Unit-3

Introduction to CSS

Content

1.CSS Overview-What is CSS?

- **C**ascading **S**tyle **S**heets, fondly referred to as **CSS**, is a simply designed language intended to simplify the process of making web pages presentable.
- CSS allows you to apply diffrent styles to web pages. It describes how a webpage should look: it prescribes colors, fonts, spacing, and much more.
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- While html uses tags, css uses rulesets. CSS is easy to learn and understand, but it provides powerful control over the presentation of an HTML document.
- **CSS Saves a Lot of Work!:** The style definitions are normally saved in external .css files. With an external stylesheet file, you can change the look of an entire website by changing just one file!

Why Use CSS?

- CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: lightblue;
}
h1 {
  color: white;
  text-align: center;
}
p {
  font-family: verdana;
  font-size: 20px;
}
</style>
</head>
<body>

<h1>My First CSS Example</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

My First CSS Example

This is a paragraph.
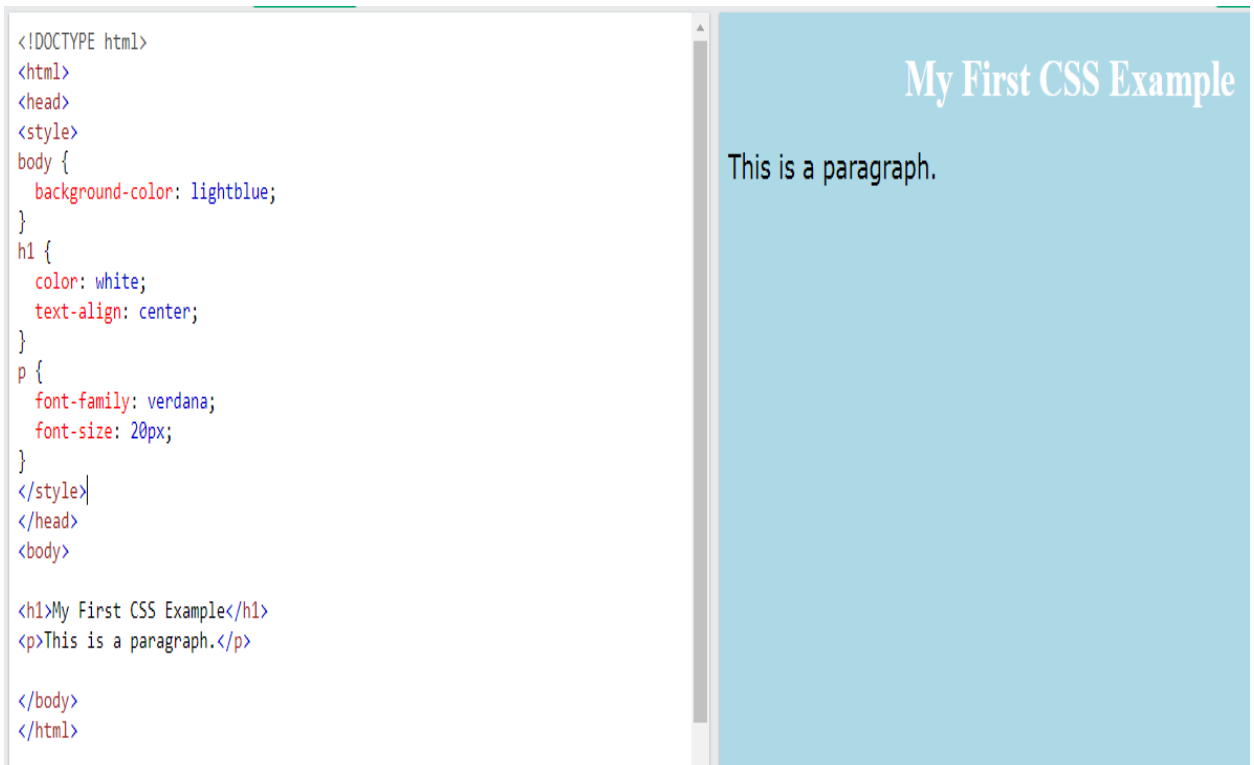
What are the advantages of CSS?

- **CSS saves time:** You can write CSS once and reuse the same sheet in multiple HTML pages.
- **Easy Maintenance**: To make a global change simply change the style, and all elements in all the webpages will be updated automatically.
- **Search Engines:** CSS is considered a clean coding technique, which means search engines won't have to struggle to "read" its content.
- **Superior styles to HTML:** CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.
- **Offline Browsing:** CSS can store web applications locally with the help of an offline cache. Using this we can view offline websites.

