

CSS

CSS is cascading style sheet. You can use it to make your HTML pages more stylish – add some colors, fonts, animation etc.

Let's start with an example.

```
Body {
  color: purple;
  background-color: #18bc9c;
}
```

Style sheets in CSS are made up of *rules*. Each rule has three parts:

1. the *selector* (in the example: “body”), which tells the browser which part of the document is affected by the rule;
2. the *property* (in the example, 'color' and 'background-color' are both properties), which specifies what aspect of the layout is being set;
3. and the *value* ('purple' and '#18bc9c'), which gives the value for the style property.

Selectors in CSS

In CSS, selectors are patterns used to select the element(s) you want to style.

Selector	Example	Description
.class	.intro	Selects all elements with class="intro"
#id	#firstname	Selects all elements with id="firstname"
*	*	Selects all elements
element	p	Selects all <p> elements
element, element	div, p	Selects all <div> elements and all <p> elements
element element	div p	Selects all <p> elements inside <div> elements

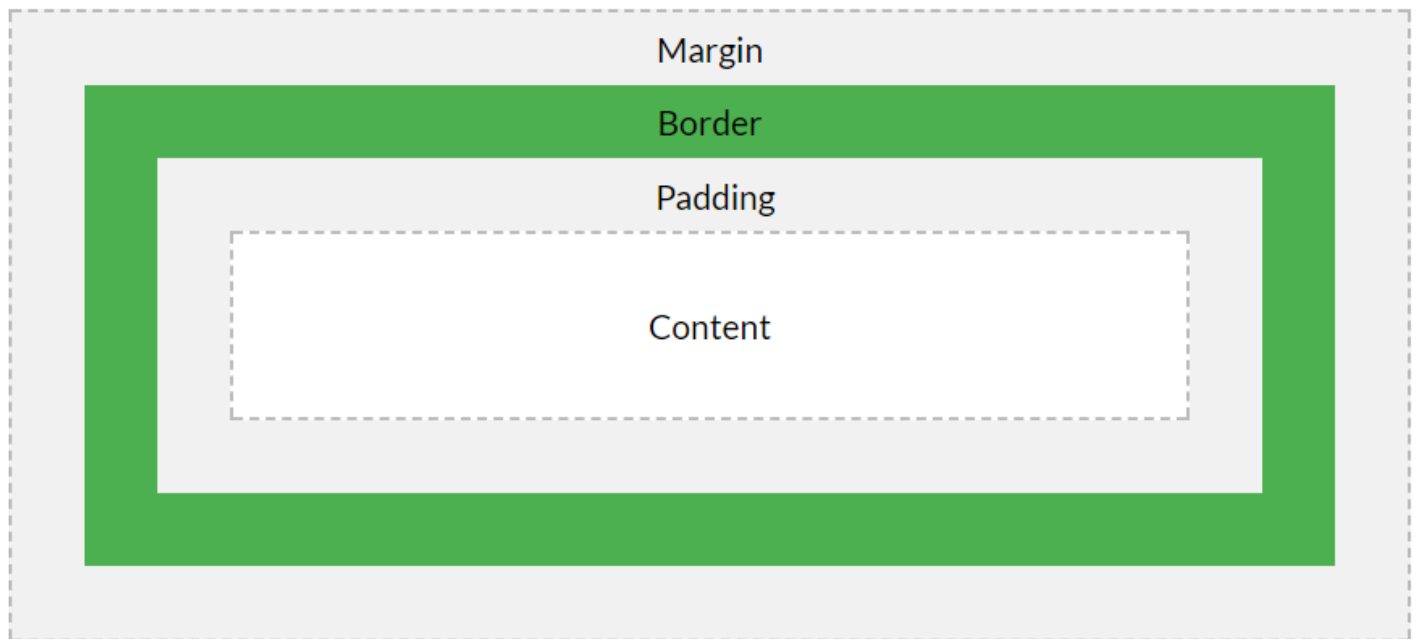
element > element	div > p	Selects all <p> elements where the parent is a <div> element
element + element	div + p	Selects all <p> elements that are placed immediately after <div> elements
element1 ~ element2	p ~ ul	Selects every element that are preceded by a <p> element
[attribute]	[target]	Selects all elements with a target attribute
[attribute=value]	[target=_blank]	Selects all elements target=" _blank"
:active	a:active	Selects the active link
::after	p::after	Inserts something after the content of each <p> element
::before	div::before	Inserts something before the content of each <div> element
:checked	input:checked	Selects every checked <input> element
:focus	input:focus	Selects the input element which has focus
:hover	a:hover	Selects links on mouse over
:invalid	input:invalid	Selects all input elements with an invalid value
:required	input:required	Selects input elements with the required attribute specified

