Batch 2 - CSS Basics, Selectors, Specificity & Box Model

1) What is CSS?

- CSS = Cascading Style Sheets

- Defines how HTML elements look on a webpage (style, layout, colors, fonts).

- HTML = structure, CSS = presentation.

Why use CSS?

- Better design (colors, fonts, sizes)

- Responsive layout (mobile friendly)

- Reusable code (external CSS)

- Separation of content (HTML) and design (CSS)

2) Types of CSS

- Inline CSS: written inside HTML tag (style attribute)

- Internal CSS: written in <style> tag in <head>

- External CSS: written in separate .css file (best practice)

Example:

p { color: blue; font-size: 18px; }

3) What is Stylesheet?

- A collection of CSS rules.

- Each rule = selector + property + value.

4) Cascading in CSS

- Means resolving conflicts when multiple rules apply.

- Priority order: Inline > ID > Class > Element.

- Latest rule wins if same specificity.

5) Selectors in CSS

- Element Selector: p { color: red; }

- Class Selector: .highlight { color: green; }

- ID Selector: #main { color: blue; }

- Group Selector: h1, h2 { color: purple; }

- Universal Selector: * { margin: 0; }

- Descendant Selector: div p { color: orange; }

- Pseudo-class: a:hover { color: pink; }

- Pseudo-element: p::first-letter { font-size: 30px; }

6) Specificity in CSS

- Defines which rule has more priority.

- Inline styles: 1000

- ID selectors: 100

- Classes, attributes, pseudo-classes: 10

- Elements, pseudo-elements: 1

Example:

p { color: black; } (1)

.highlight { color: red;} (10)

#special { color: blue; } (100)

Green wins

7) !important in CSS

- Overrides specificity rules.

- Example: p { color: red !important; }

8) CSS Box Model

- Every element is a box.

Parts: Content, Padding, Border, Margin

Example:

```
.box {
  width: 200px;
  height: 100px;
  background-color: lightblue;
  padding: 20px;         /* inside spacing */
  border: 5px solid blue;/* border thickness */
  margin: 30px;          /* outside spacing */
}
```

Difference between Padding & Margin:

- Padding = inside element (content to border)

- Margin = outside element (space between elements)

9) Interview Ready Points

- CSS separates structure and style.

- Types: Inline, Internal, External (external best).

- Specificity priority: Inline > ID > Class > Element.

- Box model defines how element size and spacing works.

- Cascading means conflict resolution between rules.