

The Less logo, featuring the word "less" in a white, lowercase, sans-serif font, enclosed within a pair of white curly braces. It is set against a solid purple rectangular background.

{less}

CSS Pre-Processors

Less, Sass,
More SCSS

The Canva logo, consisting of the word "Canva" in a white, cursive script font, positioned inside a circular gradient that transitions from teal on the left to purple on the right.

Canva

Written by
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Presented by
Julia Mitchelmore

The Sass logo, featuring the word "Sass" in a white, elegant, cursive script font, set against a solid purple rectangular background.

Sass

Q

**Is CSS a
programming
language?**



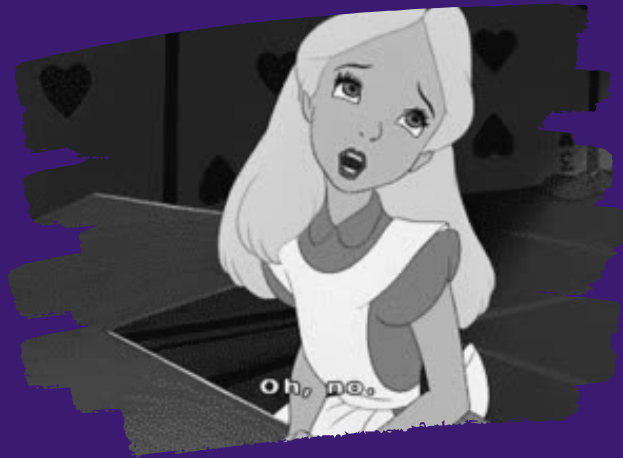
A

**Probably
not.**



CSS Standards

Q



**Can I please have
functions in CSS?**

A

No. Because:

