Web Design & Development Summer Academy 2018

Getting Started with Sass

Wi-Fi

- **Wi-Fi Network:** Clark_Student

- If prompted for a code enter "blue sky"

- **Username:** g_webdesign

- **Password:** Summer2018

Schedule of Saturday Events

Sign Up Page: https://goo.gl/HCKrrj

~~July 14, 2018 –~~ **~~Getting Started with Markdown~~**

~~July 28, 2018 –~~ **~~Getting Started with Sass~~**

August 11, 2018 – **Getting Started with Node.js**

August 18, 2018 – **Getting Started with Git and GitHub**

August 25, 2018 – **Getting Started with Bootstrap**

September 8, 2018 – **Getting Started with React.js**

September 15, 2018 – **Automating Things with Python**
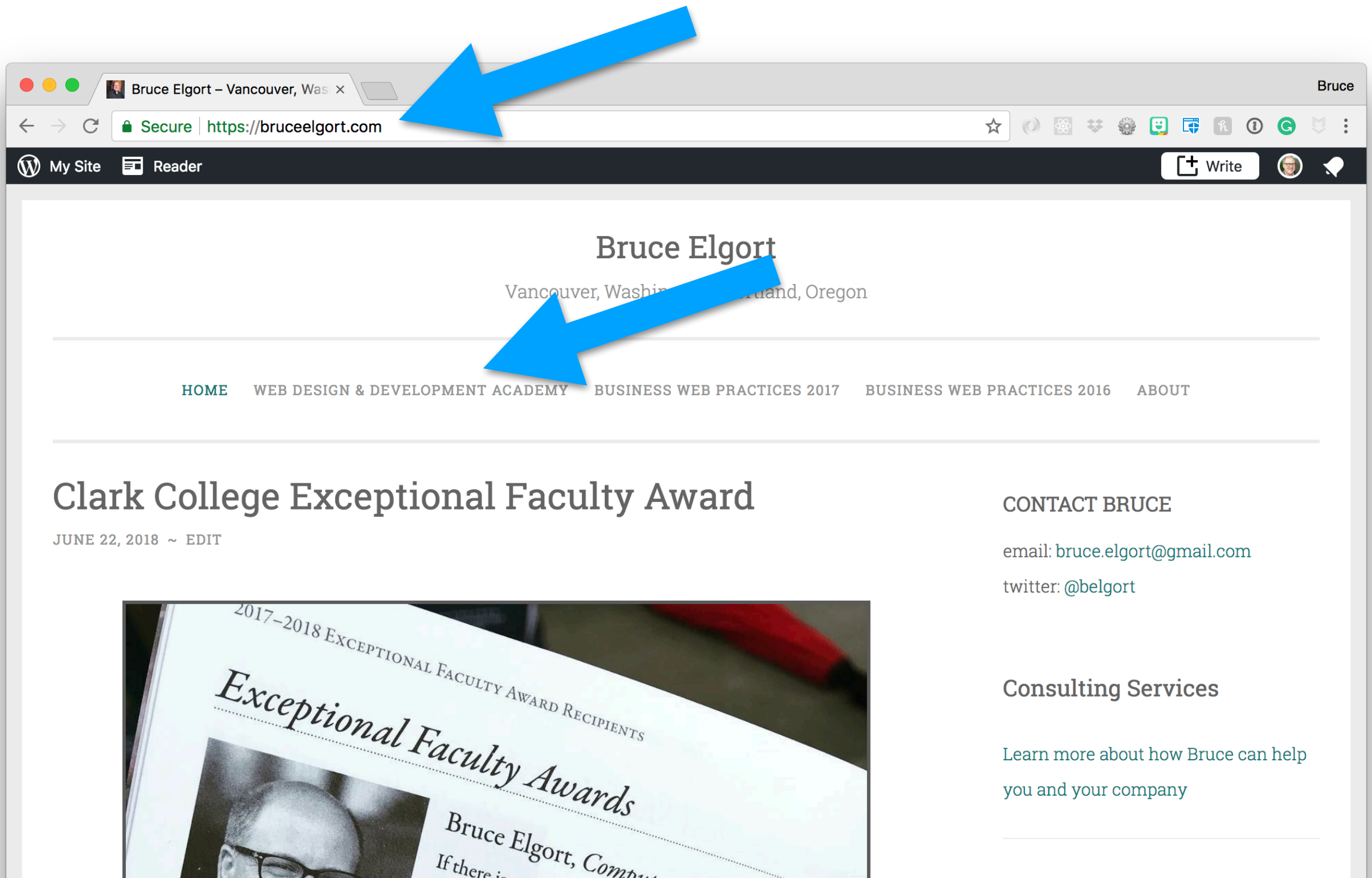
About Today's Session

