



ANGULAR
ARCHITECTS

SCSS

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SCSS

- what is SASS/SCSS?
- getting started
- SCSS features

What Is SASS/SCSS?

- SASS → syntactically awesome style sheets
 - comes in two flavors SASS & SCSS → we prefer SCSS
- SCSS is a superset of CSS (just like TypeScript > JS)
- isn't understood by the browser, but compiled to CSS

Installing SASS

- command line
 - or via compass
- npm (not the most performant)
- choco (Windows)
- brew (Mac)
- or just use it within Angular – out of the box 😊

SCSS Features

- nested rules
- variables (still needed?)
- partials
- extends
- mixins (custom snippets)
- operators
- helper functions
- conditions & loops

SCSS Nesting (***the*** feature!)

```
nav {  
  ul {  
    li {  
      a {  
        color: deepskyblue;  
  
        &:hover {  
          color: lightskyblue;  
          text-decoration: none;  
        }  
      }  
    }  
  }  
}
```

SCSS Variables

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

SCSS Partial (important!)

```
// _base.scss
$font-stack: Helvetica, sans-serif;
$primary-color: #333;

body {
  font: 100% $font-stack;
  color: $primary-color;
}
```

```
// styles.scss
@use 'base';

.inverse {
  background-color: base.$primary-color;
  color: white;
}
```


SCSS Extends (important!)

```
%message-shared {  
  border: 1px solid #ccc;  
  padding: 10px;  
  color: #333;  
}
```

```
.success {  
  @extend %message-shared;  
  border-color: green;  
}  
  
.error {  
  @extend %message-shared;  
  border-color: red;  
}  
  
.warning {  
  @extend %message-shared;  
  border-color: yellow;  
}
```

SCSS Mixins (important!)

```
@mixin theme($theme: DarkGray) {  
  background: $theme;  
  box-shadow: 0 0 1px rgba($theme, .25);  
  color: #fff;  
}  
  
.info {  
  @include theme;  
}  
  
.alert {  
  @include theme($theme: DarkRed);  
}  
  
.success {  
  @include theme($theme: DarkGreen);  
}
```

SCSS Operators

```
@use "sass:math";

.container {
  display: flex;
}

article[role="main"] {
  width: math.div(600px, 960px) * 100%;
}

aside[role="complementary"] {
  width: math.div(300px, 960px) * 100%;
  margin-left: auto;
}
```

SCSS Helper Functions

- `hsla($hue, $saturation, $lightness, $alpha: 1);`
- `rgba($red, $green, $blue, $alpha: 1);`
- `lighten($red, 10%);`
- `darken($red, 10%);`
- <https://sass-lang.com/documentation/modules/>

SCSS Conditions & Loops

```
@mixin theme-colors($light-theme: true)
{
  @if $light-theme {
    background-color: $light-background;
    color: $light-text;
  } @else {
    background-color: $dark-background;
    color: $dark-text;
  }
}
```

```
$base-color: #036;

@for $i from 1 through 3 {
  ul:nth-child(3n + #{ $i }) {
    background-color: lighten($base-color, $i * 5%);
  }
}
```

Best Practices

- Use SCSS **if you write CSS!**
 - To nest (i.e. group) your styles
 - To structure your global styles (thru partials)
 - To use extends and mixins
- Use custom properties for globals
- Use inline `//` comments
- Organize nested selectors consistently

SCSS

- what is SASS/SCSS?
- ways to use SCSS
- SCSS features

The background is an abstract composition. The upper portion features a bright purple sky with soft, white, cloud-like textures. Below the sky, a series of dark, thin lines radiate from a central point on the horizon, creating a perspective effect that suggests a floor or a series of architectural planes. The lower portion of the image is a solid, deep red color. The overall effect is one of depth and architectural structure.

Questions?