

CSS

The CSS element Selector

The element selector selects HTML elements based on the element name.

CODE:

```
<!DOCTYPE html>

<html>

<head>

<style>

p {

    text-align: center;

    color: red;

}

</style>

</head>

<body>

<p>Every paragraph will be affected by the style.</p>

<p id="para1">Me too!</p>

<p>And me!</p>

</body>

</html>
```

OUTPUT:

Every paragraph will be affected by the style.

Me too!

And me!

The CSS id Selector

The id selector uses the id attribute of an HTML element to select a specific element.

The id of an element is unique within a page, so the id selector is used to select one unique element!

To select an element with a specific id, write a hash (#) character, followed by the id of the element.

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
#para1 {
```

```
    text-align: center;
```

```
    color: red;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p id="para1">Hello World!</p>
```

```
<p>This paragraph is not affected by the style.</p>
```

```
</body>
```

```
</html>
```

Hello World!

This paragraph is not affected by the style.

The CSS class Selector

The class selector selects HTML elements with a specific class attribute.

To select elements with a specific class, write a period (.) character, followed by the class name.

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
.center {
```

```
  text-align: center;
```

```
  color: red;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1 class="center">Red and center-aligned heading</h1>
```

```
<p class="center">Red and center-aligned paragraph.</p>
```

```
</body>
```

```
</html>
```

Output:

Red and center-aligned heading

Red and center-aligned paragraph.

The CSS Universal Selector

The universal selector (*) selects all HTML elements on the page.

Example

```
<!DOCTYPE html>

<html>

<head>

<style>

* {

    text-align: center;

    color: blue;

}

</style>

</head>
```

```
<body>
```

```
<h1>Hello world!</h1>
```

```
<p>Every element on the page will be affected by the style.</p>
```

```
<p id="para1">Me too!</p>
```

```
<p>And me!</p>
```

```
</body>
```

```
</html>
```

Hello world!

Every element on the page will be affected by the style.

Me too!

And me!

The CSS Grouping Selector

The grouping selector selects all the HTML elements with the same style definitions.

Look at the following CSS code (the h1, h2, and p elements have the same style definitions):

It will be better to group the selectors, to minimize the code.

To group selectors, separate each selector with a comma.

```
h1 {  
  text-align: center;  
  color: red;
```

```
}  
  
h2 {  
  text-align: center;  
  color: red;  
}  
  
p {  
  text-align: center;  
  color: red;  
}
```

```
<!DOCTYPE html>  
  
<html>  
  
  <head>  
  
    <style>  
  
      h1, h2, p {  
  
        text-align: center;  
  
        color: red;  
  
      }  
  
    </style>  
  
  </head>  
  
  <body>  
  
    <h1>Hello World!</h1>  
  
    <h2>Smaller heading!</h2>  
  
    <p>This is a paragraph.</p>  
  
  </body>
```

</html>

Hello World!

Smaller heading!

This is a paragraph.

CSS [attribute] Selector

The `[attribute]` selector is used to select elements with a specified attribute.

The following example selects all `<a>` elements with a target attribute:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
a[target] {
```

```
    background-color: yellow;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>CSS [attribute] Selector</h2>
```

```
<p>The links with a target attribute gets a yellow background:</p>
```

```
<a href="https://vssut.ac.in/">VSSUT</a>
```

```
<a href="https://www.soa.ac.in/iter" target="_blank">ITER</a>
```

```
</body>
```

```
</html>
```

CSS [attribute] Selector

The links with a target attribute gets a yellow background:

[VSSUT](#) [ITER](#)

CSS [attribute="value"] Selector

The `[attribute="value"]` selector is used to select elements with a specified attribute and value.

The following example selects all `<a>` elements with a `target="_blank"` attribute:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
a[target="_blank"] {
```

```
    background-color: yellow;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>CSS [attribute="value"] Selector</h2>
```


<p>The link with target="_blank" gets a yellow background:</p>

VSSUT

ITER

</body>

</html>

CSS [attribute="value"] Selector

The link with target="_blank" gets a yellow background:

VSSUT **ITER**

CSS [attribute~="value"] Selector

The [attribute~="value"] selector is used to select elements with an attribute value containing a specified word.

