



Selectors & Specificity

Basic Selectors

<code>*</code> (Universal)	Selects all elements. <code>* { margin: 0; padding: 0; }</code>
<code>element</code> (Type)	Selects all elements of the given type. <code>div { border: 1px solid black; }</code>
<code>.class</code> (Class)	Selects all elements with the given class. <code>.highlight { background-color: yellow; }</code>
<code>#id</code> (ID)	Selects the element with the given ID. IDs should be unique within a document. <code>#main-header { font-size: 2em; }</code>

Combinators

<code>A B</code> (Descendant)	Selects all B elements that are descendants of A. <code>article p { line-height: 1.6; }</code>
<code>A > B</code> (Child)	Selects all B elements that are direct children of A. <code>header > nav { display: flex; }</code>
<code>A + B</code> (Adjacent Sibling)	Selects the first B element that immediately follows A. <code>h1 + p { margin-top: 1em; }</code>
<code>A ~ B</code> (General Sibling)	Selects all B elements that are siblings of A (A and B share the same parent). <code>ul ~ p { font-style: italic; }</code>

Attribute Selectors

<code>[attribute]</code>	Selects elements with the specified attribute. <code>a[target] { text-decoration: none; }</code>
<code>[attribute=value]</code>	Selects elements with the specified attribute and value. <code>input[type="text"] { border: 1px solid gray; }</code>
<code>[attribute*=value]</code>	Selects elements with the specified attribute containing the value. <code>a[href*="example"] { color: blue; }</code>
<code>[attribute^=value]</code>	Selects elements with the specified attribute starting with the value. <code>img[src^="images/thumbnails"] { width: 100px; }</code>
<code>[attribute\$=value]</code>	Selects elements with the specified attribute ending with the value. <code>a[href\$=".pdf"] { font-weight: bold; }</code>

Properties

Text Properties

<code>color</code>	Sets the color of the text. <code>p { color: #333; }</code>
<code>font-family</code>	Specifies the font family for the text. <code>h1 { font-family: Arial, sans-serif; }</code>
<code>font-size</code>	Sets the size of the text. <code>body { font-size: 16px; }</code>
<code>line-height</code>	Sets the line height of the text. <code>p { line-height: 1.5; }</code>
<code>text-align</code>	Specifies the horizontal alignment of the text. <code>h2 { text-align: center; }</code>

Box Model Properties

<code>margin</code> <code>padding</code> <code>border</code>	Sets the margin around an element. Can be one value (all sides), two values (top/bottom, left/right), or four values (top, right, bottom, left). <code>div { margin: 10px 20px; }</code>
<code>padding</code> <code>border</code>	Sets the padding inside an element. Can be one, two, or four values like margin. <code>button { padding: 5px 10px; }</code>
<code>border</code>	Sets the border around an element. Shorthand for <code>border-width</code> , <code>border-style</code> , and <code>border-color</code> . <code>img { border: 2px solid black; }</code>
<code>width</code> <code>height</code>	Sets the width of an element. <code>.container { width: 960px; }</code>
<code>height</code>	Sets the height of an element. <code>.header { height: 100px; }</code>

Background Properties

<code>background-color</code>	Sets the background color of an element. <code>body { background-color: #f0f0f0; }</code>
<code>background-image</code>	Sets the background image of an element. <code>.hero { background-image: url("image.jpg"); }</code>
<code>background-repeat</code>	Specifies how the background image is repeated. <code>.logo { background-repeat: no-repeat; }</code>
<code>background-position</code>	Specifies the position of the background image. <code>.hero { background-position: center; }</code>

Units & Values

Absolute Length Units

px (Pixels)	Relative to the viewing device. <code>font-size: 16px;</code>
pt (Points)	1pt is equal to 1/72 of an inch. <code>font-size: 12pt;</code>
pc (Picas)	1pc is equal to 12 points. <code>margin-bottom: 1pc;</code>
in (Inches)	Specifies length in inches. <code>width: 1in;</code>
cm (Centimeters)	Specifies length in centimeters. <code>height: 2.5cm;</code>
mm (Millimeters)	Specifies length in millimeters. <code>border-width: 1mm;</code>

Relative Length Units

em	Relative to the font size of the element. E.g., if the element's font size is 16px, then <code>1em</code> is 16px. <code>font-size: 1.2em;</code>
rem	Relative to the font size of the root element (html). <code>html { font-size: 16px; }</code> <code>h1 { font-size: 2rem; } /* 32px */</code>
vh	Relative to 1% of the viewport's height. <code>height: 100vh;</code>
vw	Relative to 1% of the viewport's width. <code>width: 50vw;</code>
%	Percentage of the parent element. <code>width: 50%;</code>

Color Values

Hexadecimal	Using hex codes (e.g., <code>#RRGGBB</code>). <code>color: #FF0000; /* Red */</code>
RGB	Using <code>rgb()</code> function (e.g., <code>rgb(red, green, blue)</code>). <code>color: rgb(255, 0, 0); /* Red */</code>
RGBA	Using <code>rgba()</code> function to specify opacity (e.g., <code>rgba(red, green, blue, alpha)</code>). <code>color: rgba(255, 0, 0, 0.5); /* Semi-transparent Red */</code>
HSL	Using <code>hsl()</code> function (e.g., <code>hsl(hue, saturation, lightness)</code>). <code>color: hsl(0, 100%, 50%); /* Red */</code>
HSLA	Using <code>hsla()</code> function to specify opacity (e.g., <code>hsla(hue, saturation, lightness, alpha)</code>). <code>color: hsla(0, 100%, 50%, 0.5); /* Semi-transparent Red */</code>

Layout

Display Property

display: block	The element behaves like a block-level element; it takes up the full width available and starts a new line. <code>div { display: block; }</code>
display: inline	The element behaves like an inline element; it only takes up as much width as necessary. <code>span { display: inline; }</code>
display: inline-block	The element is formatted as an inline element, but you can set a width and height. <code>button { display: inline-block; width: 100px; }</code>
display: flex	The element is displayed as a block-level flex container. <code>.container { display: flex; }</code>
display: grid	The element is displayed as a block-level grid container. <code>.grid-container { display: grid; }</code>
display: none	The element is completely removed from the document. <code>.hidden { display: none; }</code>

Flexbox Properties

flex-direction	Specifies the direction of the flexible items inside a flex container. <code>.container { flex-direction: row; }</code>
justify-content	Aligns the flexible items when the items do not use all available space on the main axis. <code>.container { justify-content: center; }</code>
align-items	Aligns the flexible items when the items do not use all available space on the cross axis. <code>.container { align-items: center; }</code>
flex	A shorthand property for <code>flex-grow</code> , <code>flex-shrink</code> , and <code>flex-basis</code> . <code>.item { flex: 1; }</code>

Grid Layout Properties

grid-template-columns	Defines the number and size of columns in a grid layout. <code>.grid-container { grid-template-columns: auto auto auto; }</code>
grid-template-rows	Defines the number and size of rows in a grid layout. <code>.grid-container { grid-template-rows: 100px 200px; }</code>
grid-gap	Specifies the size of the gap between rows and columns in a grid layout. <code>.grid-container { grid-gap: 10px; }</code>
grid-column	Specifies a grid item's size and location in a grid layout. <code>.item { grid-column: 1 / 3; }</code>
grid-row	Specifies a grid item's size and location in a grid layout. <code>.item { grid-row: 1 / 2; }</code>