

# Lesson:

## Pseudo class selector in CSS



# Topics

- :active
- :hover
- :focus
- :visited
- :link
- :first-child
- :last-child
- :nth-child(n)
- :nth-last-of-type(n)
- :not(selector)
- :first-of-type()
- :last-of-type()
- :empty
- :checked
  
- Pseudo-classes are predefined keywords that select an element based on its state or target a specific child. They start with a single colon ( : ). They can be used as part of a selector, and they are very useful to style active or visited links for example, change the style on hover, focus, target the first child, or odd rows which is very handy in many cases.

## For example, it can be used to:

- Element styling when a user mouses over it
- Styling of visited and visited links differently
- Styling of elements when focused.

## Syntax of Pseudo class selector -

Unset

```
tag:pseudo-class /* ...set CSS styling properties */
```

There are different types of Pseudo class selectors, Let's have a look at each type -

### :active

The Pseudo class selector “**:active**”, select an element when it is clicked or pressed down by the mouse pointer. It is basically used to select and style the active link.

## Syntax of active pseudo-class selector

```
Unset
tag:active {
    /* set CSS declaration properties */
}
```

## Example of active pseudo-class selector

index.html

```
Unset
<body>
    <p>
        Click the link to check how
        <a href="#">active pseudo-class selector works</a>
    </p>
</body>
```

Style.css

```
Unset
a:active {
    color: red;
}
/* This will change the anchor HTML tag to red on click of
the link.*/
```

## Browser output -

Before click

Click the link to check how active pseudo-class selector works

## On click

Click the link to check how active pseudo-class selector works

## :hover

The Pseudo class selector “:hover”, select elements that are hovered by the mouse. It does not necessarily activate it. It is generally triggered when the user hovers over an element with the cursor (mouse pointer).

Syntax of Pseudo class selector “:hover”

Unset

```
tag:hover { /* ..set CSS styling properties */}
```

### Example of Pseudo class selector “:hover”

index.html

Unset

```
<body>
    <p>Hover the below link</p>
    <a href="#">Hover me</a>
</body>
```

style.css

Unset

```
a:hover {
    color: red;
}
/* On hover of the "PW Skills" the text color will change to
red color */
```

### Browser Output-

Before hovering

Hover the below link  
[PW Skills](#)

Hover the below link  
[PW Skills](#)

## :focus

The Pseudo class selector “`:focus`”, select elements that have received focus. It is generally triggered when the user clicks or taps on an element or selects it with the keyboard’s tab key.

### Syntax of Pseudo class select “`:focus`”

Unset

```
tag:focus { /* ..set CSS styling properties */}
```

### Example of Pseudo class selector “`:focus`”

index.html

Unset

```
<body>
    <h2>Example of focus</h2>
    <input type="text" placeholder="demo" />
</body>
</body>
```

style.css

Unset

```
input:focus {
    background-color: darkslategray;
}
/* on focus of the input field, the input filed background
color will change to gray*/
```

### Browser Output-

Before focus

Before focus

**Example of focus**

demo

After focus

**Example of focus**

demo

## :visited -

The Pseudo class selector “**:visited**”, selects elements that have been visited by the user.

Syntax of Pseudo class selector “**:visited**”

Unset

```
tag:visited { /* ..set CSS styling properties */}
```

### Example of Pseudo class selector “**:visited**”

index.html

Unset

```
<body>
  <a href="#home">Link visited </a> <br />
  <a href="#about"> Link yet to be visited </a>
</body>
```

style.css

Unset

```
a {
  color: green;
}
a:visited {
  color: red;
}
/* The anchor HTML tag is set to green and on visited or
click of the anchor HTML tag the color will change to red */
```

### Browser Output-

Before visit

Before visit

<u>Link visited</u>
<u>Link yet to be visited</u>

After visit

<u>Link visited</u>
<u>Link yet to be visited</u>

## :link

The Pseudo class selector “:link”, represent the elements that have not yet been visited, particularly anchor tag or area tag that has an href attribute.

