

- Specificity Is a mechanism used by browsers to determine which CSS rule applies to an element when multiple rules could apply. It is calculated based on the types of selectors used in the rule.

- Specificity is calculated using a point system based on the following categories:

1. Inline styles: These have the highest specificity (e.g., `style="colour: red;"`).
2. ID selectors: Each ID selector adds 100 points (e.g., `#header`).
3. Class selectors, attribute selectors, and pseudo-classes: Each of these adds 10 points (e.g., `.class`, `[type="text"]`, `:hover`).
4. Type selectors and pseudo-elements: Each of these adds 1 point (e.g., `div`, `::before`).

- Complex selectors are combinations of simple selectors separated by combinators. These combinators define relationships between the elements they select.

- Types of Complex Selectors

1. Descendant Selector: Selects all elements that are descendants of a specified element (e.g., `div p`).
2. Child Selector: Selects all elements that are direct children of a specified element (e.g., `div > p`).
3. Adjacent Sibling Selector: Selects an element that is immediately preceded by a specified element (e.g., `h1 + p`).
4. General Sibling Selector: Selects all elements that are siblings of a specified element (e.g., `h1 ~ p`)⁶.

- Pseudo-Classes are used to define the special states of an element. They are prefixed with a single colon (`:`).

-Example: `:hover` applies styles when the user hovers over an element.

-Usage: `a:hover { colour: blue; }`

- Pseudo-elements are used to style specific parts of an element. They are prefixed with a double colon (`::`).

- Example: `::before` inserts content before an element's content.

- Usage: `p::before { content: "Note: "; }`

- <https://developer.mozilla.org/en-US/docs/Web/CSS/Specificity>