



SASS - Future of Stylesheet

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A Quick Question – Why are you here?

- I don't know and I think you don't know either
 - May be to understand the FET part
 - May be your bosses has nominated you
 - Understand the complexity faced by engineers on FET
-
- Who has heard of SASS?
 - Who has used SASS?

Agenda

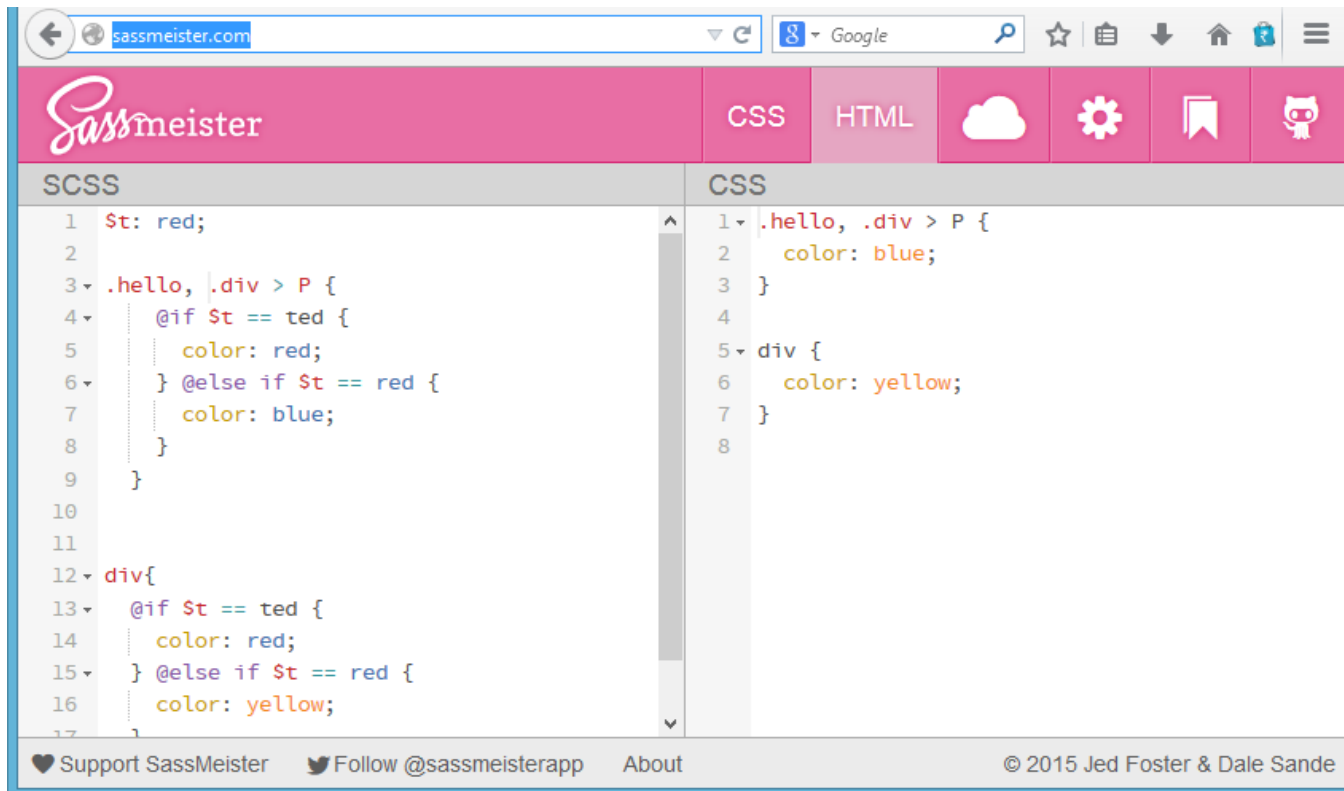
- ~~Pizza & Beer~~
- CSS Today
- Introduction to SASS
- Features of SASS
- How to use SASS
- Small and lovely demo



Live Testing

You can test out SASS during this presentation!

