**Pseudo-classes**

A CSS pseudo-class is a keyword added to a selector that specifies a special state of the selected element(s). For example, the pseudo-class :hover can be used to select a button when a user's pointer hovers over the button and this selected button can then be styled.

A pseudo-class consists of a colon (:) followed by the pseudo-class name (e.g., :hover). A functional pseudo-class also contains a pair of parentheses to define the arguments (e.g., :dir()). The element that a pseudo-class is attached to is defined as an anchor element (e.g., button in case button:hover).

Pseudo-classes let you apply a style to an element not only in relation to the content of the document tree, but also in relation to external factors like the history of the navigator (:visited, for example), the status of its content (like :checked on certain form elements), or the position of the mouse (like :hover, which lets you know if the mouse is over an element or not).

## [**Element display state pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#element_display_state_pseudo-classes)

These pseudo-classes enable the selection of elements based on their display states.

1. [:fullscreen](https://developer.mozilla.org/en-US/docs/Web/CSS/:fullscreen)
   1. Matches an element that is currently in fullscreen mode.
2. [:modal](https://developer.mozilla.org/en-US/docs/Web/CSS/:modal)
   1. Matches an element that is in a state in which it excludes all interaction with elements outside it until the interaction has been dismissed.
3. [:picture-in-picture](https://developer.mozilla.org/en-US/docs/Web/CSS/:picture-in-picture)
   1. Matches an element that is currently in picture-in-picture mode.

## [**Input pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#input_pseudo-classes)

These pseudo-classes relate to form elements, and enable selecting elements based on HTML attributes and the state that the field is in before and after interaction.

1. [:autofill](https://developer.mozilla.org/en-US/docs/Web/CSS/:autofill)
   1. Matches when an [<input>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input) has been autofilled by the browser.
2. [:enabled](https://developer.mozilla.org/en-US/docs/Web/CSS/:enabled)
   1. Represents a user interface element that is in an enabled state.
3. [:disabled](https://developer.mozilla.org/en-US/docs/Web/CSS/:disabled)
   1. Represents a user interface element that is in a disabled state.
4. [**:read-only**](https://developer.mozilla.org/en-US/docs/Web/CSS/:read-only)
   1. Represents any element that cannot be changed by the user.
5. [**:read-write**](https://developer.mozilla.org/en-US/docs/Web/CSS/:read-write)
   1. Represents any element that is user-editable.
6. [**:placeholder-shown**](https://developer.mozilla.org/en-US/docs/Web/CSS/:placeholder-shown)
   1. Matches an input element that is displaying placeholder text. For example, it will match the placeholder attribute in the [<input>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input) and [<textarea>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/textarea) elements.
7. [**:default**](https://developer.mozilla.org/en-US/docs/Web/CSS/:default)
   1. Matches one or more UI elements that are the default among a set of elements.
8. [**:checked**](https://developer.mozilla.org/en-US/docs/Web/CSS/:checked)
   1. Matches when elements such as checkboxes and radio buttons are toggled on.
9. [:**indeterminate**](https://developer.mozilla.org/en-US/docs/Web/CSS/:indeterminate)
   1. Matches UI elements when they are in an indeterminate state.
10. [**:blank**](https://developer.mozilla.org/en-US/docs/Web/CSS/:blank)
    1. Matches a user-input element which is empty, containing an empty string or other null input.
11. [:**valid**](https://developer.mozilla.org/en-US/docs/Web/CSS/:valid)
    1. Matches an element with valid contents. For example, an input element with the type 'email' that contains a validly formed email address or an empty value if the control is not required.
12. [:**invalid**](https://developer.mozilla.org/en-US/docs/Web/CSS/:invalid)
    1. Matches an element with invalid contents. For example, an input element with type 'email' with a name entered.
13. [**:in-range**](https://developer.mozilla.org/en-US/docs/Web/CSS/:in-range)
    1. Applies to elements with range limitations. For example, a slider control when the selected value is in the allowed range.
14. [**:out-of-range**](https://developer.mozilla.org/en-US/docs/Web/CSS/:out-of-range)
    1. Applies to elements with range limitations. For example, a slider control when the selected value is outside the allowed range.
15. [:**required**](https://developer.mozilla.org/en-US/docs/Web/CSS/:required)
    1. Matches when a form element is required.
16. [**:optional**](https://developer.mozilla.org/en-US/docs/Web/CSS/:optional)
    1. Matches when a form element is optional.
17. [**:user-invalid**](https://developer.mozilla.org/en-US/docs/Web/CSS/:user-invalid)
    1. Represents an element with incorrect input, but only when the user has interacted with it.