CSS versions release years:
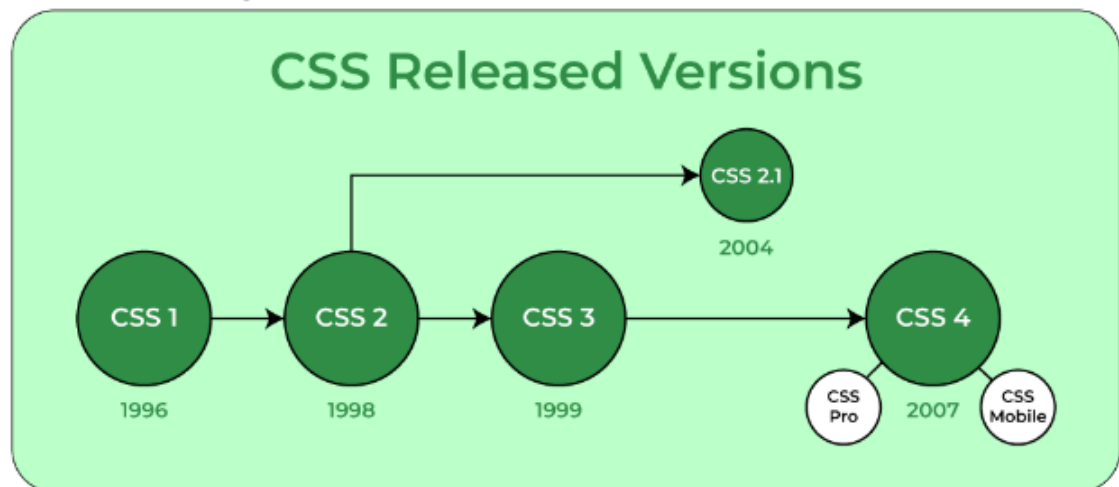
What is the syntax of css?

- **CSSSyntax:**

  CSS comprises style rules that are interpreted by the browser. A style rule set consists of a selector and declaration block.

```
Selector -- h1
Declaration -- {color:blue;font size:12px;}
```

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

```
color is property and blue is value.
font-size is property and 12px is value.
```

Welcome to MSRIT and DEPT of ISE

```html
<html>
<title>Introduction to CSS</title>

<style>
p {
color: blue;
text-align: center;
}
</style>

<body>
<p>Welcome to MSRIT and DEPT of ISE</p>
</body>

</html>
```

CSS Universal Selector

The universal selector (*) selects all HTML elements 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>
</body>
</html>
```

Hello world!

Every element on the page will be affected by the 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:

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

<p>Every paragraph will be affected by the style.</p>

</body>
</html>
```

Every paragraph will be affected by the style.

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":

```
<!DOCTYPE html>
<html>
<head>
<style>
#para1 {
  text-align: center;
  color: red;
}
</style>
</head>
<body>

<p id="para1">Hello World!</p>

</body>
</html>
```

Hello World!

This paragraph is not affected by the style.

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:

```
<!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>
```

Red and center-aligned heading

Red and center-aligned paragraph.

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

Example

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>
```

This heading will not be affected

This paragraph will be red and center-aligned.

HTML elements can also refer to more than one class.

Example

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>
```


The 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):

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

h2 {
  text-align: center;
  color: red;
}

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

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

To group selectors, separate each selector with a comma.

Example

In this example we have grouped the selectors from the code above:

```html
<!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>
```

Hello World!

Smaller heading!

This is a paragraph.

CSS Rules

Describe CSS Rules.

With a type selector, you use an element type (e.g., hr) to match all instances of that element type and then apply specified formatting features to those instances.

For example, the following CSS rule uses a type selector with the hr element type and applies a width of 50% to all the hr elements in the current web page:

<div align="center">

hr {width: 50%;}

</div>

A "width of 50%" means that for each hr element, its horizontal line will span 50% of the width of its enclosing container.

Now for another type of selector—The universal selector. The universal selector uses the same syntax as the type selector, except that instead of specifying an element type, you specify *. The asterisk is a wildcard. In general, a wildcard is something that matches every item in a collection of things.

For CSS selector rules, the * matches every element in a web page's collection of elements.

For Example: Universal selector CSS rule that centers the text for every text-oriented element in the web page:

<div align="center">

* {text-align: center;}

</div>

Even though the rule matches every element, because the property (text-align) deals with text, the rule affects only the elements that contain text.