Use: <http://sassmeister.com/>



The screenshot shows the Sassmeister website interface. The browser address bar displays 'sassmeister.com'. The website has a pink header with the 'Sassmeister' logo and navigation tabs for 'CSS', 'HTML', and icons for cloud, settings, and social media. The main content area is split into two panels: 'SCSS' on the left and 'CSS' on the right. The SCSS panel contains the following code:

```
1 $t: red;
2
3 .hello, .div > P {
4   @if $t == ted {
5     color: red;
6   } @else if $t == red {
7     color: blue;
8   }
9 }
10
11
12 div{
13   @if $t == ted {
14     color: red;
15   } @else if $t == red {
16     color: yellow;
17   }
18 }
```

The CSS panel shows the compiled output:

```
1 .hello, .div > P {
2   color: blue;
3 }
4
5 div {
6   color: yellow;
7 }
8
```

The footer of the website includes social media links for 'Support SassMeister', 'Follow @sassmeisterapp', and 'About', along with the copyright notice '© 2015 Jed Foster & Dale Sande'.

CSS Today

```
.tx-srfeuserregister-pil {
    padding:15px;
}

*+html input {margin: 5px 0px;}

*+html form .floatright input {margin: -5px 0px;}

*+html #suchbox input {margin: 0px 0px;}

*+html input.mf-login {height: 20px; width: 190px;}

*+html input.amount {height: 19px;}

/*hack damit bilder untereinander im IE mit 5px abstand erscheinen*/
body div.csc-textpic div.csc-textpic-imagewrap .csc-textpic-image {margin-bottom: 0px; padding-bottom:5px;}

.tx-ttproducts-pil-wrap2 {
    padding-left:15px;
    padding-right:15px;
}

* {
    font-family: Arial;
    color:#000000;
    font-size: 12px;
    line-height: 16px;
    background-color: transparent;
    padding: 0px;
    margin: 0px;
}

.tx-newloginbox-pil {
    padding-bottom:15px;
}

.tx-indexedsearch {
    padding:15px;
}

.csc-sitemap{
    padding-top:0px;
}

.csc-textpic{
    height:auto;
}
```

Mixed up formatting

CSS Today

```
#inhalt .menu_container .csc-menu-7 ul{
    list-style-image:none;
    list-style-position:outside;
    list-style-type:none;
    text-align:left;
    margin:0px 0px 15px 15px;
    padding:0px 0px 0px 0px;
}

#inhalt .menu_container .csc-menu-7 ul li{
    list-style-image:none;
    list-style-position:outside;
    list-style-type:none;
    background-image:url(gfx/pfeil_dot_li.gif);
    background-repeat:no-repeat;
    text-align:left;
    margin:0px 0px 0px 0px;
    padding:0px 0px 0px 15px;
}

/* ... */

.tx-flseositemap-p11 ul{
    list-style-image:none;
    list-style-position:outside;
    list-style-type:none;
    text-align:left;
    margin:0px 0px 15px 15px;
    padding:0px 0px 0px 0px;
}

.tx-flseositemap-p11 ul li{
    list-style-image:none;
    list-style-position:outside;
    list-style-type:none;
    background-image:url(gfx/pfeil_dot_li.gif);
    background-repeat:no-repeat;
    text-align:left;
    margin:0px 0px 0px 0px;
    padding:0px 0px 0px 15px;
}

/* ... */

#inhaltrechts .list_container .tx-flseositemap-p11 ul{
    list-style-image:none;
    list-style-position:outside;
```

