

CSS Selectors Concept:

- Selectors are used to identify a sepecific or set of elements to apply css styles.
- CSS selectors are used to "find" or "select" HTML elements based on their element name, id based value, class based value, attribute based values, and more.
- CSS supports different types of selectors.
For example: tagName based, id based , class name base , attribute based and relation based etc...

Generally all selectors are classified into five categories: They are,

1. Simple or Basic selectors (select elements based on **name, id, class**)
2. Attribute selectors (select elements based on an attribute name or attribute value)
3. Combinator selectors (select elements based on a specific relationship between them)
4. Pseudo-class selectors (select elements based on a certain state)
5. Pseudo-elements selectors (select and style a part of an element)

1. Simple or Basic selectors (select elements based on name, id, class)

Under the basic selectors we have 3 types. by using these 3 types regularly we can apply styles to our required html elements.

The basic selectors are:

1. Element or TagName selectors
2. id based selectors
3. class name based selectors

1. Element or TagName Based Selectors:

- If we use element name or tag name to apply styles then that is called Element or TagName based selector.
- The element selector will selects elements based on the element name.

Stynatx: `TagName { propertyName1 : propertyValue1 ; propertyName2 : propertyValue2 ; etc.. }`

For example:

```
<html>
  <head>
    <title>CSS Types</title>
    <style>
      h2{ text-align: center; }
      h1{ color: deeppink; }
    </style>
  </head>
  <body>
    <h1>Welcome to TCS</h1>
    <h1>Welcome to UI</h1>
    <h1>UI is more powerful in web development</h1>
    <h2>HTML is base for web development</h2>
  </body>
</html>
```

2. id based selectors

- If we want to identify a specific element out of all same types of elements then for that specific element we required to create "id" attribute with required value.
- We use this "id" attribute "value" to identify that specific element and we apply the required styles to that element.
For example: `<h1 id="myid"> Hello </h1>`
- We should use # symbol before id attribute value when we are applying css styles.
For example:
`#myid { propertyName : propertyValue; }`
- id attribute value must be unique value for every element in entire document.

Task : we have 10 h1 tags/elements, if we want apply style for third h1 element then we create id for third h1 element and we use that id to apply styles.

Note: id's value must be unique in the html file.

For Example:

```
<html>
  <head>
    <title>CSS Types</title>
    <style>
      #h1id2{ color: blue; }
      #h1id3{ font-family: cursive; color: red; }
    </style>
  </head>
  <body>
    <h1>Welcome to TCS</h1>
    <h1 id="h1id2">Welcome to UI</h1>
    <h1 id="h1id3">UI is more powerful in web development</h1>
    <h2>HTML is base for web development</h2>
  </body>
</html>
```

3. class based selectors

- If we want to apply the styles for two or more elements out of all same type of elements, then we can create a "class" attribute with a required "value" for those two or more elements and we can use that class name attribute value to apply same styles.
- **Task :** If we have 10 h1 tags, if we want apply same style for second, third and fourth h1 tags then we create same class name for second, third and fourth h1 tags and the same class we use to apply styles.
- The class name value may be unique or duplicate in the html file
- If we want create multiple classes for same element then we have to separate class names values by space.
For example : `<h1 class = "class1 class2 class3"> Hello </h1>`
- The class name should start with . (dot) when we are applying styles.
`.class1{ propertyName : propertyValue; }`

```
<html>
  <head>
    <title>CSS Types</title>
    <style>
      .cls1{color: red;}
      .cls2{font-family: cursive;}
      .cls3{text-align: center;}
      .cls4{text-decoration: underline;}
    </style>
  </head>
  <body>
    <h1 class="cls2 cls3">Welcome to TCS</h1>
    <h1 class="cls1 cls3 cls4" >Welcome to UI</h1>
    <h1 class="cls1 cls2 cls4">UI is more powerful in web development</h1>
    <h1 class="cls4">CSS add styles to the webpage</h1>
    <h2>HTML is base for web development</h2>
  </body>
</html>
```