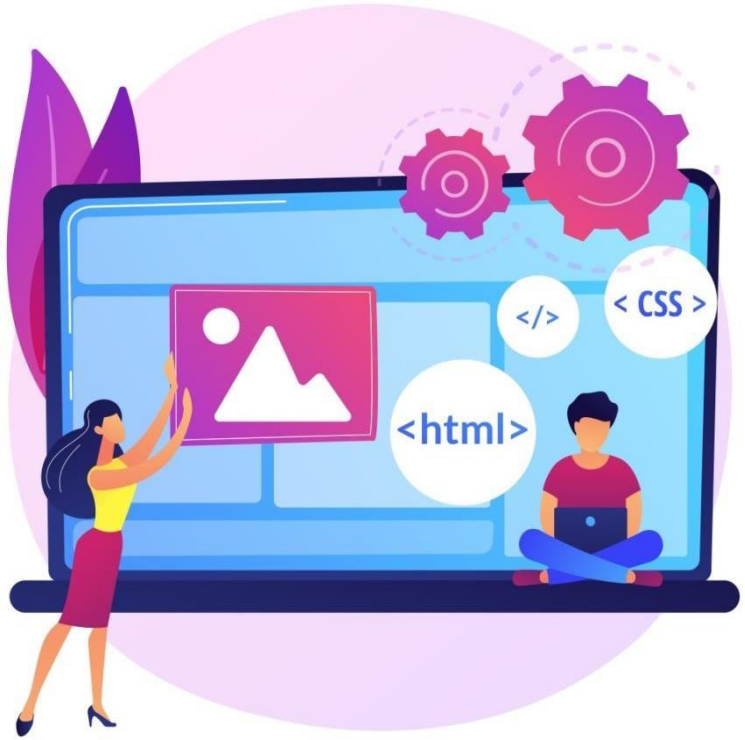
Session:
CSS Style sheets

CSS Style Sheets

Cascading Style Sheet(CSS) is used to set the style in web pages that contain HTML elements. It sets the background color, font-size, font-family, color, … etc property of elements on a web page.

There are three types of CSS which are given below:

- Inline CSS
- Internal or Embedded CSS
- External CSS



CSS Style Sheets

Inline CSS: Inline CSS contains the CSS property in the body section attached with element is known as inline CSS. This kind of style is specified within an HTML tag using the style attribute.

Example:

```
<!DOCTYPE html>
<html>
        <head>
                <title>Inline CSS</title>
        </head>

        <body>
                <p style = "color:green; font-size:50px;
                                font-style:italic; text-
align:center;">
                        Madblocks Technologies
                </p>
        </body>
</html>
```

CSS Style Sheets

Internal or Embedded CSS: This can be used when a single HTML document must be styled uniquely. The CSS rule set should be within the HTML file in the head section i.e the CSS is embedded within the HTML file.

Example:

```
<!DOCTYPE html>
<html>
<head><title>Internal CSS</title>
<style>
.main {text-align:center;}
.MBT {color:#009900;font-size:50px;font-weight:bold;}
.test {font-style:bold;font-size:20px;}</style>
</head>
<body>
<div class = "main">
<div class ="MBT">Madblocks Technologies</div>
<p class ="test">Welcome to the MTA HTML & CSS Bootcamp</p>
</div></body></html>
```

CSS Style Sheets

External CSS: External CSS contains separate CSS file which contains only style property with the help of tag attributes (For example class, id, heading, … etc). CSS property written in a separate file with .css extension and should be linked to the HTML document using **link** tag. This means that for each element, style can be set only once and that will be applied across web pages.

