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Mobile Web Development

SCSS

CSS Preprocessors

SASS is a CSS preprocessor, which extends CSS with features like variables and browser prefixes.

- ❖ Installation instructions are at <http://sass-lang.com/install>. Many of you will install Ruby as part of this step.

Why Use SCSS?

Why Use SCSS?

- ❖ Variables
- ❖ Themes
- ❖ Utility: Inheritance, Comments, Functions
- ❖ Bourbon, Compass and similar utility libraries that build on SCSS

Theming with SCSS

- ❖ Using variables to build a visual theme in SCSS (a time-saving and often requested skill)
- ❖ Using functions (mixins) to generate additional colors from a base color
- ❖ Parameterization of colors, borders, depth, images, logos.
- ❖ Can result in 10,000+ line CSS files, eg. in Sencha Touch.

Usage

Usage

```
// install sass
```

```
gem install sass
```

```
// compile input.scss into output.css
```

```
sass --watch input.scss:output.css
```

```
// compile and compress whole directories
```

```
sass --watch scss:css --style compressed
```


SCSS Basics

Importing Files

// include scss from another file

@import './colors/color-list.scss';

Variables

```
$boxWidth: 60px;
```

```
div {  
    height: $boxWidth;  
    width: $boxWidth;  
    background-color: lighten(green, 10%);  
}
```

Nesting

```
.mediumBox {  
    h1 {  
        color: red;  
    }  
}
```

// is like writing

```
.mediumBox h1 {  
    color: red;  
}
```

Extending CSS Classes

```
.coolBorder {  
    border: 3px solid black;  
}
```

```
.mediumBox {  
    color: red;  
  
    @extend .coolBorder;  
}
```

Functions (“Mixins”)

```
@mixin themedHeading($baseColor) {  
    color: $baseColor;  
    background-color: transparentize($baseColor, 0.9);  
    border: 1px solid  
    darken(transparentize($baseColor, 0.9), 10%);  
}  
  
h1 {  
    @include themedHeading(#a41298);  
}
```

Utility Functions

```
$boxWidth: 60px;
```

```
div {
```

```
    height: $boxWidth;
```

```
    width: $boxWidth;
```

```
    margin: 10px * 2;
```

```
    background-color: lighten(green, 10%);
```

```
}
```

Adding to Selectors

```
button {  
    &.small {  
        margin: 5px;  
    }  
}
```

// is like writing

```
button.small {  
    margin: 5px;  
}
```

Adding to Selectors Example

```
button {  
    margin: 10px;  
    color: red;  
  
    &.small {  
        margin: 5px;  
    }  
}
```

Inline Comments

```
@include background-image(linear-gradient(to top left, white, #0044cc));
```

// becomes the following in the resulting CSS

```
background-image: -webkit-gradient(linear, 100% 100%, 0% 0%, color-stop(0%, #ffffff), color-stop(100%, #0044cc));
```

```
background-image: -moz-linear-gradient(bottom, #ffffff, #0044cc);
```

```
background-image: -webkit-linear-gradient(bottom, #ffffff, #0044cc);
```

```
background-image: linear-gradient(to top left, #ffffff, #0044cc);
```

Cross-Browser Prefixes

// This uses background-image() from the Compass library

```
@include background-image(linear-gradient(to top left, white, #0044cc));
```

// becomes the following in the resulting CSS

```
background-image: -webkit-gradient(linear, 100% 100%, 0% 0%, color-stop(0%, #ffffff), color-stop(100%, #0044cc));
```

```
background-image: -moz-linear-gradient(bottom, #ffffff, #0044cc);
```

```
background-image: -webkit-linear-gradient(bottom, #ffffff, #0044cc);
```

```
background-image: linear-gradient(to top left, #ffffff, #0044cc);
```

Reset CSS

- ❖ Tries to remove rendering differences in browsers (eg lists, body margins)
- ❖ Removes all varying styling from html tags.
- ❖ Also called “normalize.css”
- ❖ Available in Compass:
`@import "compass/reset";`

Inline Images

```
background-image: inline-image ( 'myIcon.png' ) ;  
  
// Using Compass, this will compile to:  
// (Please note the curved quotes above are  
// from Keynote and will break SCSS.)  
  
background-image:url (  
VCBmY8AGgBLgfg4EEvjkgThl0DsiEsShH8DcSkQM2KThOE  
1QMyHSxKEGSXI9N5x8grsRm5ysgdsbm2pNALIfNn9OBmB1  
bAAEAjTeww9HNXe8AAKHEKJHKASJHDDDJASDKJAH4534I=  
) ;
```

Inline Images

- ❖ Why: Reduce net connections
- ❖ How: Write Base64 encoded image data directly into CSS instead of URLs
- ❖ Useful for small images
- ❖ Easier than managing sprites
- ❖ Note that sprites are faster from a performance point of view
- ❖ More info at <https://www.alwaystwisted.com/articles/2013-11-23-sass-and-base64-images> and in the Compass docs at <http://compass-style.org/reference/compass/helpers/inline-data/>

Btw

CSS Variables

- ❖ CSS now has support for variables in some browsers, using the “--” for variable names.

<https://web-crunch.com/know-css-variables/>