The following example selects all elements with a title attribute that contains a space-separated list of words, one of which is "flower":

<!DOCTYPE html>

<html>

<head>

<style>

```
[title~="flower"] {  
    border: 5px solid yellow;  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>CSS [attribute~="value"] Selector</h2>
```

```
<p>All images with the title attribute containing the word "flower" get a  
yellow border.</p>
```

```

```

```

```

```

```

```
</body>
```

```
</html>
```

CSS [attribute~="value"] Selector

All images with the title attribute containing the word "flower" get a yellow border.



CSS [attribute^="value"] Selector

The `[attribute^="value"]` selector is used to select elements with the specified attribute, whose value starts with the specified value.

The following example selects all elements with a class attribute value that starts with "top":

Note: The value does not have to be a whole word!

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
[class^="top"] {
```

```
    background: yellow;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>CSS [attribute^="value"] Selector</h2>
```

```
<h1 class="top-header">Welcome</h1>
```

```
<p class="top-text">Hello world!</p>
```

```
<p class="topcontent">Are you learning CSS?</p>
```

```
</body>
```

```
</html>
```

CSS [attribute^="value"] Selector

Welcome

Hello world!

Are you learning CSS?

CSS

[attribute]="value"] Selector

The `[attribute]="value"]` selector is used to select elements with the specified attribute, whose value can be exactly the specified value, or the specified value followed by a hyphen (-).

Note: The value has to be a whole word, either alone, like `class="top"`, or followed by a hyphen (-), like `class="top-text"`.

```
<!DOCTYPE html>
```

```
<html>

<head>

<style>

[class="top"] {

    background: yellow;

}

</style>

</head>

<body>


<h2>CSS [attribute="value"] Selector</h2>


<h1 class="top-header">Welcome</h1>

<p class="top-text">Hello world!</p>

<p class="topcontent">Are you learning CSS?</p>


</body>

</html>
```

CSS [attribute="value"] Selector

Welcome

Hello world!

Are you learning CSS?

CSS [attribute\$="value"] Selector

The `[attribute$="value"]` selector is used to select elements whose attribute value ends with a specified value.

The following example selects all elements with a class attribute value that ends with "test":

Note: The value does not have to be a whole word!

```
<!DOCTYPE html>

<html>

<head>

<style>

[class$="test"] {
    background: yellow;
}

</style>

</head>

<body>

<h2>CSS [attribute$="value"] Selector</h2>

<div class="first_test">The first div element.</div>

<div class="second">The second div element.</div>

<div class="my-test">The third div element.</div>

<p class="mytest">This is some text in a paragraph.</p>

</body>
```

</html>

CSS [attribute\$="value"] Selector

The first div element.

The second div element.

The third div element.

This is some text in a paragraph.

CSS

[attribute*="value"] Selector

The `[attribute*="value"]` selector is used to select elements whose attribute value contains a specified value.

The following example selects all elements with a class attribute value that contains "te":

Note: The value does not have to be a whole word!

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
[class*="te"] {
```

```
    background: yellow;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>CSS [attribute*="value"] Selector</h2>
```

```
<div class="first_test">The first div element.</div>

<div class="second">The second div element.</div>

<div class="my-test">The third div element.</div>

<p class="mytest">This is some text in a paragraph.</p>


</body>

</html>
```

CSS [attribute*="value"] Selector

The first div element.
The second div element.
The third div element.

This is some text in a paragraph.

CSS Combinators

A combinator is something that explains the relationship between the selectors.

A CSS selector can contain more than one simple selector. Between the simple selectors, we can include a combinator.

There are four different combinators in CSS:

- descendant selector (space)
- child selector (>)
- adjacent sibling selector (+)
- general sibling selector (~)

Descendant Selector

The descendant selector matches all elements that are descendants of a specified element.