Example: The file given below contains CSS property. This file save with .css extension. For Ex: **styles.css**

```
.main {
text-align:center;}
.MBT {
color:#009900;
font-size:50px;
font-weight:bold;}
#test {
font-style:bold;
font-size:20px;}
```

CSS Style Sheets

Below is the HTML file that is making use of the created external style sheet

- **link** tag is used to link the external style sheet with the html webpage.
- **href** attribute is used to specify the location of the external style sheet file.

```
<!DOCTYPE html>
<html>
<head>
<title>External CSS</title>
<link rel="stylesheet" href="styles.css"/>
</head>
<body>
<div class = "main">
<div class ="MBT">Madblocks Technologies</div>
<p  id="test">Welcome to the MTA HTML & CSS Bootcamp</p>
</div>
</body>
</html>
```

Style Sheets Precedence

Properties of CSS: Inline CSS has the highest priority, then comes Internal/Embedded followed by External CSS which has the least priority.

Multiple style sheets can be defined on one page. If for an HTML tag, styles are defined in multiple style sheets then the below order will be followed.

As Inline has the highest priority, any styles that are defined in the internal and external style sheets are overridden by Inline styles.

Internal or Embedded stands second in the priority list and overrides the styles in the external style sheet.

External style sheets have the least priority. If there are no styles defined either in inline or internal style sheet then external style sheet rules are applied for the HTML tags.

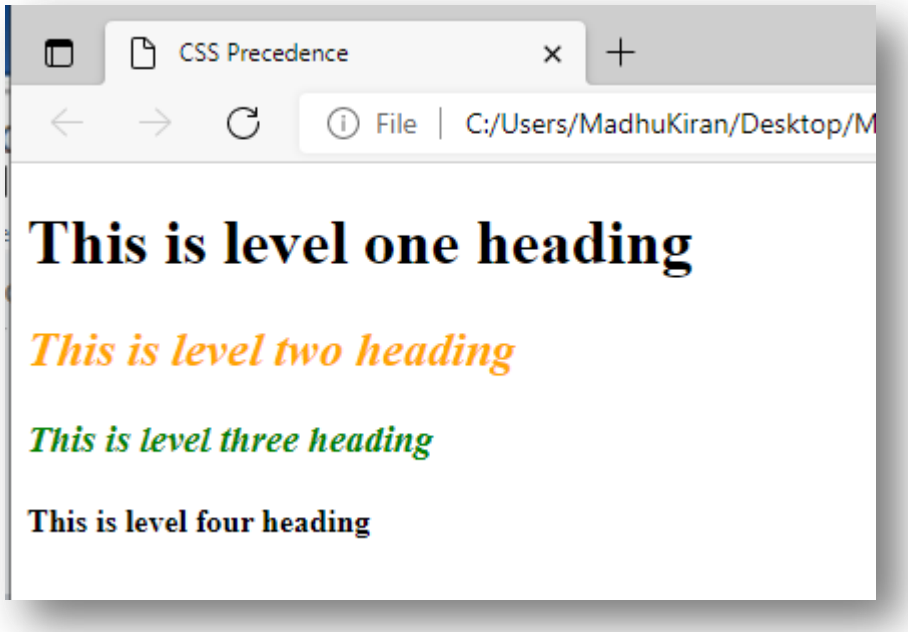
Style Sheets Precedence

Example: Let us add below code to the external style sheet in styles.css

```
h2,h3{
        font-style: italic;
        color:blue;
}
```

Let us add the below code in html file save and run it

```
<!DOCTYPE html>
<html>
<head>
<title>CSS Precedence</title>
<link rel="stylesheet" href="styles.css"/>
<style type="text/css">
h2{color: orange;}</style>
</head>
<body>
<h1>This is level one heading</h1>
<h2>This is level two heading</h2>
<h3 style="color: green;">This is level three heading</h3>
<h4>This is level four heading</h4>
</body></html>
```



You can observe Inline is first priority
Then internal css and then external css

Questions??

