Training Report - Web Development Training

Day 9: CSS Selectors and Properties

Date: 17/6/24

Summary of the Day: On the ninth day of our web development training, we delved deeper into CSS by learning about selectors and properties. Understanding how to select specific HTML elements and apply styles to them is crucial for effective web design. This session provided a comprehensive overview of various CSS selectors and a range of CSS properties used to style elements.

Detailed Notes:

1. CSS Selectors: Selectors are patterns used to select the elements you want to style.

- **Basic Selectors:**
    - **Element Selector:** Selects all elements of a given type.

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

    - **Class Selector:** Selects elements with a specific class attribute.

```
.my-class {
  font-size: 14px;
}
```

    - **ID Selector:** Selects an element with a specific ID attribute.

```
#my-id {
  text-align: center;
}
```

- **Attribute Selectors:** Select elements based on an attribute or attribute value.

```
a[href] {
  color: green;
}
a[target="_blank"] {
  font-weight: bold;}
```

- **Combinator Selectors:**

o **Descendant Selector:** Selects all elements that are descendants of a specified element.

```
div p {
  color: red;
}
```

o **Child Selector:** Selects all elements that are direct children of a specified element.

```
div > p {
  font-size: 18px;
}
```

o **Adjacent Sibling Selector:** Selects an element that is the next sibling of a specified element.

```
h1 + p {
  margin-top: 20px;
}
```

o **General Sibling Selector:** Selects all siblings of a specified element.

```
h1 ~ p {
  color: gray;
}
```

- **Pseudo-class Selectors:** Apply styles to elements based on their state.

```
a:hover {
  color: red;
}
input:focus {
  border: 2px solid blue;
}
```

- **Pseudo-element Selectors:** Apply styles to a part of an element.

```
p::first-line {
  font-weight: bold;
}
p::before {
  content: "Note: ";
  font-weight: bold;}
```

2. CSS Properties: Properties define the styles applied to the selected elements.

- **Text Properties:**
  - `color`: Sets the color of the text.

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

  - `font-size`: Sets the size of the font.

```
p {
  font-size: 16px;
}
```

  - `text-align`: Aligns the text inside an element.

```
h1 {
  text-align: center;
}
```

- **Box Model Properties:**
  - `width` and `height`: Set the width and height of an element.

```
div {
  width: 100px;
  height: 50px;
}
```

  - `padding`: Adds space inside the element, around the content.

```
div {
  padding: 10px;
}
```

  - `margin`: Adds space outside the element, around the border.

```
div {
  margin: 20px;
}
```

  - `border`: Sets the border around an element.

```
div {
  border: 1px solid black;
}
```

- **Background Properties:**
  - `background-color`: Sets the background color of an element.

```
body {
  background-color: #f0f0f0;
```

```
}
```

   o `background-image`: Sets a background image for an element.

```
div {
  background-image: url('image.jpg');
}
```

- **Display and Positioning Properties:**
  - `display`: Specifies the display behavior of an element.

```
.hidden {
  display: none;
}
```

   o `position`: Specifies the positioning method used for an element (static, relative, absolute, fixed, sticky).

```
.absolute {
  position: absolute;
  top: 50px;
  left: 50px;
}
```

- **Flexbox Properties:**
  - `display: flex`: Defines a flex container and enables a flex context for all its direct children.

```
.container {
  display: flex;
}
```

   o `justify-content`: Aligns flex items along the main axis.

```
.container {
  justify-content: center;
}
```

   o `align-items`: Aligns flex items along the cross axis.

```
.container {
  align-items: center;}
```

Reflection: Today's session on CSS selectors and properties was extremely insightful. Understanding how to select and style elements effectively using various selectors allows for more precise and efficient CSS coding. The properties we learned about will help me control the layout, appearance of webpage.