

In CSS, selectors are used to target specific HTML elements in order to apply styles to them. The three main types of selectors are ID selectors, class selectors, and tag selectors, and each serves a distinct purpose.

1. ID Selector

Use: Use the ID selector when you want to apply styles to a single, unique element on the page. IDs are unique and should only be used once per page.

Syntax: The ID selector is prefixed with a #.

Example:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>ID Selector Example</title>
  <style>
    #header {
      background-color: blue;
      color: white;
      padding: 10px;
    }
  </style>
</head>
<body>
  <div id="header">This is the header</div>
</body>
</html>
```

In this example, the #header selector targets the element with the ID of "header", applying specific styles only to that element.

2. Class Selector

Use: Use the class selector when you want to apply styles to multiple elements that share the same class. Classes can be reused multiple times on a page.

Syntax: The class selector is prefixed with a ..

Example:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Class Selector Example</title>
  <style>
    .note {
      background-color: yellow;
      border: 1px solid black;
      padding: 10px;
      margin: 5px;
    }
  </style>
</head>
<body>
  <div class="note">This is a note.</div>
  <div class="note">This is another note.</div>
  <div class="note">This is yet another note.</div>
</body>
</html>
```

In this example, the .note selector styles all elements that have the class "note". Since the class can be applied to multiple elements, all these note divs share the same styling.

3. Tag Selector

Use: Use the tag selector when you want to apply styles to all instances of a specific HTML tag anywhere on the page. This applies the styles broadly and can affect multiple elements.

Syntax: The tag selector uses the name of the tag directly.

Example:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Tag Selector Example</title>
  <style>
    p {
      color: green;
      font-size: 16px;
    }
  </style>
</head>
<body>
  <p>This is the first paragraph.</p>
  <p>This is the second paragraph.</p>
  <p>This paragraph will also be styled.</p>
</body>
</html>
```

In this example, the p tag selector applies the same styling to all <p> elements, making all paragraphs green with a font size of 16px.