**Assignment-2**

**Que:1. Explain the difference between inline, internal, and external CSS.**

Ans:1. Three types of CSS—inline, internal, and external—are different ways to apply styles to HTML elements.

**1. Inline CSS:**

This is when styles applied directly to an HTML element using the style attribute.

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

**Pros:**

* Quick to apply for small codes
* Useful for testing

**Cons:**

* Clutters the HTML
* Hard to maintain in larger projects
* Reusability is poor

**2. Internal CSS**

Here, styles are placed inside a <style> tag within the <head> section of the HTML document.

Ex: <head>

<style>

p {

color: blue;

font-size: 18px;

}

</style>

</head>

**Pros:**

* Better organization than inline
* Keeps styles in one place for a single page

**Cons:**

* Still not great for larger sites
* Doesn’t promote reuse across multiple pages

**3. External CSS**

This involves linking an external .css file to your HTML using the <link> tag in the <head>.

Ex:

<head>

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

</head>

**Pros:**

* Best for maintainability
* Reusable across many pages
* Cleaner HTML

**Cons:**

* Requires an extra HTTP request
* Styles won’t load if the file is missing or the path is wrong

**Que:2. Describe CSS selectors and list the types of selectors (e.g., element, class, id)**

**Ans:2:** CSS selectors are patterns used to select and style HTML elements. They help you target specific parts of your webpage so you can apply styles like colors, fonts, spacing, and layout rules.

**Here’s the main types of CSS selectors:**

1. **Element Selector**: Targets all instances of a specific HTML element.

Example: p {color: blue;} — styles all <p> tags.

1. **Class Selector**: Targets elements with a specific class attribute. Example: .highlight {background-color: yellow;}
2. **ID Selector**: Targets a single element with a specific id attribute. Example: #header {font-size: 24px;}
3. **Universal Selector**: Targets all elements.

Example: \* {margin: 0;}

1. **Group Selector**: Combines multiple selectors to apply the same styles.

Example: h1, h2, h3 {font-family: Arial;}

1. **Descendant Selector**: Targets elements inside other elements.

Example: div p {color: gray;} — targets <p>s inside <div>s.

1. **Child Selector**: Targets direct children.

Example: ul > li {list-style: none;}

1. **Attribute Selector**: Targets elements based on attributes.

Example: input[type="text"] {border: 1px solid;}

1. **Pseudo-class Selector**: Targets elements based on their state or position.

Example: a:hover{color: red;}

1. **Pseudo-element Selector**: Targets parts of elements. Example: p: first-line {font-weight: bold;}

**Que:3: Discuss the CSS box model and its components.**

**Ans:3:** The CSS box model is the foundation of layout and design on the web. Each HTML element is essentially a rectangular box, and the box model describes how these boxes are structured and how they interact with each other.

Here are the **four main components** of the CSS box model:

 **Content**: This is the actual stuff inside the element—like text, images, or other media.

 **Padding**: This space surrounds the content inside the box. It creates breathing room between the content and the border. Padding is part of the box, so it pushes the border outward.

 **Border**: This wraps around the padding (if any) and the content. You can style it with width, color, and type (solid, dashed, etc.).

 **Margin**: This is the outermost layer. It creates space between the element’s border and neighboring elements, helping with layout and separation.

One important note: by default, the total size of an element is the sum of the content, padding, and border, but you can change this behavior using box-sizing: border-box; which makes the border and padding part of the defined width and height.