Duplication

CSS Today

```
#inhaltmitbild{
  float: left;
  width: 507px;
  min-height:400px;
  height:auto;
  padding:0;
  margin:0px 11px 0px 0px;
  border-bottom:solid 1px #c7c7c7;
}

#inhalt{
  float: left;
  border-left:solid 1px #c7c7c7;
  border-top:solid 1px #c7c7c7;
  border-right:solid 1px #c7c7c7;
  width:505px;
  min-height:400px;
  height:auto;
  padding-bottom:30px;
}

#inhalt h1{
  padding:3px 0px 0px 15px;
  margin:0px;
  min-height:20px;
  font-size: 14px;
  line-height: 19px;
  color: #000000;
  background: url(gfx/bg_headline.gif);
  background-color:#F7F7F7;
  background-repeat:repeat-x;
  border-bottom:solid 1px #c7c7c7;
}
```

Mixed up colors and dimensions

CSS Today

```
.tx-srfeuserregister-pil {  
    padding:15px;  
}  
  
*+html input {margin: 5px 0px;}  
  
*+html form .floatright input {margin: -5px 0px;}  
  
*+html #suchbox input {margin: 0px 0px;}  
  
*+html input.mf-login {height: 20px; width: 190px;}  
  
*+html input.amount {height: 19px;}  
  
/*hack damit bilder untereinander im IE mit 5px abstand erscheinen*/  
body div.csc-textpic div.csc-textpic-imagewrap .csc-textpic-image {margin-bottom: 0px; padding-bottom:5px;}  
  
.tx-ttproducts-pil-wrap2 {  
    padding-left:15px;  
    padding-right:15px;  
}  
  
* {  
    font-family: Arial;  
    color:#000000;  
    font-size: 12px;  
    line-height: 16px;  
    background-color: transparent;  
    padding: 0px;  
    margin: 0px;  
}  
  
.tx-newloginbox-pil {  
    padding-bottom:15px;  
}  
  
.tx-indexedsearch {  
    padding:15px;  
}  
  
.csc-sitemap{  
    padding-top:0px;  
}  
  
.csc-textpic{  
    height:auto;  
}
```

Long selectors

CSS Today

```
@import "rte.css";
@import "layermenu.css";

@import "shop.css";
@import "produktabsz.css";
@import "themenabsz.css";

@import "news.css";
@import "contentslide.css";
@import "seitenauflistung.css";

p {
    padding-bottom: 0.5em;
}

.csc-textpic-clear {
    display:none;
}

.tx-srfeuserregister-pil {
    padding:15px;
}

*+html input {margin: 5px 0px;}
*+html form .floatright input {margin: -5px 0px;}
*+html #suchbox input {margin: 0px 0px;}
*+html input.mf-login {height: 20px; width: 190px;}
*+html input.amount {height: 19px;}

/*hack damit bilder untereinander im IE mit 5px abstand erscheinen*/
body div.csc-textpic div.csc-textpic-imagewrap .csc-textpic-image {margin-bottom: 0px; padding-bottom:5px;}

.tx-ttproducts-pil-wrap2 {
    padding-left:15px;
    padding-right:15px;
}
```

Imports are slow!

CSS Today

The Good, The Bad & The Cry for Help...!!!

- Frustration
- Vendor specific prefixes
- Replacing color values in a project
- Copying and pasting style again and again
- Media queries
- 3D Animations

Actually features are now becoming nightmare of developers life!

What you could have done to improve it?

- Make it intelligent
- Make it scalable
- Make it re-usable

So how to do it?



Intro to SASS (Style with attitude)

