**CSS Combinators:-**

It explains relationship between selectors. Following combinators are used in css:-

* descendant selector (space)
* child selector (>)
* adjacent sibling selector (+)
* general sibling selector (~)

**Descendant selector:-**The descendant selector matches all elements that are descendants of a specified element.

e.g. The following example selects all <p> elements inside <div> elements:

div p {  
  background-color: yellow;  
}

## Child Selector (>):- The child selector selects all elements that are the children of a specified element. The following example selects all <p> elements that are children of a <div> element:

div > p {  
  background-color: yellow;  
}

## Adjacent Sibling Selector (+):- The adjacent sibling selector is used to select an element that is directly after another specific element. Sibling elements must have the same parent element, and "adjacent" means "immediately following". The following example selects the first <p> elements that are placed immediately after <div> elements:

div + p {  
  background-color: yellow;  
}

**General Sibling Selector (~):-** The general sibling selector selects all elements that are next siblings of a specified element. The following example selects all <p> elements that are next siblings of <div> elements:

div ~ p {  
  background-color: yellow;  
}

**Pseudo-classes:-**A pseudo-class is used to define a special state of an element.

For example, it can be used to:

* Style an element when a user mouses over it
* Style visited and unvisited links differently
* Style an element when it gets focus

The syntax of pseudo-classes:

selector: pseudo-class {  
  property: value;  
}

## Anchor Pseudo-classes

Links can be displayed in different ways:

a:link {  
  color: #FF0000;  
}  
a:visited {  
  color: #00FF00;  
}  
a:hover {  
  color: #FF00FF;  
}

## Pseudo-classes and HTML Classes:-

Pseudo-classes can be combined with HTML classes:

When you hover over the link in the example, it will change color:

1. highlight: hover

 {  
  color: #ff0000;

font-size:22px;  
}

## Hover on <div>:-

An example of using the :hover pseudo-class on a <div> element:

div {

background-color: green;

color: white;

padding: 25px;

text-align: center;

}

div:hover {

background-color: blue;

}

## : First-child Pseudo-class:-

The: first-child pseudo-class matches a specified element that is the first child of another element.

## Match the first <i> element in all <p> elements

In the following example, the selector matches the first <i> element in all <p> elements:

p i:first-child {  
  color: blue;  
}

**Pseudo-elements:-** pseudo-element is used to style specified parts of an element.

For example, it can be used to:

* Style the first letter, or line, of an element
* Insert content before, or after, the content of an element

## Syntax

The syntax of pseudo-elements:

selector::pseudo-element {  
  property: value;  
}

## ::first-line Pseudo-element

 ::first-line pseudo-element is used to add a special style to the first line of a text.

The following example formats the first line of the text in all <p> elements:

p::first-line {  
  color: #ff0000;  
  font-variant: small-caps;  
}

The following properties apply to the ::first-line pseudo-element:

* font properties
* color properties
* background properties
* word-spacing
* letter-spacing
* text-decoration
* vertical-align
* text-transform
* line-height
* clear

## ::first-letter Pseudo-element

The ::first-letter pseudo-element is used to add a special style to the first letter of a text.

The following example formats the first letter of the text in all <p> elements:

p::first-letter {  
  color: #ff0000;  
  font-size: xx-large;  
}

The following properties apply to the ::first-letter pseudo- element:

* font properties
* color properties
* background properties
* margin properties
* padding properties
* border properties
* text-decoration
* vertical-align (only if "float" is "none")
* text-transform
* line-height
* float
* clear

## Pseudo-elements and HTML Classes

Pseudo-elements can be combined with HTML classes:

p.abc::first-letter {  
  color: #ff0000;  
  font-size: 200%;  
}

## Multiple Pseudo-elements

Several pseudo-elements can also be combined.

In the following example, the first letter of a paragraph will be red, in an xx-large font size. The rest of the first line will be blue, and in small-caps. The rest of the paragraph will be the default font size and color:

p::first-letter {  
  color: #ff0000;  
  font-size: xx-large;  
}  
  
p::first-line {  
  color: #0000ff;  
  font-variant: small-caps;  
}

## The ::before Pseudo-element

The ::before pseudo-element can be used to insert some content before the content of an element.

The following example inserts an image before the content of each <h1> element:

h1::before {  
  content: url(abc.gif);  
}

## The ::after Pseudo-element

The ::after pseudo-element can be used to insert some content after the content of an element.

The following example inserts an image after the content of each <h1> element:

h1::after {  
  content: url(abc.gif);  
}

## The ::marker Pseudo-element

The ::marker pseudo-element selects the markers of list items.

The following example styles the markers of list items:

::marker {  
  color: red;  
  font-size: 23px;  
}

## ::selection Pseudo-element

The ::selection pseudo-element matches the portion of an element that is selected by a user.

The following CSS properties can be applied to ::selection: color, background, cursor, and outline.

The following example makes the selected text red on a yellow background:

::selection {  
  color: red;  
  background: yellow;  
}