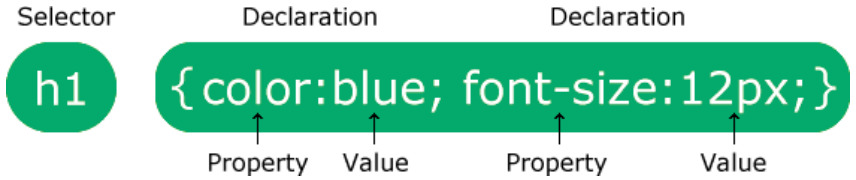
Every engineer has a tendency to tinker on a problem, lets answer few of them.

Session :
CSS Rule sets

CSS Syntax

A CSS rule consists of a selector and a declaration block.

CSS Syntax:

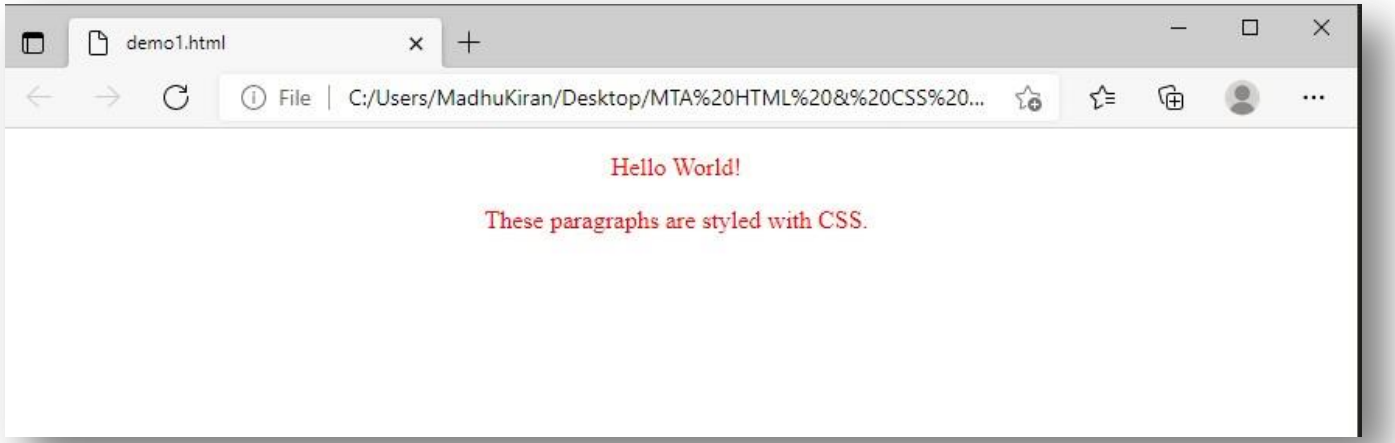


- ✓ The selector points to the HTML element you want to style.
- ✓ The declaration block contains one or more declarations separated by semicolons.
- ✓ Each declaration includes a CSS property name and a value, separated by a colon.
- ✓ Multiple CSS declarations are separated with semicolons, and declaration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

