## Categories of CSS Selectors

CSS selectors can be categorized into the following types:

### 1. Universal Selector (\*)

The universal selector applies styles to all elements on the page. **Example:**

\* {

margin: 0;

padding: 0;

}

#### Example 1:

Resets margin and padding for all elements.

#### Example 2:

\* {

box-sizing: border-box;

}

Sets the box-sizing property for all elements.

#### Example 3:

\* {

font-family: Arial, sans-serif;

}

Applies a default font to all elements.

### 2. Basic Selectors

These selectors target elements based on their type, class, or ID.

#### Type Selector

The type selector targets elements by their HTML tag.

p {

color: blue;

}

##### Example 1:

Changes text color of all <p> elements to blue.

##### Example 2:

h1 {

text-align: center;

}

Centers all <h1> elements.

##### Example 3:

div {

background-color: lightgray;

}

Changes the background color of all <div> elements.

#### Class Selector (.)

The class selector targets elements with a specific class.

.red-text {

color: red;

}

##### Example 1:

Applies red text to elements with class red-text.

##### Example 2:

.box {

border: 1px solid black;

}

Applies a black border to elements with class box.

##### Example 3:

.center {

text-align: center;

}

Centers text for elements with class center.

#### ID Selector (#)

The ID selector targets elements with a specific ID.

#header {

font-size: 24px;

}

##### Example 1:

Increases font size of an element with id="header".

##### Example 2:

#main {

width: 80%;

}

Sets the width of an element with id="main" to 80%.

##### Example 3:

#footer {

background-color: black;

color: white;

}

Changes background and text color for an element with id="footer".

### 3. Combinator Selectors

These selectors define relationships between elements.

#### Descendant Selector (A B)

Targets elements inside another element.

div p {

color: green;

}

##### Example 1:

Changes text color of <p> inside <div>.

##### Example 2:

nav ul {

list-style: none;

}

Removes bullet points from <ul> inside <nav>.

##### Example 3:

section article {

padding: 20px;

}

Adds padding to <article> inside <section>.

#### Child Selector (A > B)

Targets direct children.

ul > li {

font-weight: bold;

}

##### Example 1:

Makes direct <li> inside <ul> bold.

##### Example 2:

div > p {

color: orange;

}

Changes color of <p> that is a direct child of <div>.

##### Example 3:

nav > ul {

margin: 0;

}

Removes margin for <ul> directly inside <nav>.

### 4. Attribute Selectors

Targets elements based on attributes.

input[type="text"] {

border: 2px solid blue;

}

##### Example 1:

Styles all text inputs.

##### Example 2:

a[target="\_blank"] {

color: red;

}

Changes color of links that open in a new tab.

##### Example 3:

img[alt] {

border: 1px solid black;

}

Applies a border to images with an alt attribute.

### 5. Pseudo-classes and Pseudo-elements

#### Pseudo-classes (:hover, :first-child, :nth-child(n))

Targets elements in a specific state.

a:hover {

color: green;

}

##### Example 1:

Changes link color when hovered.

##### Example 2:

p:first-child {

font-weight: bold;

}

Makes the first <p> child bold.

##### Example 3:

li:nth-child(odd) {

background: lightgray;

}

Adds background to odd <li> items.

#### Pseudo-elements (::before, ::after)

Adds content before or after elements.

p::before {

content: "[Start] ";

}

##### Example 1:

Adds [Start] before every <p>.

##### Example 2:

p::after {

content: " [End]";

}

Adds [End] after every <p>.

##### Example 3:

h1::first-letter {

font-size: 200%;

}

Makes the first letter of <h1> larger.

### 6. Group Selector (A, B, C)

Styles multiple selectors at once.

h1, h2, h3 {

font-family: Arial, sans-serif;

}

##### Example 1:

Applies the same font to <h1>, <h2>, and <h3>.

##### Example 2:

div, section {

padding: 10px;

}

Adds padding to <div> and <section>.

##### Example 3:

a, button {

cursor: pointer;

}

Changes cursor for <a> and <button>.

## Conclusion

These categorized CSS selectors, with practical examples, will help in efficient styling and webpage design.