

<div class="row">

<div class="col-3 col-s-3 menu">

<ul>

<li>The Flight</li>

<li>The City</li>

<li>The Island</li>

<li>The Food</li>

</ul>

</div>

<div class="col-6 col-s-9">

<h1>The City</h1>

<p>Chania is the capital of the Chania region on the island of Crete. The city can be divided in two parts, the old town and the modern city.</p>

</div>

<div class="col-3 col-s-12">

<div class="aside">

<h2>What?</h2>

<p>Chania is a city on the island of Crete.</p>

<h2>Where?</h2>

<p>Crete is a Greek island in the Mediterranean Sea.</p>

<h2>How?</h2>

<p>You can reach Chania airport from all over Europe.</p>

</div>

</div>

</div>

<div class="footer">

<p>Resize the browser window to see how the content respond to the resizing.</p>

</div>

</body>

</html>