CSS Syntax

Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
p {
  color: red;
  text-align: center;
}
</style>
</head>
<body>
<p>Hello World!</p>
<p>These paragraphs are styled with CSS.</p>
</body>
</html>
```



Example Explained

p is a selector in CSS (it points to the HTML element you want to style: <p>).
color is a property, and red is the property value
text-align is a property, and center is the property value

Session :

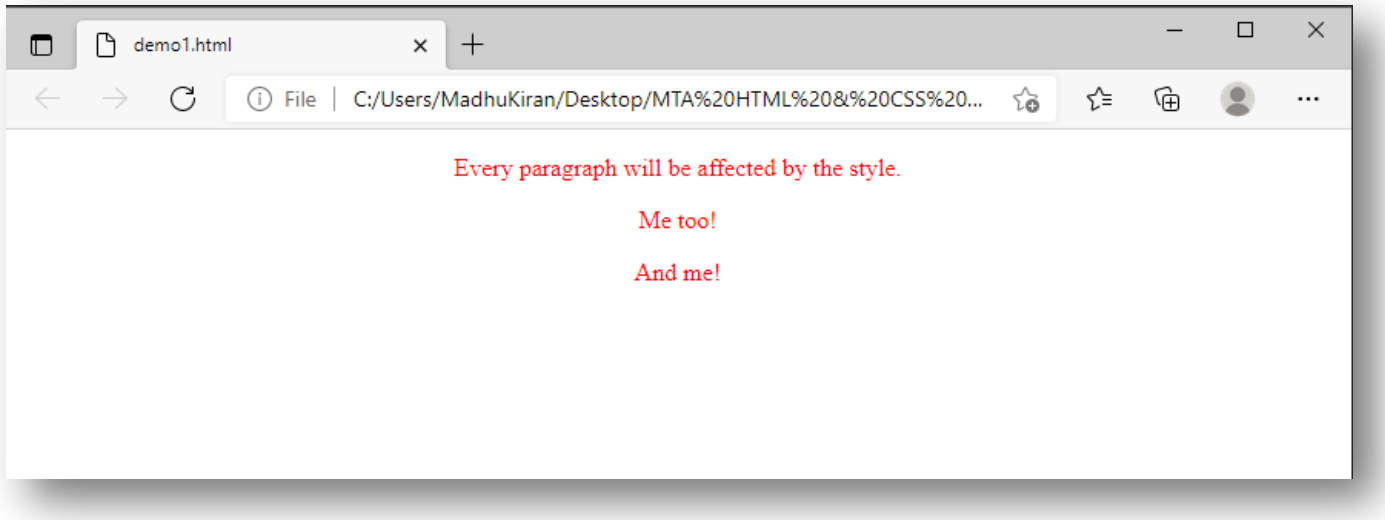
CSS SELECTORS

CSS element Selector

The element selector selects HTML elements based on the element name.

Example :
Here, all <p> elements on the page will be center-aligned, with a red text color:

```
<!DOCTYPE html>
<html>
<head>
<style>
p {
  text-align: center;
  color: red;
}
</style>
</head>
<body>
<p>Every paragraph will be affected by the style.</p>
<p>Me too!</p>
<p>And me!</p>
</body></html>
```

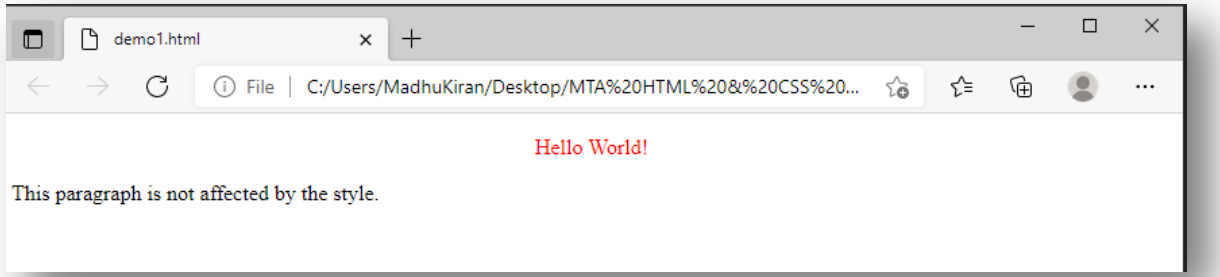


CSS id Selector

- ✓ The id selector uses the id attribute of an HTML element to select a specific element.
- ✓ The id of an element is unique within a page, so the id selector is used to select one unique element!
- ✓ To select an element with a specific id, write a hash (#) character, followed by the id of the element.

Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
#para1 {text-align: center; color: red;}
</style>
</head>
<body>
<p id="para1">Hello World!</p>
<p>This paragraph is not affected by the style.</p>
</body>
</html>
```



CSS class Selector

- ✓ The class selector selects HTML elements with a specific class attribute.
- ✓ To select elements with a specific class, write a period (.) character, followed by the class name.