### Syntax of Pseudo class selector “:link”

Unset

```
tag:link { /* ..set CSS styling properties */ }
```

### Example of Pseudo class selector “:link”

index.html

Unset

```
<body>
    <h3>List of Page visited</h3>
    <ul>
        <li><a href="#root">visited link one </a></li>
        <li><a href="#about">visited link two </a></li>
        <li><a href="#contact">visited link three </a></li>
    </ul>

    <h3>List of Page your visited rare</h3>
    <ul>
        <li><a href="#feedback"> Unvisited link one </a></li>
        <li><a href="#features"> Unvisited link two </a></li>
    </ul>
</body>
```

style.css

Unset

```
a:link {
    color: olivedrab;
}
/* The unvisited link color will change to oliverdrab color
related green and it doesn't change the color of the visited
link */
```

## style.css

```
Unset
a:link {
    color: olivedrab;
}
/* The unvisited link color will change to olivedrab color
related green and it doesn't change the color of the visited
link */
```

## Browser Output-

### List of Page visited

- visited link one
- visited link two
- visited link three

### List of Page your visited rare

- Unvisited link one
- Unvisited link two

## :first-child

The Pseudo class selector “:first-child”, select or represents the first elements among a group of sibling elements.

### Syntax of Pseudo class selector “:first-child”

```
Unset
tag:first-child { /* ..set CSS styling properties */}
```

### Example of Pseudo class selector “:first-child”

index.html

```
Unset
<body>
    <h3>first-child selector</h3>
    <div>
        <p>first element of Paragraph</p>
        <p>second element of Paragraph</p>
        <p>.....</p>
        <p>last element of Paragraph</p>
    </div>
</body>
```

## style.css

```
Unset
p:first-child {
    color: red;
}

/*
This will select the first paragraph element group by the
<div> element and change the color to red.
*/
```

## Browser Output-

### first-child selector

first element of Paragraph  
second element of Paragraph  
.....  
last element of Paragraph

## :last-child

The Pseudo class selector “:last-child”, select or represents the last elements among a group of sibling elements.

### Syntax of Pseudo class select “:last-child”

```
Unset
tag:last-child { /* ..set CSS styling properties */}
```

### Example of Pseudo class select “:first-child”

index.html

```
Unset
<body>
    <h3>last-child selector</h3>
    <div>
        <p>first element of Paragraph</p>
        <p>second element of Paragraph</p>
        <p>.....</p>
        <p>last element of Paragraph</p>
    </div>
</body>
```

## style.css

```
Unset
p:last-child {
    color: red;
}
/* This will select the last paragraph element group by the
<div> element and change the text color to red */
```

## Browser Output-

### last-child selector

first element of Paragraph

second element of Paragraph

.....

**last element of Paragraph**

## :nth-child(n)

The Pseudo class selector “`:nth-child(n)`”, selects or represents the element based on their position among a group of sibling elements.

### Syntax of Pseudo class select “`:nth-child`”

Unset

```
tag:nth-child { /* ..set CSS styling properties */}
```

### Example of Pseudo class select “`:nth-child`”

index.html

Unset

```
<body>
    <h3>last-child selector</h3>
    <div>
        <p>first element of Paragraph</p>
        <p>second element of Paragraph</p>
        <p>..... load details</p>
        <p>last element of Paragraph</p>

    </div>
</body>
```

## style.css

```
Unset
p:nth-child(3) {
    color: red;
}
/* This will select the third paragraph element group by the
<div> element and change the text color to red */
```

## Browser Output-

### last-child selector

first element of Paragraph  
second element of Paragraph  
..... load details  
last element of Paragraph

## :nth-last-of-type(n)

The Pseudo class selector “`:nth-last-of-type(n)`”, to select or represents the element base on their position among a group of sibling element. Of the same tag name, counting from the end.

### Syntax of Pseudo class select “`:nth-last-of-type(n)`”

```
Unset
tag:nth-last-of-type(n) { /* ..set CSS styling properties */}
// n denotes the index or position of the nth element
```

### Example of Pseudo class selector “`:nth-last-of-type(n)`”

index.html

```
Unset
<body>
    <h3>last-child selector</h3>
```

```
<div>
    <p>first element of Paragraph</p>
    <p>second element of Paragraph</p>
    <p>..... load details</p>
    <p>last element of Paragraph</p>
</div>
</body>
```

## style.css

```
Unset
p:nth-last-of-type(1) {
    color: red;
}

/* This will select the first element Paragraph counting from
the last and change the color to Red */
```

