Task 3- Sass Basics (Gemini)

**Sass (Syntactically Awesome Stylesheets)**

Sass is a powerful CSS preprocessor that extends the functionality of standard CSS by introducing features like variables, nested rules, mixins, and partial files. These features make your CSS more organized, maintainable, and reusable.

**How Sass Differs from Regular CSS:**

1. **Variables:**
   * Sass allows you to define variables to store reusable values.
   * This helps maintain consistency and makes it easier to update styles globally.
2. **Nested Rules:**
   * You can nest CSS rules within each other to create hierarchical structures.
   * This improves code readability and reduces repetition.
3. **Mixins:**
   * Mixins are reusable blocks of CSS code that can be included in other rules.
   * This helps to reduce redundancy and promote modularity.
4. **Partials:**
   * Sass allows you to break down your stylesheets into smaller, more manageable partial files.
   * This improves organization and makes it easier to manage large projects.
5. **Imports:**
   * You can import partial files into your main Sass file to include their styles.
   * This helps to modularize your code and keep your main stylesheet clean.

**Simple Sass Example:**

**style.scss:**

// Variables

$primary-color: #333;

// Mixin

@mixin button-style {

  background-color: $primary-color;

  padding: 10px 20px;

  border-radius: 5px;

}

// Nested Rules

.container {

  background-color: #f0f0f0;

  padding: 20px;

  .header {

    font-size: 24px;

    font-weight: bold;

  }

  .button {

    @include button-style;

  }

}

// Import a partial

@import 'partials/colors';

partials/colors.scss:

$secondary-color: #666;

Compiled CSS:

.container {

  background-color: #f0f0f0;

  padding: 20px;

}

.container .header {

  font-size: 24px;

  font-weight: bold;

}

.container .button {

  background-color: #333;

  padding: 10px 20px;

  border-radius: 5px;

}

**Key Differences from Standard CSS:**

1. **Variable Usage:** The $primary-color variable is used to set the background color of the button.
2. **Nested Rules:** The .header and .button rules are nested within the .container rule.
3. **Mixin Usage:** The button-style mixin is included in the .button rule.
4. **Partial Import:** The colors.scss partial is imported into the main style.scss file.

By using Sass, you can write more concise, maintainable, and reusable CSS code.