CSS

CSS stands for Cascading Style Sheets. It's a style sheet language used to describe the presentation of a document written in HTML or XML, including colors, layouts, and fonts.
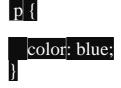
Importance of CSS:

1. **Separation of Concerns:** CSS separates the structure of a document (HTML) from its presentation, enhancing maintainability and making it easier to update styles across multiple pages.

2. **Consistency:** CSS allows you to apply consistent styling across a website, ensuring uniformity in design and layout.

3. **Flexibility:** CSS provides a high degree of control over the visual appearance of web pages, enabling developers to create custom designs and responsive layouts.

4. **Accessibility:** Properly structured and styled HTML with CSS enhances accessibility by providing clear visual cues and readable content.

CSS Selectors:

CSS selectors are patterns used to select and style elements in an HTML document. They allow you to target specific elements or groups of elements to apply styles. Here are some common CSS selectors:

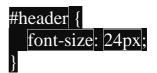1. **Element Selector**: Targets HTML elements by their tag name.

   Example:

   ```
   p {
       color: blue;
   }
   ```

   This example targets all <p> elements and sets their text color to blue.

2. **ID Selector:** Targets elements with a specific ID attribute.

   Example:

   ```
   #header {
       font-size: 24px;
   }
   ```
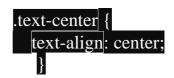
   This targets an element with the ID "header" and sets its font size to 24 pixels.

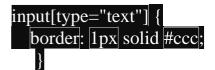3. **Class Selector**: Targets elements with a specific class attribute.

   Example:

```css
.text-center {
    text-align: center;
}
```

This targets all elements with the class "text-center" and sets their text alignment to center.

4. **Attribute Selector**: Targets elements based on their attribute values

Example:

```css
input[type="text"] {
    border: 1px solid #ccc;
}
```

This targets all <input> elements with the attribute type="text" and sets their border to a 1-pixel solid color #ccc.

5. **Descendant Selector:** Targets elements that are descendants of a specific parent.

Example:

```css
ul li {
    list-style-type: square;
}
```

This targets all <li> elements that are descendants of <ul> elements and sets their list style to square.

6. **Child Selector: Targets elements that are direct children of a specific parent.**
   Example:

```css
ul > li {
    font-weight: bold;
}
```

This targets all <li> elements that are direct children of <ul> elements and sets their font weight to bold.

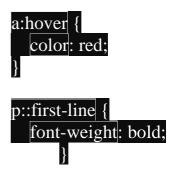7. **Universal Selector:** Targets all elements in the document.

   Example:

```css
* {
    margin: 0;
    padding: 0;
}
```

This targets all elements and sets their margin and padding to zero.

8. **Pseudo-classes and Pseudo-elements:** Targets elements based on their state or position in the document.

Example:

```css
a:hover {
    color: red;
}
```

```css
p::first-line {
    font-weight: bold;
}
```

This targets hyperlinks (<a>) when hovered over and changes their color to red. It also targets the first line of every <p> element and sets its font weight to bold.

These are just some of the basic CSS selectors. CSS offers many more selectors and features for styling elements, allowing developers to create visually appealing and responsive web pages.