Example: In this example all HTML elements with class="center" will be red and center-aligned:

```
<!DOCTYPE html>
<html>
<head>
<style>
.center {text-align: center;color: red;}
</style>
</head>
<body>

<h1 class="center">Red and center-aligned heading</h1>
<p class="center">Red and center-aligned paragraph.</p>

</body>
</html>
```

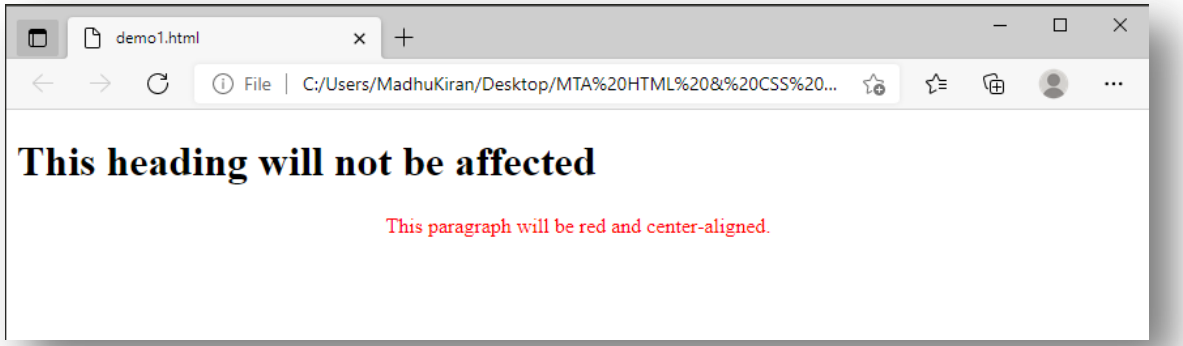
CSS class Selector

You can also specify that only specific HTML elements should be affected by a class.

Example2: In this example only <p> elements with class="center" will be red and center-aligned:

```
<!DOCTYPE html>
<html>
<head>
<style>
p.center {
  text-align: center;
  color: red;
}
</style>
</head>
<body>

<h1 class="center">This heading will not be affected</h1>
<p class="center">This paragraph will be red and center-aligned.</p>
</body>
</html>
```



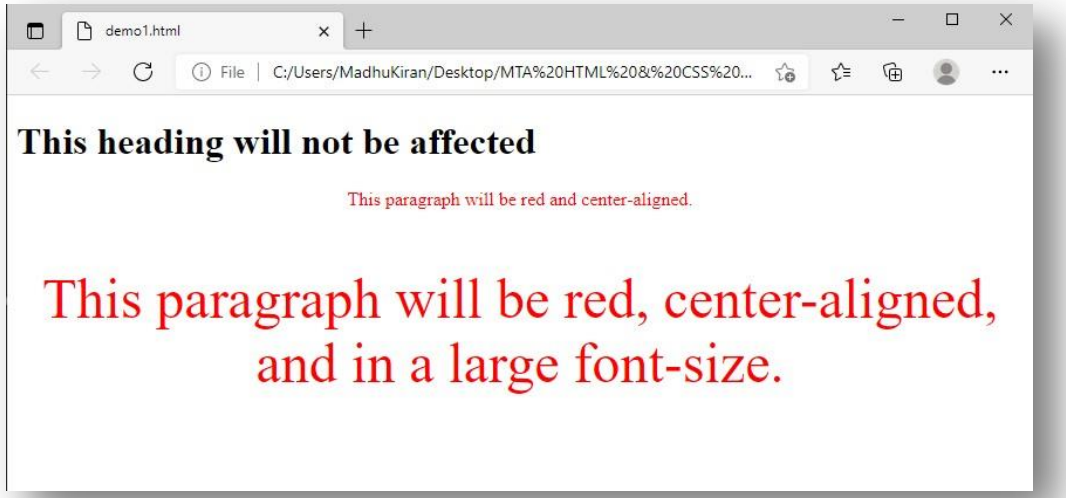
CSS class Selector

HTML elements can also refer to more than one class.

