CASCADING STYLE SHEETS (CSS)

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CLASS DESCRIPTION
In this class, students will explore styling an HTML web page using the basic CSS tools such as

TOTAL CLASS TIME: 150 minutes

CLASS OUTCOME
By the end of this class, students will learn how to CSS add style HTML webpages by adding colours, images on their web page.

INTRODUCTION

What is CSS?
CSS stands for **Cascading Style Sheets.** **Cascading** refers to the way CSS on top of another, **Style Sheets** controls the feel and look of web document. HTML and CSS works hand in hand; HTML sorts out the page structures while CSS defines how HTML elements are displayed on screen, paper, or in other media.

CSS allows you to apply specific styles to specific HTML element. The main benefit of CSS is that it allows you to separate styles from content.

CSS can be added to HTML elements in 3 ways:

- **Inline** - by using the style attribute in HTML elements
- **Internal** - by using a `<style>` element in the `<head>` section
- **External** - by using an external CSS file

The most common way to add CSS, is to keep the styles in separate CSS files. However, here we will use inline and internal styling, because this is easier to demonstrate, and easier for you to try it yourself.

**Tip:** You can learn much more about CSS in our CSS course
Inline CSS

An inline CSS is used to apply a unique style to a single HTML element.

An inline CSS uses the style attribute of an HTML element.

This example sets the text color of the <h1> element to blue:

Example

```html
<h1 style="color:blue;">This is a Blue Heading</h1>
```

Internal CSS

An internal CSS is used to define a style for a single HTML page.

An internal CSS is defined in the <head> section of an HTML page, within a <style> element:

Example

```html
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1   {color: blue;}
p    {color: red;}
</style>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```
An external style sheet is used to define the style for many HTML pages.

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

To use an external style sheet, add a link to it in the <head> section of the HTML page:

**Example**

```html
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.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. The file must not contain any HTML code, and must be saved with a .css extension.

Here is how the "styles.css" looks:

```css
body {
    background-color: powderblue;
}

h1 {
    color: blue;
}
```
CSS Fonts

The CSS color property defines the text color to be used.

The CSS font-family property defines the font to be used.

The CSS font-size property defines the text size to be used.

Example

```html
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
    color: blue;
    font-family: verdana;
    font-size: 300%;
}
p {
    color: red;
    font-family: courier;
    font-size: 160%;
}
</style>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```
CSS Border

The CSS `border` property defines a border around an HTML element:

Example

```html
p {
    border: 1px solid powderblue;
}
```

CSS Padding

The CSS `padding` property defines a padding (space) between the text and the border:

Example

```html
p {
    border: 1px solid powderblue;
    padding: 30px;
}
```

CSS Margin

The CSS `margin` property defines a margin (space) outside the border:

Example

```html
p {
    border: 1px solid powderblue;
    margin: 50px;
}
```
The id Attribute

To define a specific style for one special element, add an id attribute to the element:

```html
<p id="p01">I am different</p>
```

then define a style for the element with the specific id:

```css
#p01 {
    color: blue;
}
```

**Note:** The id of an element should be unique within a page, so the id selector is used to select one unique element!

The class Attribute

To define a style for a special type of elements, add a class attribute to the element:

```html
<p class="error">I am different</p>
```

then define a style for the elements with the specific class:

```css
p.error {
    color: red;
}
```

External References

External style sheets can be referenced with a full URL or with a path relative to the current web page.

This example uses a full URL to link to a style sheet:
**Example**

```html
<link rel="stylesheet" href="https://www.w3schools.com/html/styles.css">
```

This example links to a style sheet located in the html folder on the current web site:

**Example**

```html
<link rel="stylesheet" href="/html/styles.css">
```

This example links to a style sheet located in the same folder as the current page:

**Example**

```html
<link rel="stylesheet" href="styles.css">
```