## [**Linguistic pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#linguistic_pseudo-classes)

These pseudo-classes reflect the document language and enable the selection of elements based on language or script direction.

1. [:dir()](https://developer.mozilla.org/en-US/docs/Web/CSS/:dir)
   1. The directionality pseudo-class selects an element based on its directionality as determined by the document language.
2. [:lang()](https://developer.mozilla.org/en-US/docs/Web/CSS/:lang)
   1. Select an element based on its content language.

## [**Location pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#location_pseudo-classes)

These pseudo-classes relate to links, and to targeted elements within the current document.

1. [:any-link](https://developer.mozilla.org/en-US/docs/Web/CSS/:any-link)
   1. Matches an element if the element would match either [:link](https://developer.mozilla.org/en-US/docs/Web/CSS/:link) or [:visited](https://developer.mozilla.org/en-US/docs/Web/CSS/:visited).
2. [:link](https://developer.mozilla.org/en-US/docs/Web/CSS/:link)
   1. Matches links that have not yet been visited.
3. [:visited](https://developer.mozilla.org/en-US/docs/Web/CSS/:visited)
   1. Matches links that have been visited.
4. [:local-link](https://developer.mozilla.org/en-US/docs/Web/CSS/:local-link)
   1. Matches links whose absolute URL is the same as the target URL. For example, anchor links to the same page.
5. [:target](https://developer.mozilla.org/en-US/docs/Web/CSS/:target)
   1. Matches the element which is the target of the document URL.
6. [:target-within](https://developer.mozilla.org/en-US/docs/Web/CSS/:target-within)
   1. Matches elements which are the target of the document URL, but also elements which have a descendant which is the target of the document URL.
7. [:scope](https://developer.mozilla.org/en-US/docs/Web/CSS/:scope)
   1. Represents elements that are a reference point for selectors to match against.

## [**Resource state pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#resource_state_pseudo-classes)

These pseudo-classes apply to media that is capable of being in a state where it would be described as playing, such as a video.

1. [:playing](https://developer.mozilla.org/en-US/docs/Web/CSS/:playing)
   1. Represents a media element that is capable of playing when that element is playing.
2. [:paused](https://developer.mozilla.org/en-US/docs/Web/CSS/:paused)
   1. Represents a media element that is capable of playing when that element is paused.

## [Time-dimensional pseudo-classes](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#time-dimensional_pseudo-classes)

1. These pseudo-classes apply when viewing something which has timing, such as a [WebVTT](https://developer.mozilla.org/en-US/docs/Web/API/WebVTT_API) caption track.
2. [:current](https://developer.mozilla.org/en-US/docs/Web/CSS/:current)
   1. Represents the element or ancestor of the element that is being displayed.
3. [:past](https://developer.mozilla.org/en-US/docs/Web/CSS/:past)
   1. Represents an element that occurs entirely before the [:current](https://developer.mozilla.org/en-US/docs/Web/CSS/:current) element.
4. [:future](https://developer.mozilla.org/en-US/docs/Web/CSS/:future)
   1. Represents an element that occurs entirely after the [:current](https://developer.mozilla.org/en-US/docs/Web/CSS/:current) element.

## [**Tree-structural pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#tree-structural_pseudo-classes)

These pseudo-classes relate to the location of an element within the document tree.

1. [:root](https://developer.mozilla.org/en-US/docs/Web/CSS/:root)
   1. Represents an element that is the root of the document. In HTML this is usually the <html> element.
2. [:empty](https://developer.mozilla.org/en-US/docs/Web/CSS/:empty)
   1. Represents an element with no children other than white-space characters.
3. [:nth-child](https://developer.mozilla.org/en-US/docs/Web/CSS/:nth-child)
   1. Uses An+B notation to select elements from a list of sibling elements.
4. [:nth-last-child](https://developer.mozilla.org/en-US/docs/Web/CSS/:nth-last-child)
   1. Uses An+B notation to select elements from a list of sibling elements, counting backwards from the end of the list.
5. [:first-child](https://developer.mozilla.org/en-US/docs/Web/CSS/:first-child)
   1. Matches an element that is the first of its siblings.
6. [:last-child](https://developer.mozilla.org/en-US/docs/Web/CSS/:last-child)
   1. Matches an element that is the last of its siblings.
7. [:only-child](https://developer.mozilla.org/en-US/docs/Web/CSS/:only-child)
   1. Matches an element that has no siblings. For example, a list item with no other list items in that list.
8. [:nth-of-type](https://developer.mozilla.org/en-US/docs/Web/CSS/:nth-of-type)
   1. Uses An+B notation to select elements from a list of sibling elements that match a certain type from a list of sibling elements.
9. [:nth-last-of-type](https://developer.mozilla.org/en-US/docs/Web/CSS/:nth-last-of-type)
   1. Uses An+B notation to select elements from a list of sibling elements that match a certain type from a list of sibling elements counting backwards from the end of the list.
10. [:first-of-type](https://developer.mozilla.org/en-US/docs/Web/CSS/:first-of-type)
    1. Matches an element that is the first of its siblings, and also matches a certain type selector.
11. [:last-of-type](https://developer.mozilla.org/en-US/docs/Web/CSS/:last-of-type)
    1. Matches an element that is the last of its siblings, and also matches a certain type selector.
12. [:only-of-type](https://developer.mozilla.org/en-US/docs/Web/CSS/:only-of-type)
    1. Matches an element that has no siblings of the chosen type selector.

