**CSS Preprocessors: A Primer**

**What is a CSS Preprocessor?**

A CSS preprocessor is a programming language that extends the functionality of CSS. It allows you to write CSS in a more efficient and maintainable way by introducing features like variables, mixins, nesting, and more. Preprocessed CSS code is then compiled into standard CSS that can be understood by browsers.

**Popular CSS Preprocessors:**

* **Sass (Syntactically Awesome Stylesheets):** A mature and widely used preprocessor with features like variables, nesting, mixins, and functions.
* **Less (Leaner CSS):** A similar preprocessor to Sass, offering many of the same features but with a slightly different syntax.
* **Stylus:** A more expressive preprocessor with features like conditionals, loops, and embedded Ruby-like scripting.

**Advantages of Using a CSS Preprocessor:**

* **Improved Maintainability:** CSS preprocessors make your CSS code more organized and easier to read and maintain, especially for large projects.
* **Time-Saving:** Features like variables and mixins can help you write CSS code more efficiently and reduce repetitive tasks.
* **Enhanced Functionality:** Preprocessors often provide additional features like nesting, operators, and functions that are not available in standard CSS.
* **Better Cross-Browser Compatibility:** Some preprocessors can help you write CSS that is more compatible with different browsers.

**Code Example (Sass):**

SCSS

$primary-color: #007bff;

$font-size: 18px;

body {

color: $primary-color;

font-size: $font-size;

}

.button {

background-color: $primary-color;

color: white;

padding: 10px 20px;

border: none;

cursor: pointer;

}