The following example selects all `<p>` elements inside `<div>` elements:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
div p {  
    background-color: yellow;  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>Descendant Selector</h2>
```

```
<p>The descendant selector matches all elements that are descendants of a  
specified element.</p>
```

```
<div>
```

```
    <p>Paragraph 1 in the div.</p>
```

```
    <p>Paragraph 2 in the div.</p>
```

```
    <section><p>Paragraph 3 in the div.</p></section>
```

</div>

<p>Paragraph 4. Not in a div.</p>

<p>Paragraph 5. Not in a div.</p>

</body>

</html>

Descendant Selector

The descendant selector matches all elements that are descendants of a specified element.

Paragraph 1 in the div.

Paragraph 2 in the div.

Paragraph 3 in the div.

Paragraph 4. Not in a div.

Paragraph 5. Not in a div.

Child Selector (>)

The child selector selects all elements that are the children of a specified element.

The following example selects all <p> elements that are children of a <div> element:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
div > p {
```

```
    background-color: PURPLE;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>Child Selector</h2>
```

```
<p>The child selector (>) selects all elements that are the children of a specified element.</p>
```

```
<div>
```

```
<p>Paragraph 1 in the div.</p>
```

```
<p>Paragraph 2 in the div.</p>
```

```
<section>
```

```
<!-- not Child but Descendant -->
```

```
<p>Paragraph 3 in the div (inside a section element).</p>
```

```
</section>
```

```
<p>Paragraph 4 in the div.</p>
```

```
</div>
```

```
<p>Paragraph 5. Not in a div.</p>
```

```
<p>Paragraph 6. Not in a div.</p>
```

```
</body>
```

```
</html>
```

Child Selector

The child selector (>) selects all elements that are the children of a specified element.

Paragraph 1 in the div.

Paragraph 2 in the div.

Paragraph 3 in the div (inside a section element).

Paragraph 4 in the div.

Paragraph 5. Not in a div.

Paragraph 6. Not in a div.

Adjacent Sibling Selector (+)

The adjacent sibling selector is used to select an element that is directly after another specific element.

Sibling elements must have the same parent element, and "adjacent" means "immediately following".

The following example selects the first <p> element that are placed immediately after <div> elements:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
div + p {
```

```
    background-color: yellow;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>Adjacent Sibling Selector</h2>
```

<p>The + selector is used to select an element that is directly after another specific element.</p>

<p>The following example selects the first p element that are placed immediately after div elements:</p>

<div>

<p>Paragraph 1 in the div.</p>

<p>Paragraph 2 in the div.</p>

</div>

<p>Paragraph 3. After a div.</p>

<p>Paragraph 4. After a div.</p>

<div>

<p>Paragraph 5 in the div.</p>

<p>Paragraph 6 in the div.</p>

</div>

<p>Paragraph 7. After a div.</p>

<p>Paragraph 8. After a div.</p>

</body>

</html>

Adjacent Sibling Selector

The + selector is used to select an element that is directly after another specific element.

The following example selects the first p element that are placed immediately after div elements:

Paragraph 1 in the div.

Paragraph 2 in the div.

Paragraph 3. After a div.

Paragraph 4. After a div.

Paragraph 5 in the div.

Paragraph 6 in the div.

Paragraph 7. After a div.

Paragraph 8. After a div.

General Sibling Selector (~)

The general sibling selector selects all elements that are next siblings of a specified element.

The following example selects all <p> elements that are next siblings of <div> elements:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
div ~ p {
```

```
    background-color: RED;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>General Sibling Selector</h2>
```

<p>The general sibling selector (~) selects all elements that are next siblings of a specified element.</p>

<p>Paragraph 1.</p>

General Sibling Selector

The general sibling selector (~) selects all elements that are next siblings of a specified element.

Paragraph 1.

Paragraph 2.

Paragraph 3.

Some code.

Paragraph 4.

CSS Pseudo-classes

What are Pseudo-classes?

A pseudo-class is used to define a special state of an element.

For example, it can be used to:

- Style an element when a user mouses over it
- Style visited and unvisited links differently
- Style an element when it gets focus

Syntax

The syntax of pseudo-classes:

```
selector:pseudo-class {  
  property: value;  
}
```