**CSS Introduction**

CSS (Cascading Style Sheets) is a language used to style HTML elements. It controls the presentation of content on web pages, including layout, colors, fonts, and more. By using CSS, you can create visually appealing and consistent web designs.

**Types of Style Sheets**

There are three main ways to apply CSS styles:

1. **External Style Sheet:**
   * A separate .css file linked to your HTML document using the <link> tag.
   * This is the most common and recommended approach for larger projects, as it allows for better organization and reusability of styles.
2. **Internal Style Sheet:**
   * Styles embedded directly within the <head> section of your HTML document using the <style> tag.
   * Suitable for smaller projects or when you want to apply styles to a specific section of your page.
3. **Inline Style:**
   * Styles applied directly to individual HTML elements using the style attribute.
   * While convenient for quick styling changes, it's generally not recommended for larger projects due to its lack of organization and maintainability.

**CSS Syntax**

CSS rules consist of three main parts:

1. **Selector:** Specifies the HTML element(s) to which the styles will be applied.
2. **Declaration Block:** Contains one or more declarations, each consisting of a property and its corresponding value.
3. **Property:** A CSS attribute that determines the style of an element.
4. **Value:** The specific value assigned to a property.

**Example:**

/\* Selector \*/

body {

/\* Declaration Block \*/

background-color: #f0f0f0;

font-family: Arial, sans-serif;

}

**CSS Selectors**

Selectors are used to target specific HTML elements. Here are some common types of selectors:

* **Element Selector:** Targets elements based on their tag name (e.g., p, h1, div).
* **Class Selector:** Targets elements with a specific class attribute (e.g., .my-class).
* **ID Selector:** Targets a single element with a unique ID attribute (e.g., #my-id).
* **Attribute Selector:** Targets elements based on their attributes (e.g., [href], [type="button"]).

**Combinator Selectors**

* **Descendant Selector:**
  + div p: Selects all paragraph elements that are descendants of a div element.
* **Child Selector:**
  + div > p: Selects all paragraph elements that are direct children of a div element.
* **Adjacent Sibling Selector:**
  + p + span: Selects the first span element that follows a paragraph element.
* **General Sibling Selector:**
  + p ~ span: Selects all span elements that follow a paragraph element.

**Pseudo-Class Selectors**

* **:hover:** Selects an element when the mouse pointer is hovering over it.
* **:active:** Selects an element when it is activated (e.g., clicked or pressed).
* **:focus:** Selects an element when it has keyboard focus.
* **:link:** Selects an unvisited hyperlink.
* **:visited:** Selects a visited hyperlink.

**Pseudo-Element Selectors**

* **::before:** Inserts content before the content of an element.
* **::after:** Inserts content after the content of an element.
* **::first-letter:** Selects the first letter of an element.
* **::first-line:** Selects the first line of an element.

**Attribute Selectors**

* **[attribute]:** Selects elements with a specified attribute.
* **[attribute="value"]:** Selects elements with a specified attribute and value.
* **[attribute^="value"]:** Selects elements with an attribute that starts with a specified value.
* **[attribute$="value"]:** Selects elements with an attribute that ends with a specified value.
* **[attribute\*="value"]:** Selects elements with an attribute that contains a specified value.

**CSS Basic Properties**

* **color:** Sets the color of text or elements.
* **font-family:** Specifies the font to be used.
* **font-size:** Sets the size of the font.
* **background-color:** Sets the background color of an element.
* **border:** Creates a border around an element.
* **margin:** Sets the space outside an element.
* **padding:** Sets the space inside an element.
* **display:** Controls the layout of an element.
* **position:** Sets the positioning of an element.