

**AIM:** Using CSS and CSS3 enhance the web application developed in Assignment #1  
Colour, Background, Font, Table, List, CSS3 selectors, Pseudo classes, and Pseudo elements properties should be used to enhance the web pages.

## **Theory:**

CSS is used in web development to control the layout, appearance, and formatting of HTML documents.

CSS rules consist of a selector and a declaration block. The selector targets HTML elements to which the styles will be applied. CSS selectors target HTML elements based on their type, class, ID, attributes, or relationship with other elements.

CSS can be applied in three ways: inline, internal, and external

Cascade and Specificity: - CSS follows the cascading principle, where multiple style sources (e.g., external CSS, internal CSS, inline styles) can affect an element. The order of precedence is **inline styles > internal styles > external styles**.

### **1. Inline CSS:**

Inline CSS is applied directly within the HTML tags using the "style" attribute.

Disadvantages:

Code repetition: If the same styles are applied to multiple elements, you need to repeat the CSS code for each element, leading to larger HTML files and reduced maintainability.

Difficult to manage: As the project grows, managing and making changes to inline styles becomes challenging and less organized.

Problems faced when using inline CSS:

- Maintenance challenges: As mentioned earlier, maintaining and updating inline CSS across various elements can become cumbersome, especially in larger projects. It can lead to code duplication and decrease maintainability.
- Specificity issues: Inline styles have a higher specificity than external styles, making it harder to override them. This can lead to unintended and hard-to-debug styling conflicts.
- Code clutter: Inline CSS clutters the HTML code, making it less readable and harder to understand, especially for someone not familiar with the codebase.
- Limited reusability: Inline styles cannot be easily reused across different elements or pages, which leads to more work and potential inconsistencies if you want to maintain a consistent design.

## **2. Internal CSS**

Internal CSS, also known as embedded CSS, is a method of applying CSS styles directly within an HTML document. Unlike external CSS, where styles are defined in a separate .css file and linked to the HTML file, internal CSS is placed within the head section of an HTML file using the <style> element.

Internal CSS has a scope limited to the HTML document it is embedded in.

## **3. External CSS:**

External CSS is placed in a separate CSS file and linked to the HTML page using the "link" tag.

Advantages:

Better organization: Styles are separate from HTML, making it easier to manage and maintain.

Code reusability: Styles defined in an external CSS file can be applied to multiple elements throughout the website, reducing redundancy.

Caching: External CSS files can be cached by the browser, leading to faster page loading times for subsequent visits.

Disadvantages:

Requires an additional HTTP request to fetch the external CSS file, which may slightly impact initial loading times (although the benefit of caching usually outweighs this).

May result in a larger number of files to manage if not properly organized.

In general, it's a best practice to use external CSS whenever possible, as it promotes better separation of concerns, easier maintenance, and improved code reusability. Inline CSS should be reserved for exceptional cases where quick, temporary styling adjustments are needed.

## **Conclusion:**

Using CSS, the website developed earlier was styled and CSS concepts like pseudo classes, selectors and pseudo element properties were used. Used CSS in different types i.e. Inline, Internal and External CSS.