History

Syntactically **A**wesome **S**tylesheets

- Firstly developed in 2007
- Born in the Ruby and Rails Community

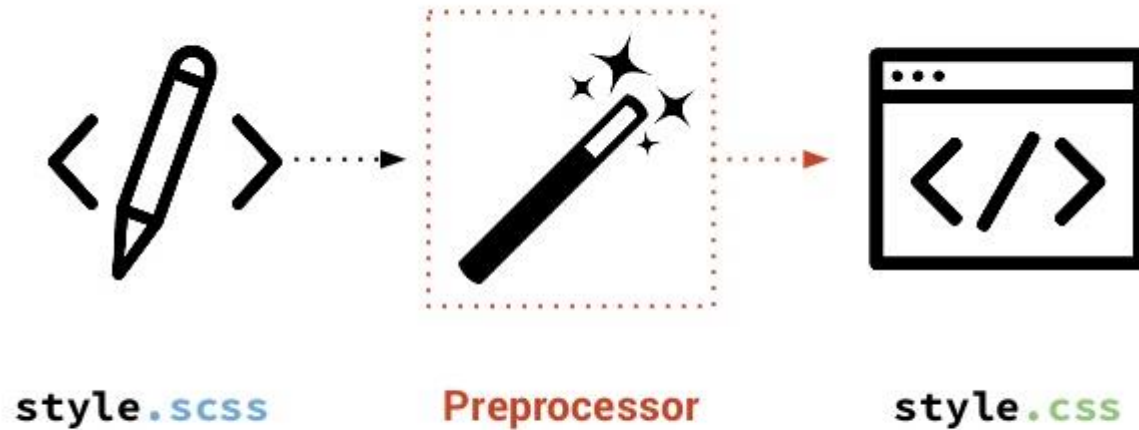
SASS has two main parts

- Scripting language
- Preprocessor for CSS

SASS is a system that extends CSS and can make your CSS more efficient and organized.



How does it works?



.SCSS (SassyCSS)

SCSS follows conventions of CSS

- Superset of CSS syntax and uses brackets and semicolons.
- SCSS Stylesheets get an **.scss** extension.
- Most commonly used.

```
1 body #main .value {  
2   color: #eee;  
3  
4 a.link {  
5     color: #101010;  
6     text-decoration: none;  
7   }  
8  
9 }
```


.SASS (The Indented Syntax)

SASS focuses on indentation and short-hand.

- Instead of brackets and semicolons, it uses indentation of lines to specify blocks of code.
- SassScript stylesheets get a `.sass` extension.
- Older syntax.

A project would normally only use one of the two syntaxes.

```
1 ▾ body #main .value
2   color: #eee
3 ▾ a.link
4   color: #101010
5   text-decoration: none
```

Tools Used - (sass-lang.com)

- Compilation tools
 - SASS, Compass – Requires Ruby
- SASS/Compass GUI tools
 - Scout (open source)
 - Koala (open source)
 - Compass.app (USD 10)

Features / Enhancements

SASS has 5 primary features

- Variables
- Nesting
- Mixins
- Partials
- Inheritance

Variables

```
#menu {  
  ...  
  border-left: solid 1px #c7c7c7;  
  border-top: solid 1px #c7c7c7;  
  border-right: solid 1px #c7c7c7;  
}  
#rootline {  
  ...  
  background-color: #c7c7c7;  
}  
#content {  
  ...  
  border-left: solid 1px #c7c7c7;  
  border-top: solid 1px #c7c7c7;  
  border-right: solid 1px #c7c7c7;  
}
```

CSS

refactor

```
$grey: #c7c7c7;  
$border-size: solid 1px;  
$border: $border-size $grey;  
#menu {  
  ...  
  border-left: $border;  
  border-top: $border;  
  border-right: $border;  
}  
#rootline {  
  ...  
  background-color: $grey;  
}  
#content {  
  ...  
  border-left: $border;  
  border-top: $border;  
  border-right: $border;  
}
```

SCSS

Nesting

```
#header {  
  ...  
}  
#header ul.menu li a {  
  ...  
}  
#header ul.menu li {  
  ...  
}  
li a {  
  ...  
}  
#header ul.menu {  
  ...  
}
```

CSS

refactor

```
#header {  
  ...  
  ul.menu {  
    ...  
    li {  
      ...  
      a {  
        ...  
      }  
    }  
  }  
  li a {  
    ...  
  }  
}
```

SCSS

Calculations

```
#content {  
  width: 500px;  
  padding: 40px;  
}  
#sidebar {  
  width: 100px;  
  margin-left: 20px;  
}
```