- CSS needs to be *fast*
- We already have JavaScript

CSS Standards

Q

**My project is
getting big! What
else can I do?**

A

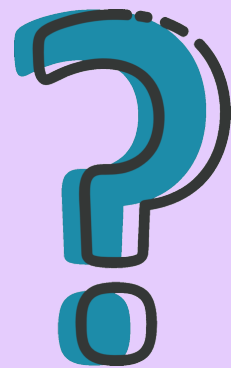


**Get by with CSS variables
and calc()**

or

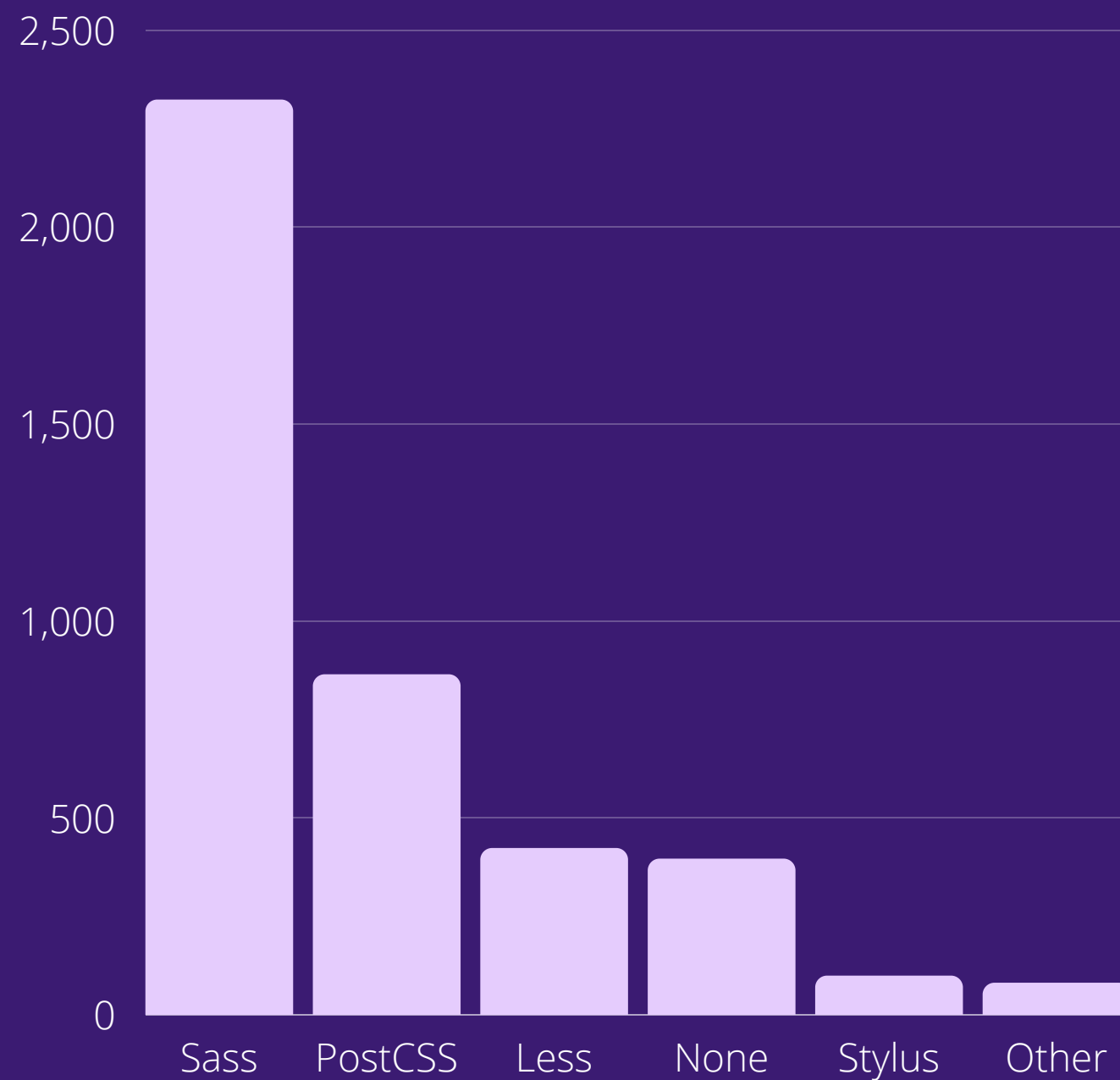
Use a CSS Pre-Processor

Pre-Processor



`{...}`
CSS

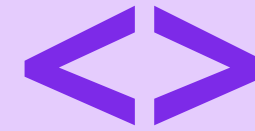
Popular Choices



<https://ashleynolan.co.uk/blog/frontend-tooling-survey-2019-results>



Sass & SCSS



Quick Intro



Sass



```
$font-stack: Helvetica, sans-serif  
$primary-color: #333  
body
```

```
  font: 100% $font-stack  
  color: $primary-color
```

SCSS

```
$font-stack: Helvetica, sans-serif;  
$primary-color: #333;  
body {  
  font: 100% $font-stack;  
  color: $primary-color;  
}
```

Partials & Imports

```
// _base.scss
$font-stack: Helvetica, sans-serif;
$primary-color: #333;
$secondary-color: white;
body {
  font: 100% $font-stack;
  color: $primary-color;
}
```

```
// styles.scss
@use 'base';
.main {
  background: base.$primary-color;
  color: base.$secondary-color;
}
```



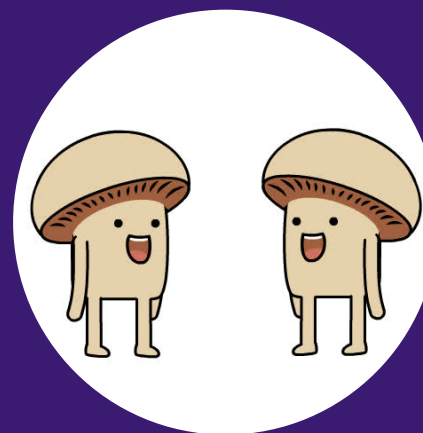
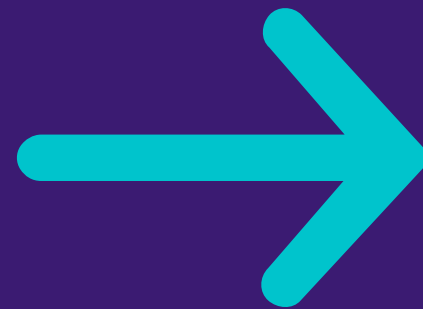
```
// styles.css
body {
  font: 100% Helvetica, sans-serif;
  color: #333;
}
.main {
  background: #333;
  color: white;
}
```

Nesting

```
header {  
  h1 {  
    font-weight: bold;  
  }  
  
  nav {  
    ul {  
      list-style: none;  
    }  
    li {  
      display: inline-block;  
    }  
  }  
}
```

```
<body>  
  <header>  
    <nav>  
      <ul>  
        <li><a href="/">Home</a> </li>  
        <li><a href="/about">About</a></li>  
        <li><a href="/help">Help</a></li>  
      </ul>  
    </nav>  
  </header>
```

...



```
header h1 {  
  font-weight: bold;  
}  
header nav ul {  
  list-style: none;  
}  
header nav li {  
  display: inline-block;  
}
```

```
@mixin retinaOnly() {  
  @media only screen and (-webkit-min-device-pixel-ratio: 2),  
    only screen and (min-resolution: 192dpi) {  
    @content;  
  }  
}
```

