Q1. What is a CSS selector? Provide examples of element, class, and ID selectors.

Ans: A CSS selector is a pattern used to select and style specific HTML elements on a webpage.
It tells the browser which elements the CSS rules should apply to.
By using selectors, we can change colors, fonts, sizes, layouts, and other visual styles.

- Element Selector:

    Targets all elements of a specific HTML tag

    ```
    p {
      color: blue;
    }
    ```
    This makes all <p> (paragraph) text blue.

- Class Selector:

    Targets elements that have a specific class attribute
    ```
    . highlight {
      background-color: yellow;
    }
    ```
    This applies a yellow background to any element with class="highlight"

- ID Selector:

    Targets a single unique element with a specific ID attribute.
    ```
    #main-title {
      font-size: 24px;
      color: darkgreen;
    }
    ```

Q2. Explain the concept of CSS specificity. How do conflicts between multiple stylesget resolved?

Ans: CSS Specificity and Conflict Resolution

CSS specificity is a set of rules that the browser uses to determine which style should be applied when multiple CSS rules target the same HTML element.
In simple words, it decides which CSS rule wins when there's a conflict.

Order of Specificity (from lowest to highest):

1. Element selectors (e.g., p, h1) → least specific

2. Class selectors (e.g., .box, .highlight)

3. ID selectors (e.g., #main) → more specific

4. Inline styles (e.g., style="color:red;") → most specific

If two or more selectors have the same specificity, the last one written in the CSS will be applied (this is called the cascade rule).

Q3. What is the difference between internal, external, and inline CSS? Discuss the advantages and disadvantages of each approach.

Ans: Difference Between Internal, External, and Inline CSS :

CSS (Cascading Style Sheets) can be added to HTML in three different ways: inline, internal, and external.
Each method defines how and where the CSS rules are written and applied.

1. Inline CSS

Definition:
Inline CSS is written **directly inside an HTML element's "style" attribute**.

Example:

<p style="color: blue; font-size: 18px;">This is inline CSS.</p>

Advantages:

*   Easy to apply for small changes.

*   Useful for quick testing or styling a single element.

Disadvantages:

*   Difficult to maintain when many elements need styling.

*   Mixes content and design (not good practice).

*   Slows down page updates.

2. Internal CSS

Definition:
Internal CSS is written **inside the <style> tag** within the **<head> section** of an HTML document.

Example:

<head>

 <style>

  p { color: red; font-size: 16px; }

 </style>

</head>

Advantages:

- Styles apply to one specific page only.

- Easier to manage than inline CSS.

- Keeps HTML cleaner than inline styles.

Disadvantages:

- Repetition of the same styles across multiple pages.

- Slower loading if many internal styles are used on several pages.

3. External CSS

Definition:
External CSS is written in a **separate .css file** and linked to the HTML file using the <link> tag.

Example:

<link rel="stylesheet" href="style.css">

Advantages:

- **Best for maintaining large websites.**

- **Styles are reusable across multiple pages.**

- **Makes HTML clean and faster to load (cached by browser).**

Disadvantages:

- **Requires an extra file (won't load properly if the link is broken).**

- **Slightly slower on first page load due to external file fetching.**