CSS

refactor
→

```
$total-width: 600px;  
$sidebar-width: 100px;  
$spacing: 20px;  
  
#content {  
  width: $total-width - $sidebar-width;  
  padding: $spacing * 2;  
}  
#sidebar {  
  width: $sidebar-width;  
  margin-left: $spacing;  
}
```

SCSS

Predefined Functions

```
$color: #777777;  
  
#content {  
  background-color: darken($color, 20%);  
}  
h2 {  
  color: lighten($color, 50%);  
}
```

SCSS

compile →

```
#content {  
  background-color: #444444; }  
  
h2 {  
  color: #f6f6f6; }
```


Predefined Functions

<http://sass-lang.com/documentation/Sass/Script/Functions.html>

<code>adjust_hue(color, degrees)</code>	<code>alpha(color)</code>	<code>percentage(value)</code>
<code>complement(color)</code>	<code>blue(color)</code>	<code>unit(number)</code>
<code>darken(color, amount)</code>	<code>green(color)</code>	<code>unitless(number)</code>
<code>desaturate(color, amount)</code>	<code>hue(color)</code>	
<code>grayscale(color)</code>	<code>red(color)</code>	<code>quote(str)</code>
<code>lighten(color, amount)</code>	<code>opacity(color)</code>	<code>unquote(str)</code>
<code>mix(color1, color2, weight)</code>	<code>lightness(color)</code>	
<code>opacity(color, amount)</code>	<code>saturation(color)</code>	
<code>saturate(color, amount)</code>		
<code>transparentize(color, amount)</code>	<code>abs(value)</code>	
	<code>ceil(value)</code>	
<code>hsl(hue, saturation, lightness)</code>	<code>floor(value)</code>	
<code>hsla(hue, saturation, lightness, alpha)</code>	<code>round(value)</code>	
<code>rgb(red, green, blue)</code>		
<code>rgba(red, green, blue, alpha)</code>	<code>comparable(number1, number2)</code>	
<code>rgba(color, alpha)</code>	<code>type_of(obj)</code>	

Mixins

```
@mixin rounded-border {  
  border-radius: 4px;  
  -moz-border-radius: 4px;  
  -webkit-border-radius: 4px;  
}  
.rounded-box {  
  @include rounded-border;  
  width: 250px;  
}  
#navigation {  
  ul {  
    li {  
      @include rounded-border;  
    }  
  }  
}
```

SCSS

compile →

```
.rounded-box {  
  border-radius: 4px;  
  -moz-border-radius: 4px;  
  -webkit-border-radius: 4px;  
  width: 250px; }  
#navigation ul li {  
  border-radius: 4px;  
  -moz-border-radius: 4px;  
  -webkit-border-radius: 4px; }
```

CSS

Mixins with Arguments

```
@mixin rounded-border($radius) {  
  border-radius: $radius;  
  -moz-border-radius: $radius;  
  -webkit-border-radius: $radius;  
}  
.rounded-box {  
  @include rounded-border(4px);  
  width: 250px;  
}  
#navigation {  
  ul {  
    li {  
      @include rounded-border(2px);  
    }  
  }  
}
```

