CSS fundamentals

[1.]What is CSS? How does it differ from HTML?

ANS. CSS (Cascading Style Sheets)

is a stylesheet language used to control the presentation and layout of web pages.

It defines how HTML elements should be displayed, including colors, fonts, spacing, positioning, and responsiveness.

How HTML and CSS Work Together:

HTML provides the structure (e.g., a heading, paragraph, or button).

CSS enhances the design (e.g., makes the heading red, adds a background, or animates the button).

Why Use CSS Instead of Styling in HTML?:

Separation of Concerns – Keeps structure (HTML) and design (CSS) separate for cleaner code. Reusability – One CSS file can style multiple HTML pages.

Efficiency – Changes (e.g., font size) apply globally, not per element. Advanced Control – Enables animations, responsive layouts (Flexbox/Grid), and themes.

Conclusion

HTML = Skeleton (content & structure).

CSS = Skin & clothes (visual styling).

Together, they create well-structured, visually appealing websites

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[2.] Explain the three ways to apply CSS to a web page.

Ans. CSS can be added to an HTML document in three main ways:

Inline CSS

Internal (Embedded) CSS

External CSS

NOTE : Each method has its use cases, advantages, and disadvantages

1. Inline CSS

a) Applies styles directly inside an HTML element using the style attribute

b)When to Use:

Quick fixes or testing.

Overriding other styles in specific cases.

c)Example:

<p style="color: red; font-size: 16px;">This is a red paragraph.</p>

<button style="background: blue; color: white;">Click Me</button>

2. Internal (Embedded) CSS

a)Defines styles inside the <style> tag within the HTML <head>

b)When to Use:

Small projects or single-page websites.

When external CSS is unnecessary.

c)Example:

<!DOCTYPE html>

<html>

<head>

<style>

p {

color: green;

font-family: Arial;

}

button {

background: black;

color: white;

}

</style>

</head>

<body>

<p>This paragraph is green.</p>

<button>Submit</button>

</body>

</html>

3. External CSS

a)Links to a separate .css file using the <link> tag.

b)index.html

<html>

<head>

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

</head>

<body>

<p>This paragraph is styled externally.</p>

<button>Click Me</button>

</body>

</html>

b)style.css

p {

color: purple;

font-weight: bold;

}

button {

background: orange;

padding: 10px;

}

Best Practices

✔ Use External CSS for most projects (best for scalability).

✔ Use Internal CSS for small projects or quick prototypes.

✔ Avoid Inline CSS unless necessary (e.g., dynamic JavaScript changes).

CSS Priority (Cascading Order)

If multiple styles conflict:

Inline CSS (highest priority)

Internal CSS

External CSS

Browser Default Styes

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[3.] What are CSS selectors? List and describe the different types of selectors.

Ans. CSS Selectors:

CSS selectors are patterns used to select and style HTML elements on a web page.

They are a fundamental part of CSS (Cascading Style Sheets)

that determine which elements the styling rules will apply to.

Types of CSS Selectors

Basic Selectors

a)Universal Selector (\*)

Selects all elements on the page

Example: \* { margin: 0; } (removes margin from all elements)

b)Type Selector (Element Selector)

Selects all elements of a given type

Example: p { color: blue; } (styles all paragraph elements)

c)Class Selector (.class)

Selects elements with a specific class attribute

Example: .warning { color: red; } (styles all elements with class="warning")

d)ID Selector (#id)

Selects a single element with a specific id attribute

Example: #header { background: gray; } (styles element with id="header")

e)Attribute Selector ([attribute])

Selects elements based on attributes or attribute values

Examples:

[target] (elements with target attribute)

[type="text"] (elements with type="text")

[href^="https"] (elements with href starting with "https")

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[4.] What is the box model in CSS? Explain its components.

Ans. The CSS Box Model:

The CSS box model is a fundamental concept that describes how elements are structured and spaced in a web page. Every HTML element is represented as a rectangular box, and the box model defines how these boxes are sized, spaced, and layered.

Components of the Box Model:

Content

The actual content of the element (text, images, etc.)

Sized by width and height properties

Example: width: 300px; height: 200px;

Padding

The space between the content and the border

Clears an area around the content (inside the border)

Controlled by padding property (and padding-top, padding-right, etc.)

Example: padding: 10px; (10px on all sides)

Border

A line that surrounds the padding and content

Styled with border properties (width, style, color)

Example: border: 2px solid black;

Margin

The space outside the border (between this element and others)

Creates space between elements

Controlled by margin property (and margin-top, margin-right, etc.)

Example: margin: 20px; (20px on all sides)

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