CSS Building Blocks > CSS Selectors & Inheritance | Cheat Sheet:

1. CSS Selectors

The CSS Selectors are used to select the HTML Elements that we want to style.

The different types of CSS Selectors are:

- Simple Selectors
 - Class Selector
 - ID Selector
 - Type (tag name) Selector
 - Attribute Selector
 - Universal Selector
 - Pseudo-class
- Compound Selectors
- Complex Selectors and many more.

1.1 Class Selector

The CSS Class Selector selects all the HTML elements that have a given CSS class selector as their class attribute value. It consists of a dot (.), followed by the class name of the HTML element.

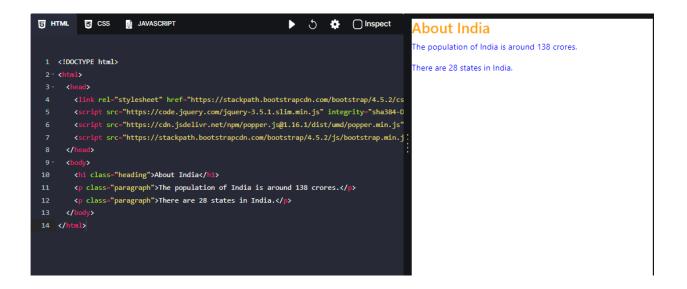
```
i 1 The population of India is around 138 crores.

1 · .paragraph {
2    color: blue;
3 }
```

Here, the CSS class selector is .paragraph . So, it selects all the HTML elements that have an HTML attribute name class , and it's value paragraph .

Note

There can be more than one HTML element with the same class name in the HTML document.



1.2 ID Selector

The CSS ID selector selects an HTML element based on its ID attribute value. It consists of a hash (#), followed by the ID of the HTML element.

```
HTML

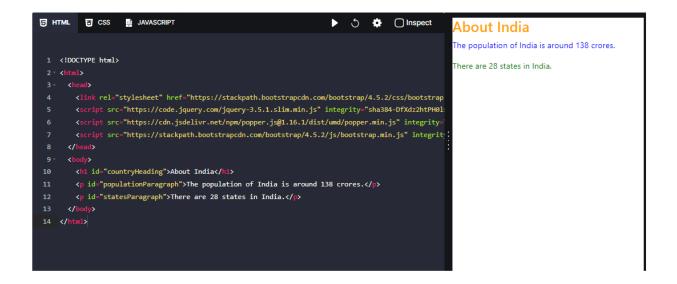
i 1 The population of India is around 138 crores.

1 * #populationParagraph {
2 color: blue;
3 }
```

Here, the CSS ID selector is #populationParagraph . So, it selects the HTML element that has an HTML attribute name id and it's value populationParagraph .

■ Note

There should be only **one** HTML element with a given ID in the entire HTML document. The HTML id attribute value doesn't need to have the prefix section as CCBP UI Kit is not used.



1.3 Type (tag name) Selector

The CSS Type Selector selects all the HTML elements based on their tag names (h1 , p , div , etc.)

Here, the CSS Type selector is $\,p\,$. So, it selects all the HTML elements that have a tag name $\,p\,$.



2. Most fundamental concepts of CSS

In CSS, the styles that are applied to HTML elements depend on three fundamental concepts.

- Inheritance
- Specificity
- Cascade

2.1 CSS Inheritance

The mechanism through which the value of certain CSS properties is passed on from parent elements to child elements is called **Inheritance**.

2.1.1 Parent Element: If the HTML elements are placed inside the other HTML element, then the outer HTML element is called the parent element of the HTML elements inside it.

From the above Code Snippet, we can say:

- 1. The HTML div element is the parent element of the HTML h1 and p elements.
- 2. The HTML p element is the parent element of the HTML a element.

