Task 13-Variables (Gemini)

**CSS Variables (Custom Properties): A Dynamic Approach to Styling**

CSS variables, also known as custom properties, are a powerful feature in CSS that allows you to define reusable values that can be used throughout your stylesheet. This dynamic approach to styling simplifies maintenance and promotes consistency across your website.

**How They Work:**

1. **Declaration:**
   * You declare a CSS variable using the --variable-name syntax.
   * The value assigned to the variable can be any valid CSS value, including colors, fonts, lengths, and more.
   * Variables are typically declared in the root selector (:root) to make them globally accessible.
2. **Usage:**
   * To use a CSS variable within a property value, you reference it using the var() function.
   * The var() function takes the variable name as an argument.

**Example:**

:root {

  --primary-color: #007bff;

  --secondary-color: #6c757d;

  --font-family: Arial, sans-serif;

  --font-size: 16px;

}

/\* Example usage \*/

body {

  color: var(--primary-color);

  font-family: var(--font-family);

  font-size: var(--font-size);

}

h1 {

  color: var(--secondary-color);

  font-size: 2em;

}

button {

  background-color: var(--primary-color);

  color: white;

  padding: 10px 20px;

  border: none;

  border-radius: 5px;

  cursor: pointer;

}

**Changing Variable Values and Their Effects:**

By modifying the values of CSS variables in the :root selector, you can easily change the overall look and feel of your website:

:root {

  --primary-color: #ff0000; /\* Change primary color to red \*/

  /\* Other variables remain the same \*/

}

This simple change will affect all elements that use the --primary-color variable, resulting in a visually different website. For example, the background color of the button and the text color of the body will now be red.

**Benefits of Using CSS Variables:**

* **Consistency:** Ensures consistent styling throughout your website.
* **Maintainability:** Simplifies updates and theme changes.
* **Flexibility:** Allows for dynamic theme switching and customization.
* **Efficiency:** Reduces code redundancy and improves performance.

By leveraging CSS variables, you can create more flexible, maintainable, and visually appealing websites.