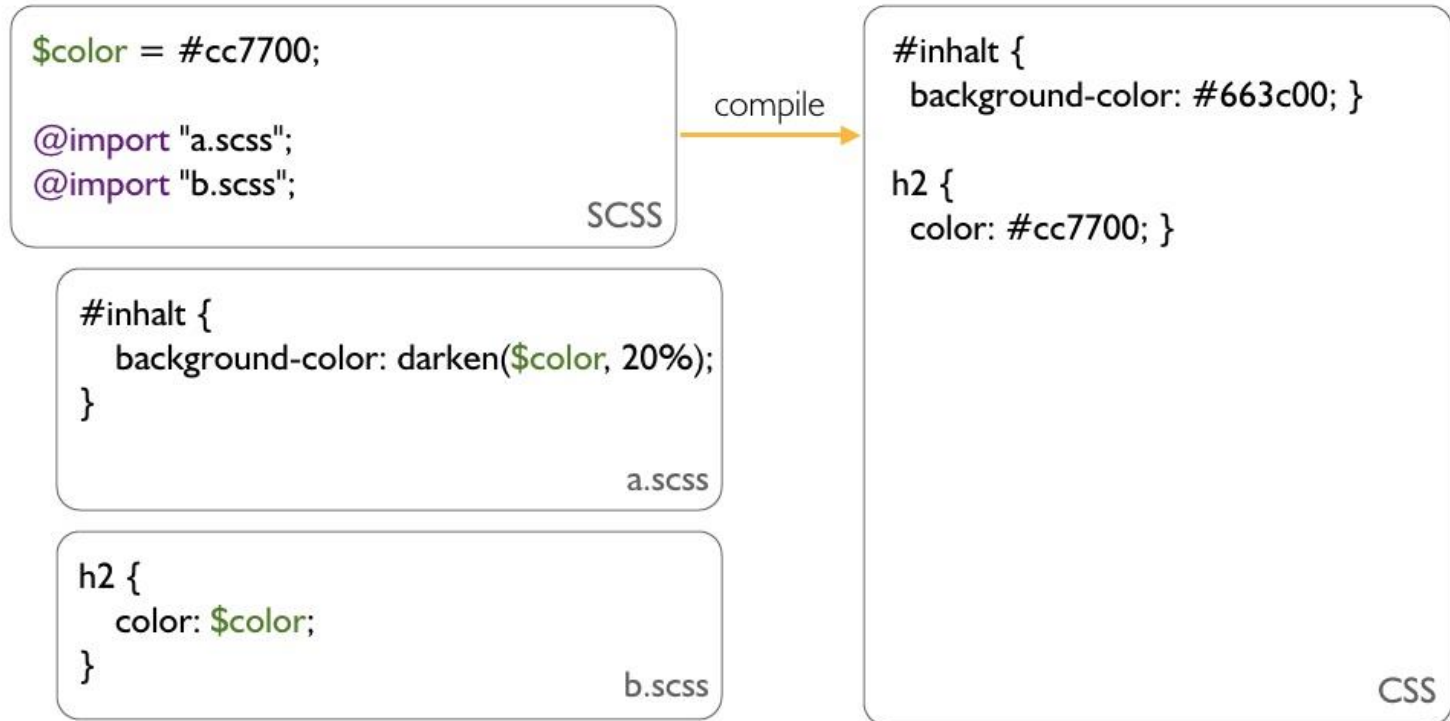
SCSS

compile →

```
.rounded-box {  
  border-radius: 4px;  
  -moz-border-radius: 4px;  
  -webkit-border-radius: 4px;  
  width: 250px; }  
#navigation ul li {  
  border-radius: 2px;  
  -moz-border-radius: 2px;  
  -webkit-border-radius: 2px; }
```

CSS

Partials



Control Structures - if

```
$type: business;
p {
  @if $type == ocean {
    color: blue;
  } @else if $type == matador {
    color: red;
  } @else if $type == business {
    color: green;
  } @else {
    color: black;
  }
}
```

SCSS

compile →

```
p {
  color: green; }
```

CSS

Control Structures - for

```
@for $i from 1 through 3 {  
  h#{ $i } {  
    font-size: 1em - (0.2 * $i);  
  }  
}
```

SCSS

compile →

```
h1 {  
  font-size: 0.8em; }  
  
h2 {  
  font-size: 0.6em; }  
  
h3 {  
  font-size: 0.4em; }
```

CSS

Comments

```
/*  
 * Multiline CSS Comment  
 */  
body { color: black; }  
  
// One-line, internal comment  
a { color: green }
```

SCSS

compile →

```
/*  
 * Multiline CSS Comment  
 */  
body {  
  color: black; }  
  
a {  
  color: green; }
```

CSS

A close-up photograph of two people in white business attire shaking hands. The person on the right is wearing a silver metal-link wristwatch. The background is blurred, showing what appears to be an office or industrial setting with orange and grey tones.

Thank You!