2.1.2 Child Element

An HTML element that is directly inside the parent element is called the child element of that parent element.

```
### Interception of the worlds in the highest of the worlds in the seven wonders of the worlds is one of the seven wonders of the world.

| The <a href="https://en.wikipedia.org/wiki/Taj_Mahal">Taj Mahal</a>
| The <a href="https://en.wikipedia.org/wiki/Taj_Mahal">Taj Mahal</a>
| Taj Ma
```

2.1.3 Inherited Properties

If the CSS properties applied to the parent element are inherited by the child elements, then they are called Inherited properties.

Some of the CSS Inherited Properties are:-

- Text related Properties
 - font-family
 - o font-style
 - o font-weight
 - o text-align
- List related Properties

- list-style-type
- color property and many more.

2.1.4 Non-inherited Properties

If the CSS properties applied to the parent element are not inherited by the child elements, then they are called Non-inherited properties.

Some of the CSS Non-inherited properties are:

- CSS Box Properties
 - width
 - height
 - margin
 - padding
 - o border-style
 - border-width
 - border-color
 - o border-radius
- CSS Background Properties
 - background-image
 - background-color
 - background-size
- Text-decoration and many more.

```
About India

The population of India is around 138 crores.

There are 28 states in India.

The population of India is around 138 crores.

There are 28 states in India.

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```

CSS Specificity & Cascade | Cheat Sheet

1. Specificity

Specificity is how browsers decide which CSS property values are the **most relevant** to an HTML element and, therefore, will be applied.

The following list of CSS Selectors is in the lowest to highest order by specificity.

- 1. Type (tag name) Selector
- 2. Class Selector
- 3. ID Selector

1.1 Type Selector & Class Selector

A Class Selector is **more specific** compared to Type (tag name) Selector as it selects only the HTML elements that have a **specific class attribute value** in the HTML document

```
∃ HTML
           ਰ css
                     JAVASCRIPT
                                                       Inspect
                                                                     Heading 1
                                                                     Heading 2
                                                                     Heading 3
i 1 - ⟨style>
  2 × h1 {
                                                                     Heading 4
      color: grey;
                                                                     Heading 5
      font-family: "Roboto";
      font-size: 22px;
  7 - heading {
      color: blue;
     font-weight: bold;
 10 }</style>
        <h1>Heading 1</h1>
       <h1>Heading 2</h1>
       <h1 class="heading">Heading 3</h1>
        <h1 class="heading">Heading 4</h1>
        <h1 class="heading">Heading 5</h1>
  Note
   It doesn't overwrite the entire CSS Ruleset but only overwrites the CSS properties that are the same.
```

1.2 Class Selector & ID Selector

An ID Selector is more specific when compared to a Class Selector as we provide a unique ID within the HTML document and it selects only a **single** HTML Element.

```
Css:
h1 {
  color: grey;
  font-family: "Roboto";
  font-size: 22px;
```

```
}
.heading {
  color: blue;
  font-weight: bold;
}
#heading5 {
  color: green;
  font-size: 28px;
  font-style: italic;
}
```

```
日 HTML
           ਤ css
                     JAVASCRIPT
                                                           ☐ Inspect
                                                                         Heading 1
                                                                         Heading 2
                                                                         Heading 3
 1 <!DOCTYPE html>
                                                                         Heading 4
                                                                         Heading 5
         <link rel="stylesheet" href="https://stackpath.bootstrapcdn.c</pre>
        <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js</pre>
                                                                         Heading 5
        <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.1/di</pre>
        <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5</pre>
         <h1>Heading 1</h1>
10
        <h1>Heading 2</h1>
        <h1 class="heading">Heading 3</h1>
        <h1 class="heading">Heading 4</h1>
        <h1 class="heading">Heading 5</h1>
         <h1 class="heading" id="heading5">Heading 5</h1>
      </body>
```

2. Inline Styles

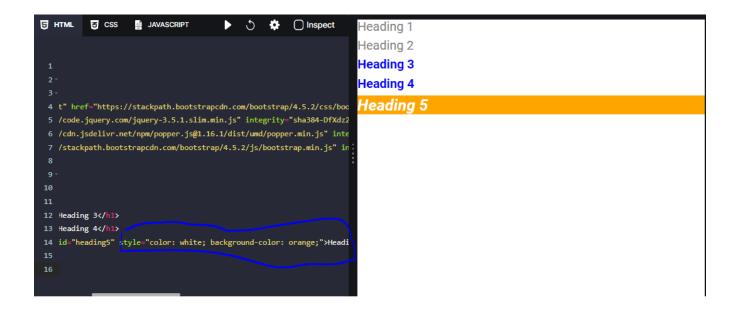
The Inline styles are applied directly to an HTML element. They use the HTML

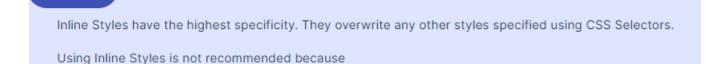
style attribute, with CSS property values defined within it.

Syntax:

