Module-3
CSS Selectors and Styling
Theory Assignment 1

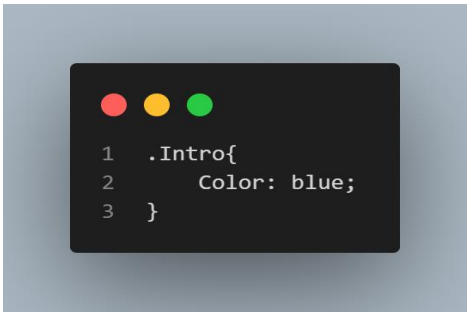
Q.1 What is a CSS Selector? Provide examples of element, class, and ID selectors.

Ans: A CSS Selector is a pattern used to select the HTML elements you want to style. It tells the browser which elements the CSS rules should apply to.

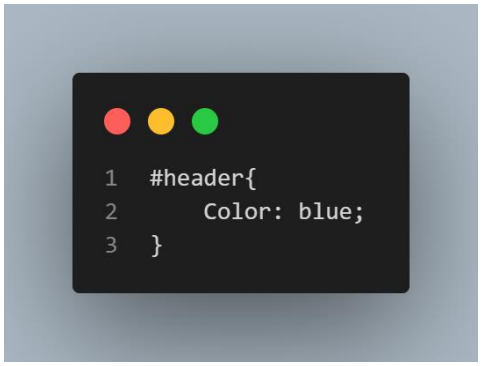
Types of CSS Selectors with Examples:

1. Element Selector: Targets all elements of a specific type.

2. Class Selectors: Targets all elements with a specific class attribute (Start with .dot). This applies styles to any element with class=" Intro".



3. ID Selectors: Targets a single element with a specific ID (starts with a hash#). IDs must be unique in a page. This applies style only to the element with id=" header".



Q.2 Explain the concept of CSS specificity. How do you conflict between multiple styles get resolved?

Ans: CSS specificity is a set of rules that determines which style rule takes precedence when multiple rules apply to the same HTML element.

Specificity Hierarchy Chart:

Selector type	Specificity value
Universal *	0,0,0,0
Element / Tag (p, h1)	0,0,0,1
Class (.class)	0,0,1,0
Attribute ([type = “text”])	0,0,1,0
Pseudo-class (: hover)	0,0,1,0
ID (#id)	0,1,0,0
Inline styles (style=” “)	1,0,0,0

!important	Overrides all (except another !imp with higher specificity)

How conflicts get resolved:
If two or more CSS rules target the same element, the rule with higher specificity wins. If specificity is equal, the last declared rule in the CSS take precedence.

```css
p {
 color: red;
 font-size: 24px;
}
.text{
color: blue;
}
#intro {color: aqua;}
```

```html
<p class="text" id="intro">text</p>
```

The Final color will be **Red** because:

P selector has 0,0,0,1
.text class has 0,0,1,0 and
#intro ID has 0,1,0,0 has highest specificity

Q.3 What is the difference between internal, external, and inline CSS? Discuss the advantages and disadvantages of each approach.

Ans:

1) Inline CSS: CSS directly written inside an html tag.
ex: ** Yash Panchal **

ADVANTAGES:

- Quick and easy for small changes.
- Good for testing or one-time fixes.

DISADVANTAGES:

- Hard to manage if you have lots of elements.
- Makes your HTML messy.
- Not reusable – you have to repeat the style again and again.

2) <u>Internal CSS:</u> CSS is written inside the <style> tag in the <head> section of the html file.

```
<head>
  <style>
    p {
      color: blue;
    }
  </style>
</head>
```

ADVANTAGES:

- Keeps all the CSS for one page in one place.
- Easier to manage than Inline CSS.

DISADVANTAGES:

- Only works for that one page.
- Not ideal for large websites with many pages.
- Slows things down if you repeat styles across multiple pages.

3) <u>External CSS:</u> CSS is written in separate .css file, and you link it in your HTML.

```
<head>
  <link rel="stylesheet" href="style.css">
</head>
```

ADVANTAGES:

- Clean and organized – HTML and CSS are kept separate.
- Reuse the same CSS file across many pages.
- Faster for the browser after the first load.
- Best for larger or multi-page websites.

DISADVANTAGES:

- Needs an extra file, so the page might load a bit slower the first time.
- If the CSS file doesn’t load, styles won’t show.