## [**User action pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#user_action_pseudo-classes)

These pseudo-classes require some interaction by the user in order for them to apply, such as holding a mouse pointer over an element.

[:hover](https://developer.mozilla.org/en-US/docs/Web/CSS/:hover)

Matches when a user designates an item with a pointing device, such as holding the mouse pointer over the item.

[:active](https://developer.mozilla.org/en-US/docs/Web/CSS/:active)

Matches when an item is being activated by the user. For example, when the item is clicked on.

[:focus](https://developer.mozilla.org/en-US/docs/Web/CSS/:focus)

Matches when an element has focus.

[:focus-visible](https://developer.mozilla.org/en-US/docs/Web/CSS/:focus-visible)

Matches when an element has focus and the user agent identifies that the element should be visibly focused.

[:focus-within](https://developer.mozilla.org/en-US/docs/Web/CSS/:focus-within)

Matches an element to which [:focus](https://developer.mozilla.org/en-US/docs/Web/CSS/:focus) applies, plus any element that has a descendant to which [:focus](https://developer.mozilla.org/en-US/docs/Web/CSS/:focus) applies.

## [**Functional pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#functional_pseudo-classes)

These pseudo-classes accept a [selector list](https://developer.mozilla.org/en-US/docs/Web/CSS/Selector_list#selector_list) or [forgiving selector list](https://developer.mozilla.org/en-US/docs/Web/CSS/Selector_list#forgiving_selector_list) as a parameter.

[:is()](https://developer.mozilla.org/en-US/docs/Web/CSS/:is)

The matches-any pseudo-class matches any element that matches any of the selectors in the list provided. The list is forgiving.

[:not()](https://developer.mozilla.org/en-US/docs/Web/CSS/:not)

The negation, or matches-none, pseudo-class represents any element that is not represented by its argument.

[:where()](https://developer.mozilla.org/en-US/docs/Web/CSS/:where)

The specificity-adjustment pseudo-class matches any element that matches any of the selectors in the list provided without adding any specificity weight. The list is forgiving.

[:has()](https://developer.mozilla.org/en-US/docs/Web/CSS/:has)

The relational pseudo-class represents an element if any of the relative selectors match when anchored against the attached element.

## [**Time-dimensional pseudo-classes**](https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes#time-dimensional_pseudo-classes)

These pseudo-classes apply when viewing something which has timing, such as a [WebVTT](https://developer.mozilla.org/en-US/docs/Web/API/WebVTT_API) caption track.

[:current](https://developer.mozilla.org/en-US/docs/Web/CSS/:current)

Represents the element or ancestor of the element that is being displayed.

[:past](https://developer.mozilla.org/en-US/docs/Web/CSS/:past)

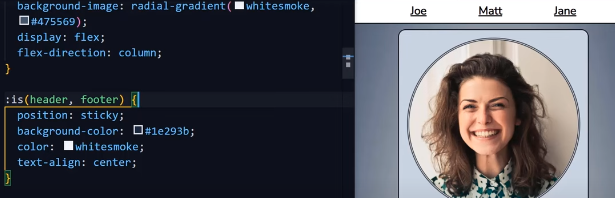
Represents an element that occurs entirely before the [:current](https://developer.mozilla.org/en-US/docs/Web/CSS/:current) element.

[:future](https://developer.mozilla.org/en-US/docs/Web/CSS/:future)

Represents an element that occurs entirely after the [:current](https://developer.mozilla.org/en-US/docs/Web/CSS/:current) element.

Pseudo is class





The :is pseudo class is the property use for multiply selector for having same style it less the code (D.R.Y) Do not, Repeat, Yourself