Example3: In this example the <p> element will be styled according to class="center" and to class="large":

```
<!DOCTYPE html>
<html>
<head>
<style>
p.center {text-align: center;color: red;}
p.large {font-size: 300%;}
</style>
</head>
<body>
<h1 class="center">This heading will not be affected</h1>
<p class="center">This paragraph will be red and center-aligned.</p>
<p class="center large">This paragraph will be red, center-aligned, and in a large font-size.</p>

</body>
</html>
```



CSS Universal Selector

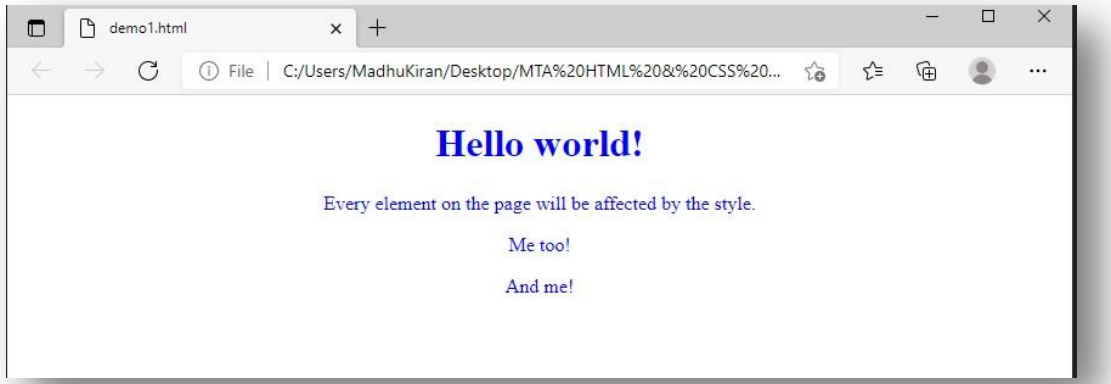
The universal selector (*) selects all HTML elements on the page.

Example: The CSS rule below will affect every HTML element on the page:

```
<!DOCTYPE html>
<html>
<head>
<style>
* {text-align: center; color: blue;}
</style>
</head>
<body>
<h1>Hello world!</h1>

<p>Every element on the page will be affected by the style.</p>
<p id="para1">Me too!</p>
<p>And me!</p>

</body>
</html>
```



CSS Grouping Selector

The grouping selector selects all the HTML elements with the same style definitions.

Look at the following CSS code (the h1, h2, and p elements have the same style definitions):

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

CSS Grouping Selector

It will be better to group the selectors, to minimize the code.
To group selectors, separate each selector with a comma.

Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
h1, h2, p {
  text-align: center;
  color: red;
}
</style>
</head>
<body>
<h1>Hello World!</h1>
<h2>Smaller heading!</h2>
<p>This is a paragraph.</p>
</body></html>
```

Session :

CSS COMBINATORS

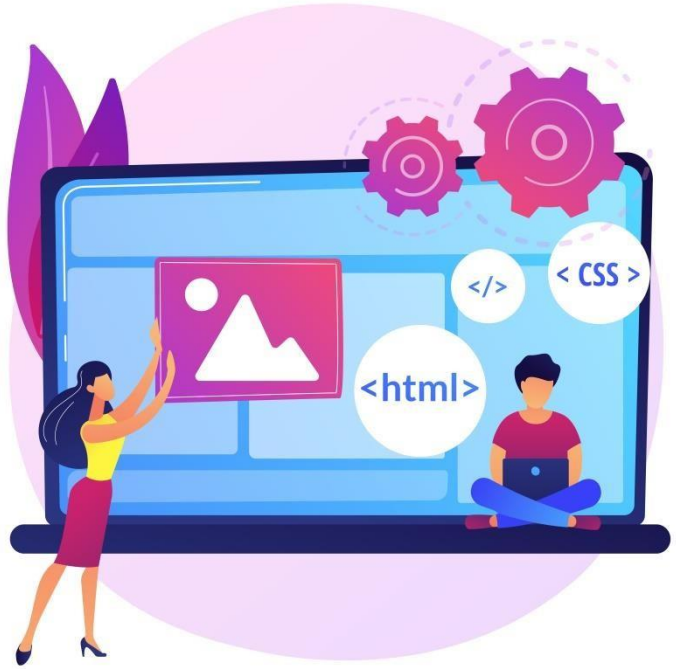
CSS Combinators

A combinator is something that explains the relationship between the selectors.

A CSS selector can contain more than one simple selector. Between the simple selectors, we can include a combinator.

There are four different combinators in CSS:

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



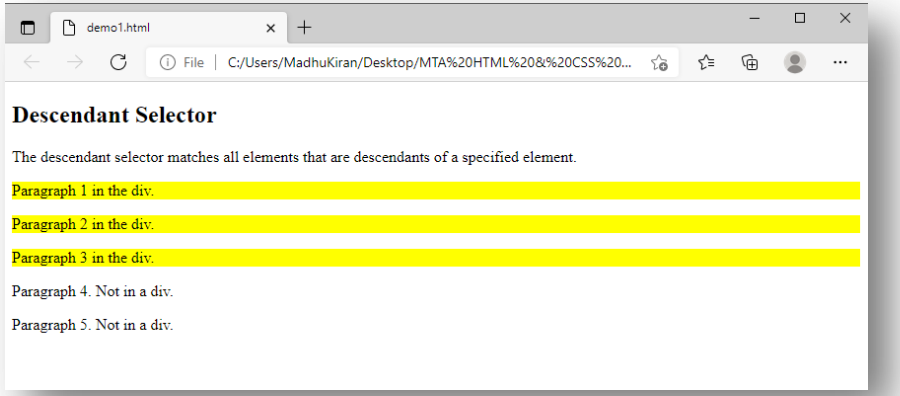
CSS Combinators

Descendant Selector

The descendant selector matches all elements that are descendants of a specified element.

Example: The following example selects all <p> elements inside elements

```
<!DOCTYPE html>
<html>
<head>
<style>
div p {background-color: yellow;}</style>
</head>
<body>
<h2>Descendant Selector</h2>
<p>The descendant selector matches all elements that are descendants of a specified element.</p>
<div>
  <p>Paragraph 1 in the div.</p>
  <p>Paragraph 2 in the div.</p>
  <section><p>Paragraph 3 in the div.</p></section>
</div>
<p>Paragraph 4. Not in a div.</p>
<p>Paragraph 5. Not in a div.</p>
</body></html>
```



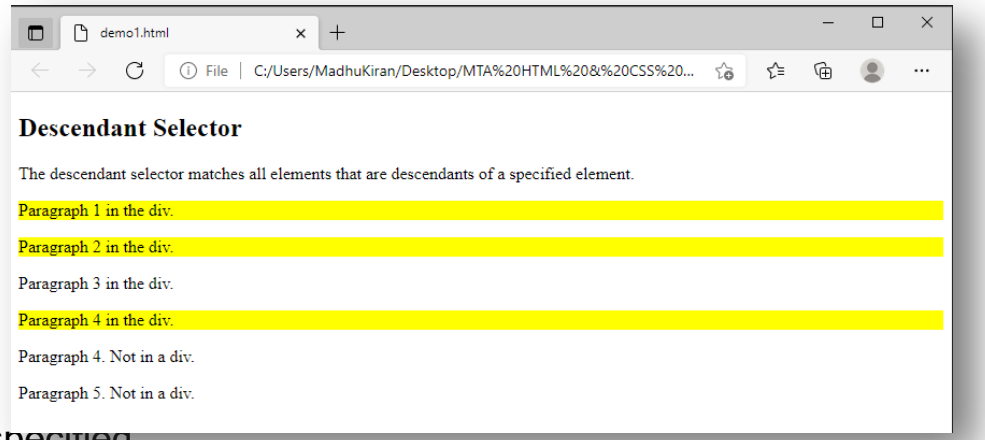
CSS Combinators

Child Selector (>)

The child selector selects all elements that are the children of a specified element.

Example: The following example selects all <p> elements that are children of a element:

