



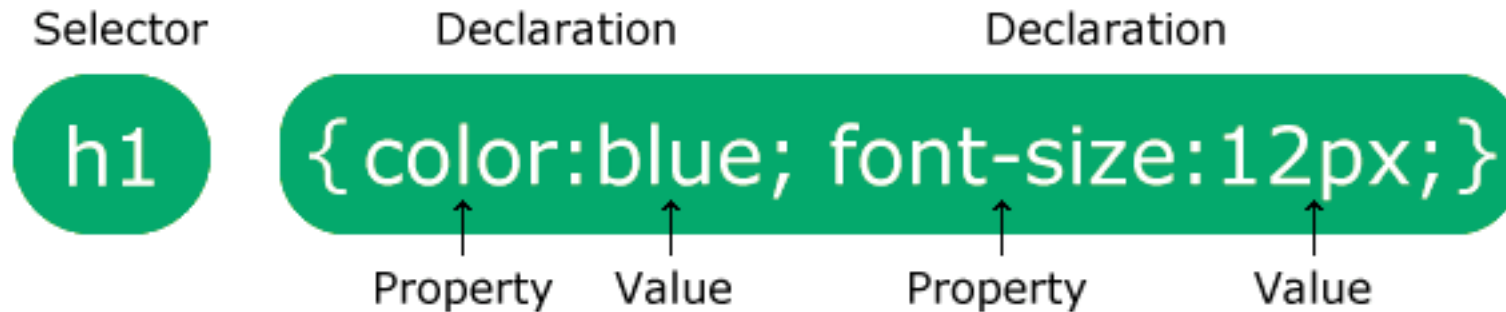
Cascading Style Sheet

UNIT 3: CSS

What is CSS?

- CSS stands for **Cascading Style Sheets**
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS can control the layout of multiple web pages all at once
- CSS provides a big set of pre-defined codes for styling the HTML elements
 - color
 - background-color
 - font-size
 - font-family
 - text-align

CSS Syntax



- The **selector** points to the HTML element you want to style.
- The **declaration block** contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.
- Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

What are different types using CSS?

- CSS can be applied using three ways
 - Inline CSS
 - Internal CSS
 - External CSS

What is mean by Inline CSS?

- When the CSS codes get applied directly on a tag using **STYLE** attribute, it is known as inline CSS
- Use the codes using **key:value** pair model
- Use **semicolon (;)** when as separator when using multiple codes
- Just like HTML, CSS is also case insensitive

Inline CSS

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;text-align:center;">This is a heading</h1>
<p style="color:red;">This is a paragraph.</p>
<p> Not Affected </p>
</body>
</html>
```

This is a paragraph.

Not Affected

This is a heading

What is meant by Internal CSS?

- When we apply styling on all or selected set of elements in a web page, it is called as internal CSS
- Use **<style></style>** tag to create such styles

Internal CSS

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: linen;
}

h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
|
```

This is a heading

This is a paragraph.

What is external CSS?

- We can create a file having styling effects and use that file in all the web pages of a website or even in multiple websites
- Such method of using styling is called as external CSS
- Here we need to use <link> tag to define the external CSS file name

```
<link href='filename.css' rel='stylesheet'>
```

Rel->relationship

External CSS

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

"mystyle.css"

```
body {
  background-color: lightblue;
}

h1 {
  color: navy;
  margin-left: 20px;
}
```

