CSS selectors

CSS selectors define the pattern to select elements to which a set of CSS rules are then applied.

CSS selectors can be grouped into the following categories based on the type of elements they can select.

Basic selectors

<u>Universal selector</u>

Selects all elements. Optionally, it may be restricted to a specific namespace or to all namespaces.

Syntax: * ns|* *|*

Example: * will match all the elements of the document.

Type selector

Selects all elements that have the given node name.

Syntax: elementname

Example: input will match any <input> element.

Class selector

Selects all elements that have the given class attribute.

Syntax: .classname

Example: .index will match any element that has class="index".

ID selector

Selects an element based on the value of its id attribute. There should be only one element with a given ID in a document.

Syntax: #idname

Example: #toc will match the element that has id="toc".

Attribute selector

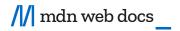
Selects all elements that have the given attribute.

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Syntax: [attr] [attr=value] [attr~=value] [attr|=value] [attr^=value] [attr*=value]
```

Example: [autoplay] will match all elements that have the autoplay attribute set (to any value).

Grouping selectors

Selector list



Oymun. A, D

Example: div, span will match both and <div> elements.

Combinators

Descendant combinator

The " " (space) combinator selects nodes that are descendants of the first element.

Syntax: A B

Example: div span will match all elements that are inside a <div> element.

Child combinator

The > combinator selects nodes that are direct children of the first element.

Syntax: A > B

Example: ul > li will match all elements that are nested directly inside a element.

General sibling combinator

The combinator selects siblings. This means that the second element follows the first (though not necessarily immediately), and both share the same parent.

Syntax: A ~ B

Example: $p \sim span$ will match all $\leq span >$ elements that follow a $\leq p >$, immediately or not.

Adjacent sibling combinator

The + combinator matches the second element only if it *immediately* follows the first element.

Syntax: A + B

Example: h2 + p will match the first $\leq p \geq$ element that *immediately* follows an h2 element.

Column combinator A

The || combinator selects nodes which belong to a column.

Syntax: A || B

Example: col || td will match all elements that belong to the scope of the <col> .

Pseudo-classes and pseudo-elements

Pseudo classes

The : pseudo allow the selection of elements based on state information that is not contained in the document tree.

Example: a:visited will match all <a> elements that have been visited by the user.

Pseudo elements

The :: pseudo represent entities that are not included in HTML.

Example: p::first-line will match the first line of all elements.

Structure of a selector

The term 'selector' can refer to one of the following:

Simple selector

A selector with a single component, such as a single id selector or type selector, that's not used in combination with or contains any other selector component or combinator. A given element is said to match a simple selector when that simple selector accurately describes the element. All <u>basic selectors</u>, attributes, and single <u>pseudo-classes and pseudo-elements</u> are simple selectors.

Compound selector

A sequence of <u>simple selectors</u> that are not separated by a <u>combinator</u>. A compound selector represents a set of simultaneous conditions on a single element. A given element is said to match a compound selector when the element matches all the simple selectors in the compound selector.

In a compound selector, the <u>type selector</u> or a <u>universal selector</u> in a compound selector must come first in the sequence of selectors. Only one type selector or universal selector is allowed in the sequence. Since whitespace represents the <u>descendant</u> <u>combinator</u>, no whitespace is allowed between the simple selectors in a compound selector.

Example: a#selected {...}

Complex selector

A sequence of one or more simple and/or <u>compound selectors</u> that are separated by <u>combinators</u>. A complex selector represents a set of simultaneous conditions on a set of elements. These conditions apply in the context of relationships described by the combinators. A given element is said to match a complex selector when the element matches compound selectors and the combinators between the compound selectors.

Examples: $a \# selected > .icon \{...\}$, $.box h2 + p \{...\}$, $a .icon \{...\}$

Relative selector

A selector representing an element relative to one or more anchor elements preceded by a combinator. Relative selectors that don't begin with an explicit <u>combinator</u> have an implied <u>descendant combinator</u>.

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Examples: + div#topic > #reference \{...\}, > .icon \{...\}, dt:has(+ img) ~ dd \{...\}
```

Selector list

A comma-separated list of <u>simple</u>, <u>compound</u>, or <u>complex</u> selectors. If the constituent selector type of a selector list is important but unspecified, it is called a *complex* selector list. A given element is said to match a selector list when the element matches any (at least one) of the selectors in that selector list. Read more about when a selector list is deemed <u>invalid</u> and how to construct a <u>forgiving selector list</u>.

Example: #main, article.heading {...}

Specifications

Specification

Selectors Level 4

See the <u>pseudo-class</u> and <u>pseudo-element</u> specification tables for details on those.

See also

- :has() pseudo class
- CSS Specificity
- Selector list

This page was last modified on Feb 22, 2023 by MDN contributors.