CSS

CSS, which stands for Cascading Style Sheets, is a style sheet language used for describing the presentation and formatting of a document written in HTML or XML. It allows web developers to control the appearance and layout of multiple web pages simultaneously by applying styles to HTML elements.
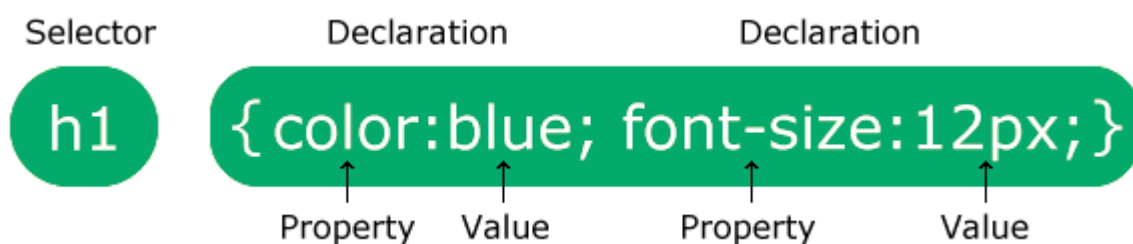
CSS supports responsive design techniques, allowing developers to create layouts that adapt to different screen sizes and devices.CSS helps to design web pages that are visually appealing on desktops, tablets, and smartphones.

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 saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files

CSS Syntax

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

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.

Example

In this example all <p> elements will be center-aligned, with a red text color:

```
<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>
```
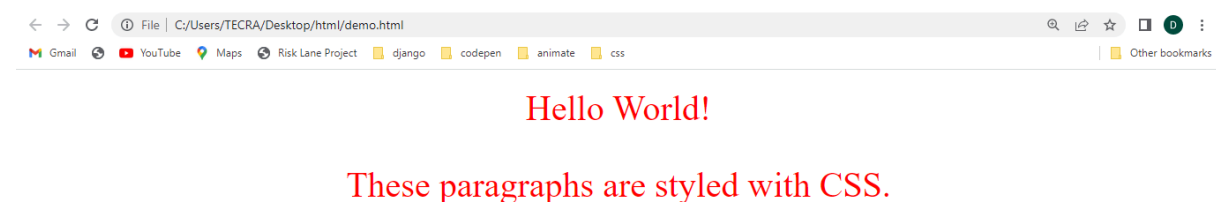
Example Explained

- `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

output

<div style="text-align:center;color:red;">

Hello World!

These paragraphs are styled with CSS.

</div>

How To Add CSS

Three Ways to Insert CSS

There are three ways of inserting a style sheet:

- External CSS
- Internal CSS
- Inline CSS

External CSS

With an external style sheet, you can change the look of an entire website by changing just one file!

Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.

Example

External styles are defined within the <link> element, inside the <head> section of an HTML page:

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

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

</body>
</html>
```

An external style sheet can be written in any text editor, and must be saved with a .css extension.

The external .css file should not contain any HTML tags.

Here is how the "mystyle.css" file looks:

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

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

Save both files.Then double click on html file.

Output

Internal CSS

An internal style sheet may be used if one single HTML page has a unique style.

The internal style is defined inside the <style> element, inside the head section.

Example

Internal styles are defined within the <style> element, inside the <head> section of an HTML page:

```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>
```

Output

Inline CSS

An inline style may be used to apply a unique style for a single element.

To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

Example

Inline styles are defined within the "style" attribute of the relevant element:

```
<html>
<body>

<h1 style="color:blue;text-align:center;">This is a heading</h1>
<p style="color:red;">This is a paragraph.</p>

</body>
</html>
```

Output

CSS Comments

Comments are used to explain the code, and may help when you edit the source code at a later date.

Comments are ignored by browsers.

A CSS comment is placed inside the `<style>` element, and starts with `/*` and ends with `*/`:

Example of single line comment:

```
/* This is a single-line comment */
p {
    color: red;
    }
```

Example of single line comment:

```
/* This is
a multi-line
comment */

p {
    color: red;
    }
```

CSS Selectors

CSS selectors are used to "find" (or select) the HTML elements you want to style.

The CSS element Selector

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

Example

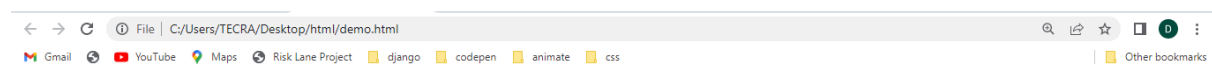Here, all <p> elements on the page will be center-aligned, with a red text color:

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

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

</body>
</html>
```

Output

Every paragraph will be affected by the style.

Me too!

And me!

The 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

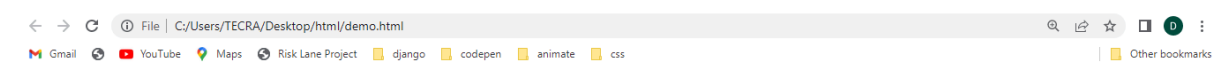The CSS rule below will be applied to the HTML element with id="para1":

```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>
```

Output

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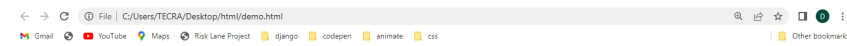
In this example all HTML elements with class="center" will be red and center-aligned:

```
<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>
```

Output

Red and center-aligned heading

Red and center-aligned paragraph.

HTML elements can also refer to more than one class.

```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>
```

The CSS Universal Selector

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

Example

```
<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>

The CSS Grouping Selector

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

It will be better to group the selectors, to minimize the code.

To group selectors, separate each selector with a comma.

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

<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>