Property in CSS

Before getting into the different property types, let's go through the CSS Box Model.

All HTML elements can be considered as boxes. In CSS, the term "box model" is used when talking about design and layout.

The CSS box model is essentially a box that wraps around every HTML element. It consists of: margins, borders, padding, and the actual content. The image below illustrates the box model:



Explanation of the different parts:

Content - The content of the box, where text and images appear

Padding - Clears an area around the content. The padding is transparent

Border - A border that goes around the padding and content

Margin - Clears an area outside the border. The margin is transparent

Example: Add `border: 2px solid green; padding: 25px; margin: 25px;`
To your banner element in your portfolio project.

Here's a list of a few important properties in CSS. You can find the complete list [here](#).

property	Description
color	Sets the color of the text
opacity	Sets the opacity level for an element
background	A shorthand property for setting all the background properties in one declaration
background-color	Specifies the background color of an element
background-image	Specifies one or more background images for an element
background-position	Specifies the position of a background image
background-repeat	Sets how a background image will be repeated
border	Sets all border properties in one declaration Example: <code>2px solid green;</code>
border-color	Sets the color of borders
border-radius	Sets border radius- A round border depending on the value
border-width	Width of the border <code>border-width: 10px 20px 30px 40px;</code> is the same as <code>border-top-width: 10px; border-right-width: 20px; border-bottom-width: 30px; border-left-width: 40px;</code> , for example.
You can use border-left, border-right etc to set a particular border	
display	Default value: inline Displays an element as an inline element

	<p>block: Displays an element as a block element</p> <p>none: This element will not be displayed</p>
float	<p>Specifies whether or not a box (i.e an element) should float</p> <p>Default value: None</p> <p>The element doesn't float when the value is None</p> <p>left: Floats to the left of its container</p> <p>right: to the right</p> <p>inherit: Inherit this property from its parent element</p>
position	<p>This property specifies the type of positioning method used for an element</p> <p>Default value: static</p> <p>Elements render in order, as they appear in the document flow</p> <p>absolute: The element is positioned relative to its first positioned (not static) ancestor element</p> <p>Fixed: The element is positioned relative to the browser window. They don't scroll with the rest of the page</p> <p>relative: The element is positioned to its normal position: left: 20px;</p> <p>More about position property here: https://internetingishard.com/html-and-css/advanced-positioning/ </p>
overflow	<p>Specifies what happens if content overflows an element's box</p> <p>overflow-x : left to right</p> <p>overflow-y : top to bottom</p>
padding	<p>Sets all the padding properties in one declaration</p> <p>Example: <code>padding : 10px 15px 20px 25px;</code></p> <p>Goes in clockwise direction – this is the same as <code>padding-top : 10px, padding-right : 15px padding-bottom : 20px padding-left : 25px;</code></p>
z-index	<p>Sets the stack order of a positioned element</p>
@font-face	<p>A rule that allows websites to download and use fonts other than “web-safe” fonts</p>
font	<p>Sets all the font properties in one declaration</p>
font-family	<p>Specifies the font family (font) for text</p>
font-size	<p>Specifies the font size of text</p>
font-weight	<p>Specifies the weight of a font</p> <p>normal bold bolder lighter <i>a number</i></p>

Value in CSS

CSS properties have various different values and you can find anything you need on the internet.

Example:

Hex value for colors, different border values, different fonts etc.

Remember the default values for some of the properties mentioned above.

Once you are done going through this study material, the HTML5 study material & working on the project, you should be able to take up a quiz on HTML5 and CSS – this will include both theory & practical questions.