```
<!DOCTYPE html>
<html>
<head>
<style>
div > p {background-color: yellow;}</style>
</head>
<body>
<h2>Descendant Selector</h2>
<p>The descendant selector matches all elements that are descendants of a specified element.</p>
<div>
  <p>Paragraph 1 in the div.</p>
  <p>Paragraph 2 in the div.</p>
  <section><p>Paragraph 3 in the div.</p></section>
<p>Paragraph 4 in the div.</p>
</div>
<p>Paragraph 4. Not in a div.</p>
<p>Paragraph 5. Not in a div.</p></body></html>
```



CSS Combinators

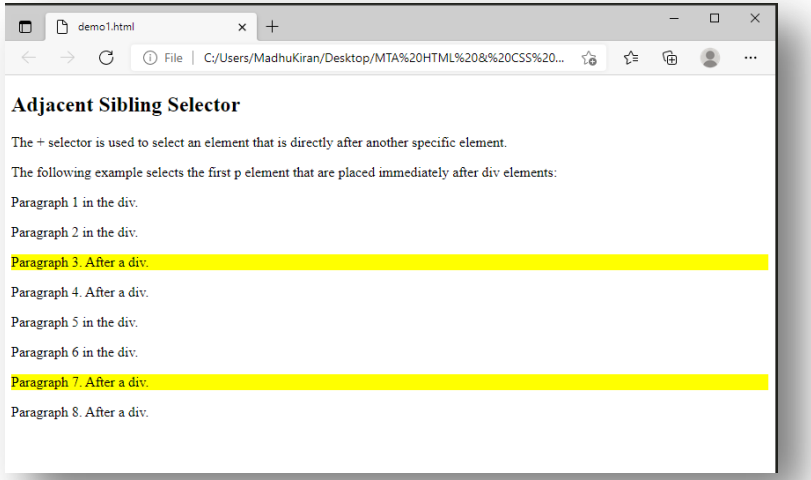
Adjacent Sibling Selector (+)

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".

Example: The following example selects the first <p> element that are placed immediately after elements:

```
<!DOCTYPE html>
<html>
<head>
<style>
div + p {
  background-color: yellow;
}
</style>
</head>
<body>
<h2>Adjacent Sibling Selector</h2>
<p>The + selector is used to select an element that is directly after another specific element.</p>
<p>The following example selects the first p element that are placed immediately after div elements:</p>
<div>
  <p>Paragraph 1 in the div.</p>
  <p>Paragraph 2 in the div.</p>
</div>
<p>Paragraph 3. After a div.</p>
<p>Paragraph 4. After a div.</p>
<div>
  <p>Paragraph 5 in the div.</p>
  <p>Paragraph 6 in the div.</p>
</div>
<p>Paragraph 7. After a div.</p>
<p>Paragraph 8. After a div.</p>
</body></html>
```



CSS Combinators

General Sibling Selector (~)

The general sibling selector selects all elements that are siblings of a specified element.

Example: The following example selects all <p> elements that are siblings of elements:

```
<!DOCTYPE html>
<html>
<head>
<style>
div ~ p {
  background-color: yellow;
}
</style>
</head>
<body>

<h2>General Sibling Selector</h2>
<p>The general sibling selector (~) selects all elements that are siblings of a specified element.</p>

<p>Paragraph 1.</p>

<div>
  <p>Paragraph 2.</p>
</div>

<p>Paragraph 3.</p>
<code>Some code.</code>
<p>Paragraph 4.</p>

</body>
</html>
```