### Browser Output-

#### last-child selector

first element of Paragraph

second element of Paragraph

..... load details

**last element of Paragraph**

#### :not(selector)

The Pseudo class selector “:not(selector)”, selects or represents the elements that do not match a list of selectors, it is also known as the negation pseudo-class

#### Syntax of Pseudo class selects “:not(selector)”

```
Unset
tag:not(selector) { /* ..set CSS styling properties */}
```

#### Example of Pseudo class selector “:not(selector)”

index.html

```
Unset
<body>
    <h3>Negation selector</h3>
    <div>
        <p class="one">first element of Paragraph</p>
        <p>second element of Paragraph</p>
        <p>..... load details</p>
        <p>last element of Paragraph</p>
    </div>
</body>
```

## style.css

```
Unset
p:not(.one) {
    color: red;
}
/* This will select all the elements that are not selected
and change the color to Red */
```

## Browser Output-

### Negation selector

first element of Paragraph  
 second element of Paragraph  
 ..... load details  
 last element of Paragraph

## :first-of-type()

The Pseudo class selector “`:first-of-type`”, selects or represents the first element of its type among a of sibling elements

### Syntax of Pseudo class selector “`:first-of-type`”

```
Unset
tag:first-of-type { /* ..set CSS styling properties */}
```

### Example of Pseudo class selector “`:first-of-type`”

index.html

Unset

```
<body>
    <h3>Negation selector</h3>
    <div>
        <h4>first element of Paragraph</h4>
        <h4>second element of Paragraph</h4>
        <p>..... load details</p>
        <p>last element of Paragraph</p>
    </div>
</body>
```

## style.css

```
Unset
p:first-of-type {
    color: red;
}

/* This will select the first paragraph elements and change
the color of the font to red.*/
```

## Browser Output-

### First-of-type selector

first element of Paragraph

second element of Paragraph

..... load details

last element of Paragraph

## :last-of-type() 4

The Pseudo class selector “:last-of-type()”, selects or represents the last element of its type among a group of sibling elements

### Syntax of Pseudo class selectors “:last-of-type”

```
Unset
tag:last-of-type { /* ..set CSS styling properties */}
```

### Example of Pseudo class selectors “:last-of-type”

index.html

```
Unset
<body>
    <h3>Negation selector</h3>
    <div>
        <h4>first element of Paragraph</h4>
        <h4>second element of Paragraph</h4>
        <p>..... load details</p>
        <p>last element of Paragraph</p>
    </div>
</body>
```

## style.css

```
Unset
p:last-of-type {
    color: red;
}

/* This will select the last paragraph element and change the
color of the font to red.*/
```

### Browser Output-

#### First-of-type selector

**first element of Paragraph**

**second element of Paragraph**

..... load details

**last element of Paragraph**

#### :empty

The Pseudo class selector “:empty”, selects or represents the element that has no children, children can be of either element nodes or text, comments, processing instructions, and CSS content.

Syntax of Pseudo class selector “:empty”

```
Unset
tag:empty { /* ..set CSS styling properties */}
```

#### Example of Pseudo class selectors “:empty”

index.html

```
Unset
<body>
    <h3>Empty Pseudo class selector</h3>
    <div>
        <p>first element of Paragraph</p>
        <p></p>
        <p>last element of Paragraph</p>
    </div>
</body>
```

## style.css

```
Unset
p:empty {
    background-color: gray;
    height: 10px;
}
/* This will select the paragraph element which is empty and
change the background color to gray and height is provide for
visibility.*/
```

## Browser Output-

### First-of-type selector

first element of Paragraph

last element of Paragraph

### :checked

The Pseudo class selector “`:checked`”, selects or represents the element of any radio, checkbox or option in an element that is checked or toggled to an on state.

### Syntax of Pseudo class selector “`:checked`”

Unset

```
tag:checked { /* ..set CSS styling properties */}
```

### Example of Pseudo class selectors “`:checked`”

index.html

Unset

```
<body>
    <h3>checked pseudo-class selector</h3>
    <input type="checkbox" /> Agree to terms and services <br
/>
    <input type="checkbox" /> Confirm to proceed
</body>
```

### style.css

```
Unset  
input:checked {  
    outline: 2px solid green;  
}  
  
/* This will select the checkbox input field when on click  
the check box will change checkbox with the outline color  
green along 3px  
*/
```

### Browser Output-

#### checked pseudo class selector

- Agree to terms and services
- Confirm to proceed