Mixins



```
$grid: 16px;  
math.div($grid * 12, 7)  
→ 27.428571428571429px
```

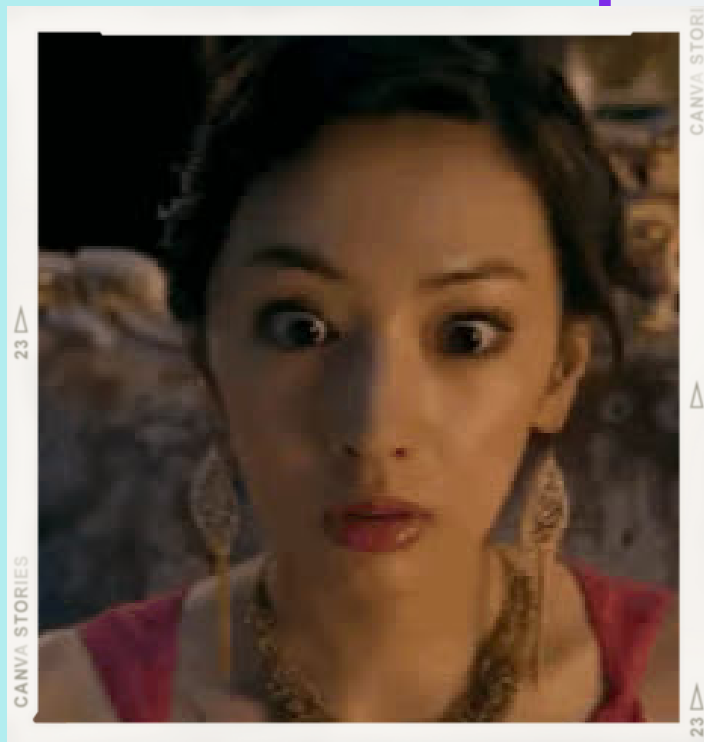
```
color.scale(#998099, $alpha: -40%)  
→ rgba(153, 128, 153, 0.6)
```

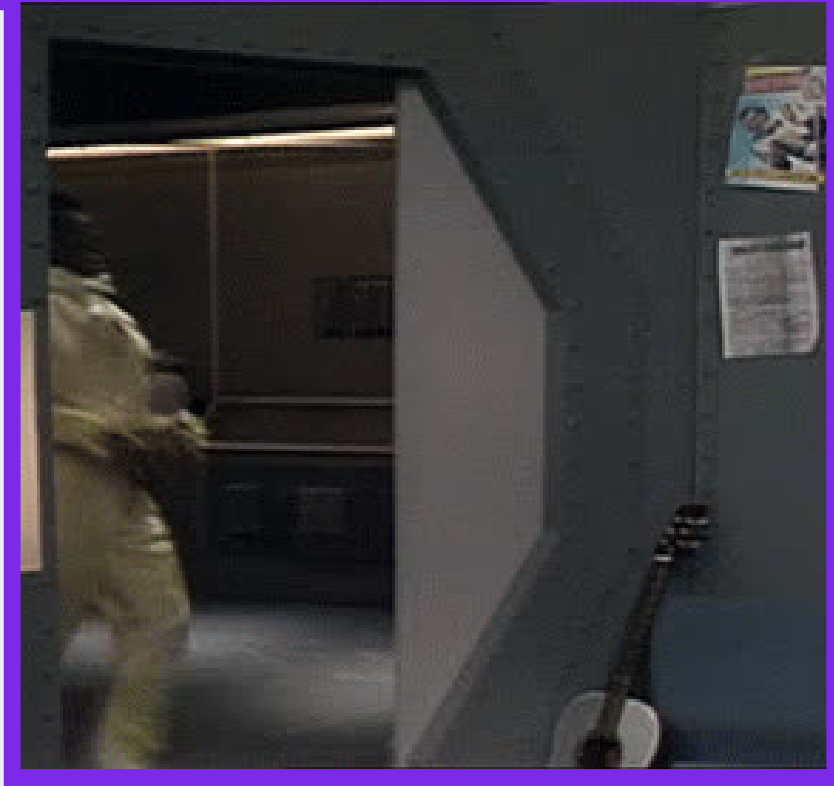


Maths

But why?

- Often included for free!
- Easy decomposition
- Extra features - but you don't have to use them
- Even more advanced capabilities
 - Parent selectors
 - @if, @for, @while and even @function





Go forth and be stylish!