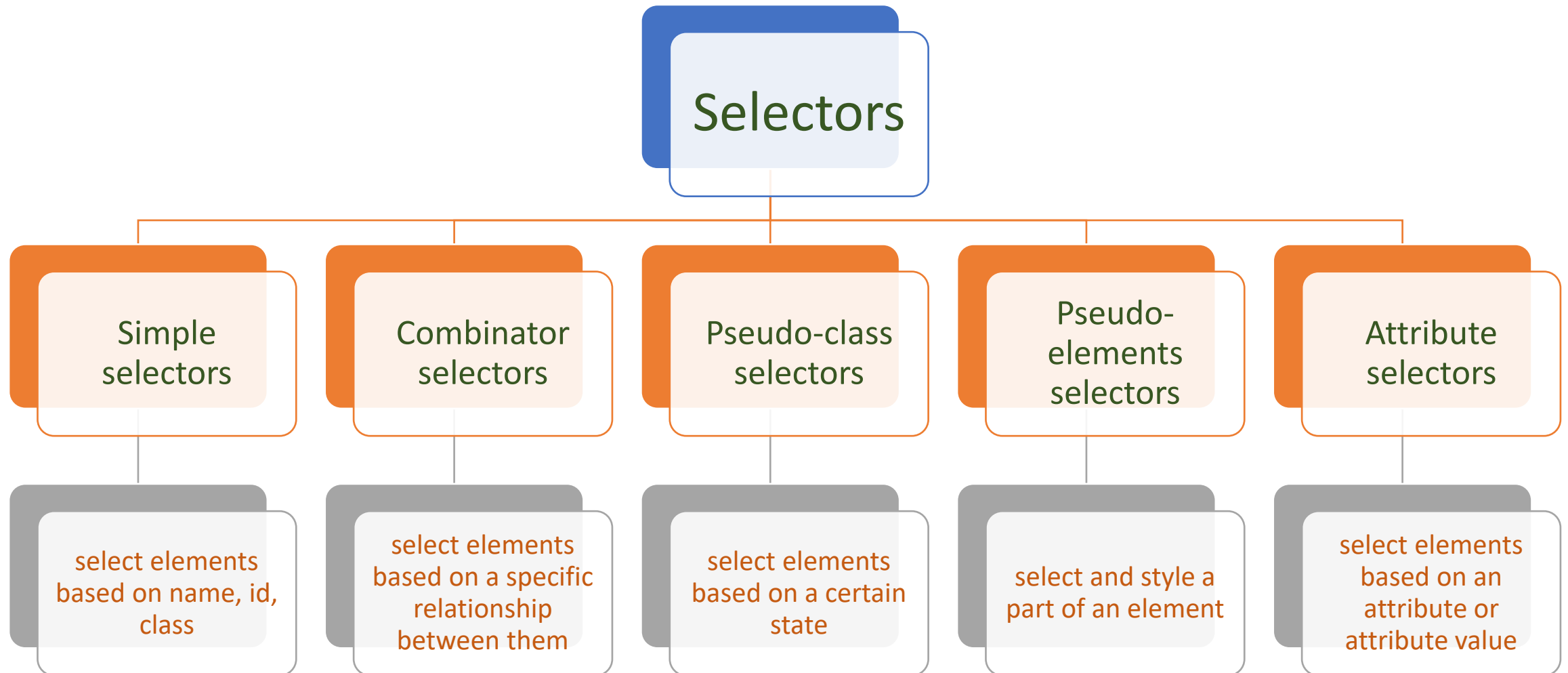
This is a heading

This is a paragraph.

What are selectors?

- CSS selectors are used to "find" (or select) the HTML elements you want to style.
- CSS selectors are divided into five categories

What are selectors?



What are the simple selectors?

Universal Selector (*)

- selects all HTML elements on the page

Element Selector

- selects HTML elements based on the element name

Grouping Selector

- selects all the HTML elements with the same style definitions

ID Selector

- uses the id attribute of an HTML element to select a specific element

CLASS Selector

- selects HTML elements with a specific class attribute

Examples of Simple Selectors

```
* {  
  text-align: center;  
  color: blue;  
}
```

```
p {  
  text-align: center;  
  color: red;  
}
```

```
h1, h2, p {  
  text-align: center;  
  color: red;  
}
```

```
#para1 {  
  text-align: center;  
  color: red;  
}
```

```
.center {  
  text-align: center;  
  color: red;  
}
```