```
<tag style = "property1: value1; property2: value2; ...">Content</tag>
```

A HTML style attribute value can consist of one or more CSS property values.





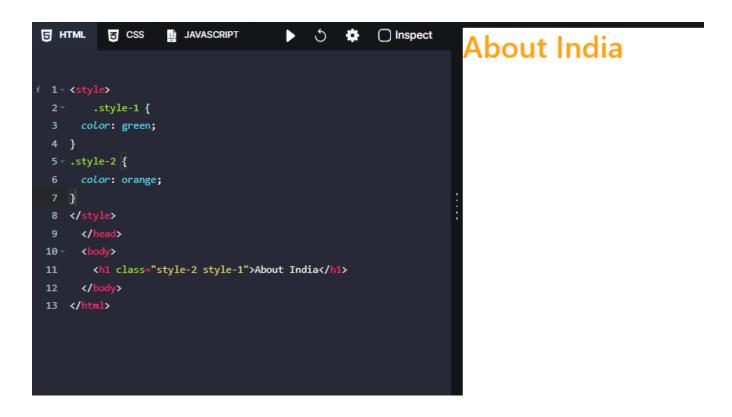
· Inline Styles are not reusable.

Note

· Writing HTML and CSS separately increases code readability.

3. CSS Cascade

The source order of CSS Rulesets matters. When two CSS Rulesets have equal specificity, the one that comes last in the CSS is applied.

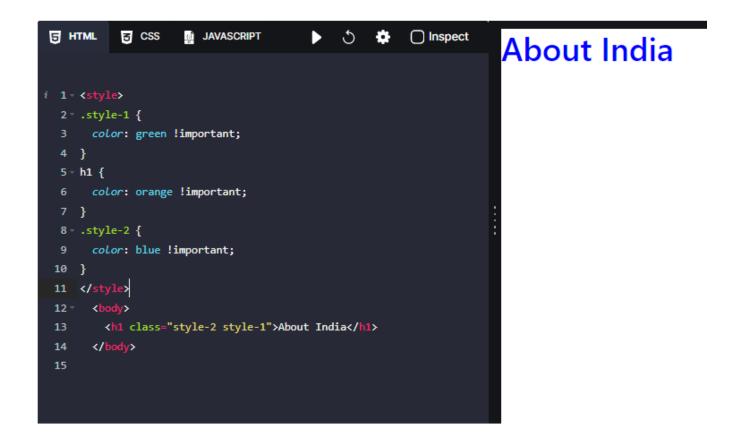


The styles that apply to the HTML Elements are not determined by the **order the classes** defined in the HTML class attribute, but instead the order in which they appear in the CSS.

3.1 The !important exception

It is a special piece of CSS used to make a particular CSS property and value the most specific thing, irrespective of source order and specificity.

The only way to override a !important property value is to include another !important property value. The added property value should either come later in the order or should be of higher specificity.



■ Note

Always look for a way to use specificity before even considering !important .

Only use !important when you want to override foreign CSS (from external libraries, like Bootstrap).