Universal Selector

```
<head>
  <meta charset="utf-8" />
  <title>Using CSS</title>

  <style>
    *{
      text-align:center;
      color:orangered;
    }
  </style>
</head>
<body>
  <h1>Universal Selector Example</h1>

  <p>CSS is used to decorate the web pages,you can control the
  color of the text, the style of fonts, the spacing between paragraphs,
  </p>
</body>
</html>
```

Universal Selector Example

CSS is used to decorate the web pages,you can control the color of the text, the style of fonts, the spacing between paragraphs,

Group Selector

```
<head>
  <meta charset="utf-8" />
  <title>Using CSS</title>

  <style>
    h1,h2,p{
      background-color:rgb(0, 148, 255);
      text-align:center;
      color:orangered;
    }
  </style>
</head>
<body>
  <h1>Using Group Selector Example</h1>

  <h2>Welcome to CSS Page</h2>

  <p>CSS is used to decorate the web pages,you can control the
  color of the text, the style of fonts, the spacing between paragraphs,
  </p>

</body>
</html>
```

localhost:54021/W... A

Using Group Selector Example

Welcome to CSS Page

CSS is used to decorate the web pages,you can control the color of the text,
the style of fonts, the spacing between paragraphs,

Id Selector

- To define styling for specific element in the web page, first we need to define an identity to the element using **ID** attribute
- Use **#idname** while defining styling for the element inside `<style></style>` tag

Id Selector Example

```
style.css  WaysToIncludeCSS.html  X
<style>
  #h1{ background-color:rgb(0, 148, 255);
      text-align:center;
      color:orangered;
      margin-bottom:0;}

  #h2 {background-color: chocolate;
      color: black;
      text-align: center;
      margin-top: 0;}
  #p{background-color:rgb(182, 255, 0); }

</style>

</head>
<body>
  <h1 id="h1">ABES Engineering College,Ghaziabad</h1>

  <h2 id="h2">Information Technology</h2>

  <p id="p">College is located in ghaziabad near to nh24, one of the best
  in ghaziabad
  </p>

</body>
</html>
100 %  No issues found
```

**ABES Engineering
College,Ghaziabad**
Information Technology

College is located in ghaziabad near to nh24, one of the best engineering college in ghaziabad

Class Selector

- To define styling for group of elements in the web page, first we need to classify them **CLASS** attribute
- Use **.idname** while defining styling for the group of elements inside `<style></style>` tag

Class Selector Example

```
<meta charset="utf-8" />
<title>Using CSS</title>

<style>
  .h1{ background-color:rgb(0, 148, 255);
    text-align:center;
    color:orangered;
    margin-bottom:0;}

  .h2 {background-color: chocolate;
    color: black;
    text-align: center;
    margin-top: 0;}

</style>

</head>
<body>
  <h1 class="h1">ABES Engineering College,Ghaziabad</h1>

  <h2 class="h2">Information Technology</h2>

</body>
</html>
```

**ABES Engineering
College,Ghaziabad**
Information Technology

Combinator Selectors

- A combinator is something that explains the relationship between the selectors.
- There are four different combinators in CSS
 - descendant selector (space)
 - child selector (>)
 - adjacent sibling selector (+)
 - general sibling selector (~)

Descendant Selector

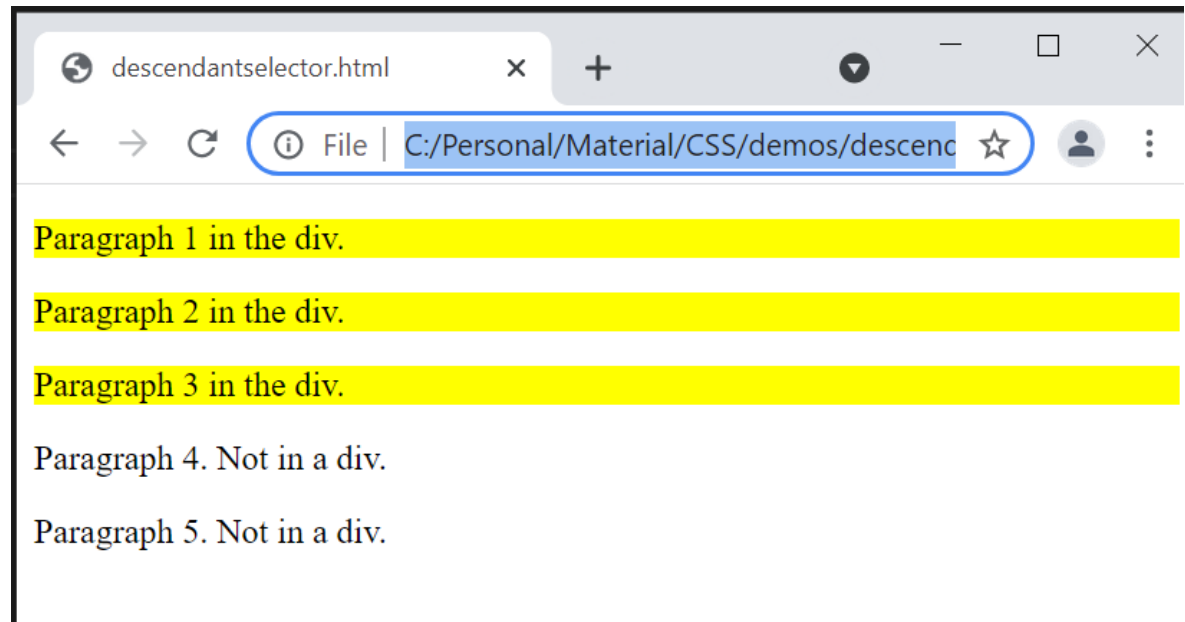
- The descendant selector matches all elements that are descendants of a specified element
- The following example selects all <p> elements inside <div> elements

```
div p {  
    background-color: yellow;  
}
```

Descendant Selector

```
<> descendantselector.html > html
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <style>
5        div p {
6          background-color: yellow;
7        }
8      </style>
9    </head>
10   <body>
11     <div>
12       <p>Paragraph 1 in the div.</p>
13       <p>Paragraph 2 in the div.</p>
14       <section>
15         <p>Paragraph 3 in the div.</p>
16       </section>
17     </div>
18     <p>Paragraph 4. Not in a div.</p>
19     <p>Paragraph 5. Not in a div.</p>
20   </body>
21 </html>
```

```
div p {
  background-color: yellow;
}
```



Child Selector (>)

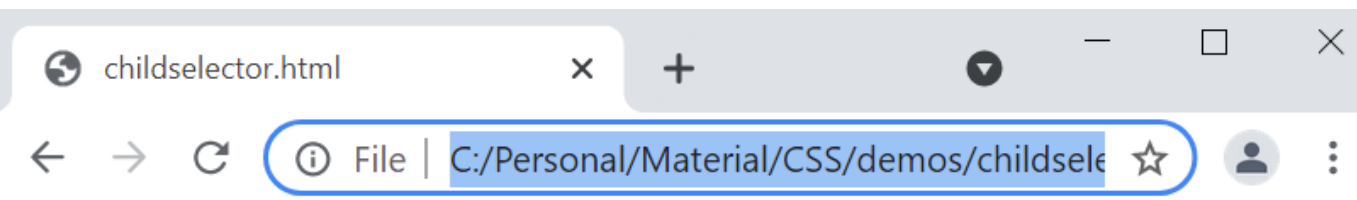
- The child selector selects all elements that are the children of a specified element.
- The following example selects all <p> elements that are children of a <div> element

```
div > p {  
    background-color: yellow;  
}
```


Child Selector (>)

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <style>
5        div > p {
6          background-color: yellow;
7        }
8      </style>
9    </head>
10   <body>
11     <div>
12       <p>Paragraph 1 in the div.</p>
13       <p>Paragraph 2 in the div.</p>
14       <section>
15         <p>Paragraph 3 in the div.</p>
16       </section>
17     </div>
18     <p>Paragraph 4. Not in a div.</p>
19     <p>Paragraph 5. Not in a div.</p>
20   </body>
21 </html>
```

```
div > p {
  background-color: yellow;
}
```



Paragraph 1 in the div.

Paragraph 2 in the div.

Paragraph 3 in the div.

Paragraph 4. Not in a div.

Paragraph 5. Not in a div.

Adjacent Sibling Selector (+)

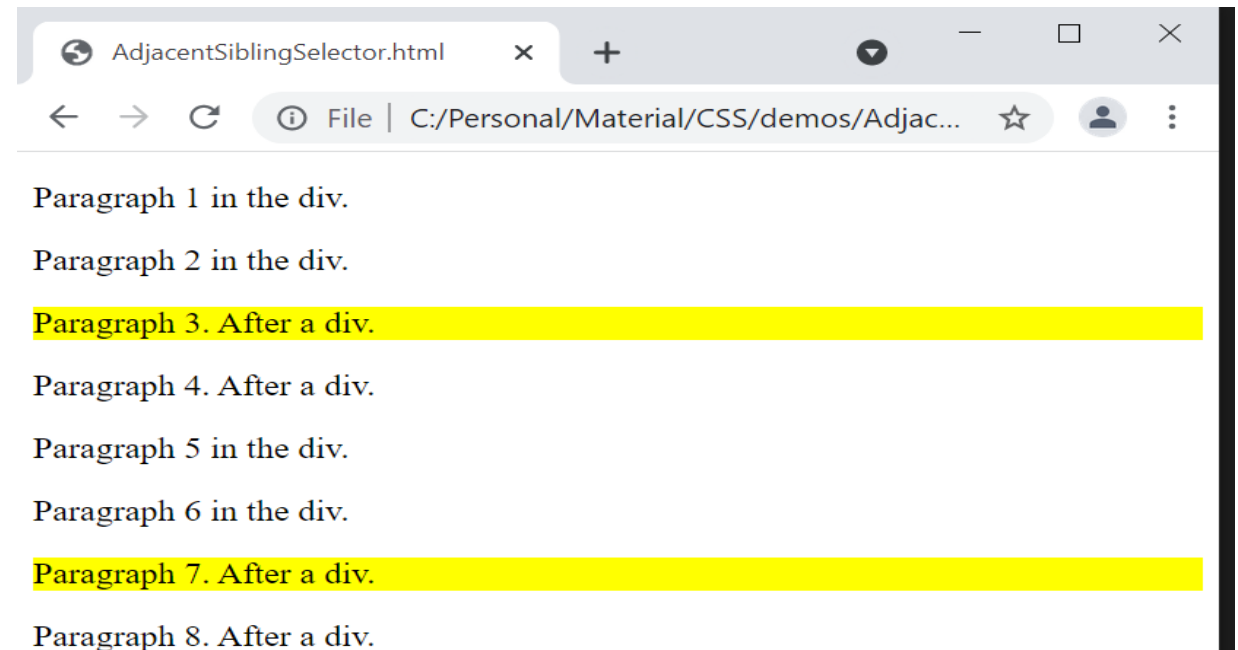
- The adjacent sibling selector is used to select an element that is directly after another specific element
- Sibling elements must have the same parent element, and "adjacent" means "immediately following"
- The following example selects the first <p> element that are placed immediately after <div>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

```
div + p {  
    background-color: yellow;  
}
```

Adjacent Sibling Selector (+)

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <style>
5       div + p {
6         background-color: yellow;
7       }
8     </style>
9   </head>
10  <body>
11    <div>
12      <p>Paragraph 1 in the div.</p>
13      <p>Paragraph 2 in the div.</p>
14    </div>
15    <p>Paragraph 3. After a div.</p>
16    <p>Paragraph 4. After a div.</p>
17    <div>
18      <p>Paragraph 5 in the div.</p>
19      <p>Paragraph 6 in the div.</p>
20    </div>
21    <p>Paragraph 7. After a div.</p>
22    <p>Paragraph 8. After a div.</p>
23  </body>
24 </html>
```

```
div + p {
  background-color: yellow;
}
```



Cascading Order

- Browser default
- External and internal CSS
- Inline CSS

The inline style has the highest priority, and will override external and internal styles and browser defaults.

CSS Basic Properties

Here are some basic CSS properties to work with.

- ❖ Text Properties

- ❖ List Properties

- ❖ Border Properties

- ❖ Font Properties

Text Properties

| Property | Description | Values |
|------------------------|---|---|
| Color | Sets the color of a text | RGB, hex, keyword |
| line-height | Sets the distance between lines | normal, number, length, % |
| letter-spacing | Increase or decrease the space between characters | normal, length |
| text-align | Aligns the text in an element | left, right, center, justify |
| text-decoration | Adds decoration to text | none, underline, overline, line-through |
| text-indent | Indents the first line of text in an element | length, % |
| text-transform | Controls the letters in an element | none, capitalize, uppercase, lowercase |

List Properties

| Property | Description | Values |
|----------------------------|---|---|
| list-style | Sets all the properties for a list in one declaration | list-style-type, list-style-position, list-style-image, inherit |
| list-style-image | Specifies an image as the list-item marker | URL, none, inherit |
| list-style-position | Specifies where to place the list-item marker | inside, outside, inherit |
| list-style-type | Specifies the type of list-item marker | none, disc, circle, square, decimal, decimal-leading-zero, armenian, georgian, lower-alpha, upper-alpha, lower-greek, lower-latin, upper-latin, lower-roman, upper-roman, inherit |

Border Properties

| Property | Description | Values |
|----------------------------|--|---|
| Border | Sets all the border properties in one declaration | border-width, border-style, border-color |
| border-bottom | Sets all the bottom border properties in one declaration | border-bottom-width, border-bottom-style, border-bottom-color |
| border-bottom-color | Sets the color of the bottom border | border-color |
| border-bottom-style | Sets the style of the bottom border | border-style |
| border-bottom-width | Sets the width of the bottom border | border-width |
| border-color | Sets the color of the four borders | color_name, hex_number, rgb_number, transparent, inherit |
| border-left | Sets all the left border properties in one declaration | border-left-width, border-left-style, border-left-color |
| border-left-color | Sets the color of the left border | border-color |
| border-left-style | Sets the style of the left border | border-style |
| border-left-width | Sets the width of the left border | border-width |
| border-right | Sets all the right border properties in one declaration | border-right-width, border-right-style, border-right-color |
| border-right-color | Sets the color of the right border | border-color |

Font Properties

| Property | Description | Values |
|---------------------|--|---|
| Font | Sets all the font properties in one declaration | font-style, font-variant, font-weight, font-size/line-height, font-family, caption, icon, menu, message-box, small-caption, status-bar, inherit |
| font-family | Specifies the font family for text | family-name, generic-family, inherit |
| font-size | Specifies the font size of text | xx-small, x-small, small, medium, large, x-large, xx-large, smaller, larger, length, %, inherit |
| font-style | Specifies the font style for text | normal, italic, oblique, inherit |
| font-variant | Specifies whether or not a text should be displayed in a small-caps font | normal, small-caps, inherit |
| font-weight | Specifies the weight of a font | normal, bold, bolder, lighter, 100, 200, 300, 400, 500, 600, 700, 800, 900, inherit Careful, many of these are not supported! |

Thank You