What you should know before attending this session

- How to edit and save files
- Experience with HTML and CSS, especially using external style sheets

Learning Outcomes

- Know how to use Sass nesting, variables, mixins, placeholders, and functions to write more expressive and reusable styles
- Know how to compile Sass files into CSS
- Know how to transition a CSS codebase to SCSS

Slides and other resources

Let's Play a Game...

1. From the app store download "Kahoot! Play & Create"

2. If you are using a PC point your web browser to:

   http://kahoot.it

3. Type in the **PIN** that Bruce will show on the screen

4. Get ready to rumble!!!

Fill in
the blank:
_____

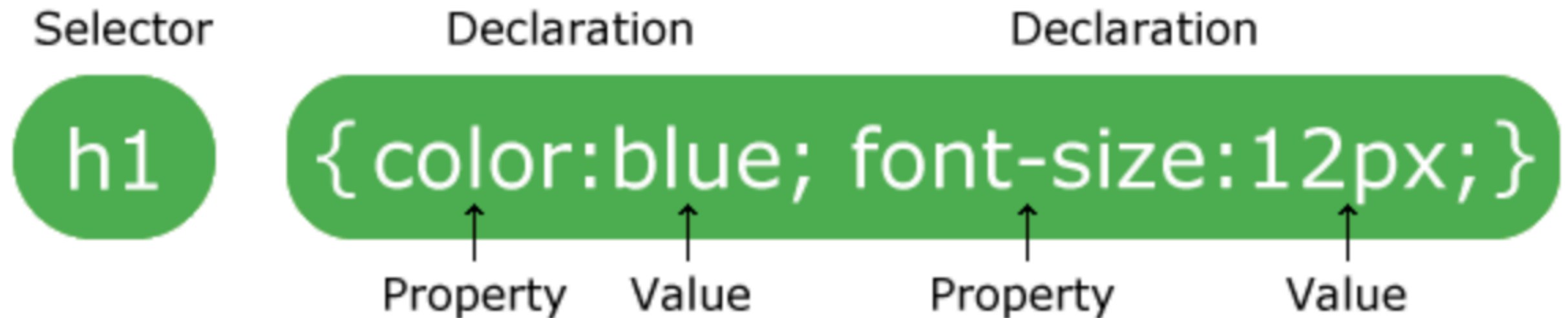Writing and understanding CSS is _____.

CSS
IS
AWESOME

What is CSS?

- CSS stands for **C**ascading **S**tyle **S**heets

- CSS describes how HTML elements are to be displayed on screen, paper, or in other media

- CSS saves a lot of work. It can control the layout of multiple web pages all at once

- External stylesheets are stored in CSS files

Link CSS to HTML

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <title>I Like Pizza</title>
6      <link rel="stylesheet" href="css/style.css">
7  </head>
8  <body>
9      <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit.
       Distinctio suscipit odit, quaerat laudantium numquam, possimus quam
       reprehenderit ut facere, iusto, animi consequatur quas iste assumenda
       vel minima ullam labore ad?</p>
10 </body>
11 </html>
```

- The selector points to the HTML element you want to style

- The declaration block contains one or more declarations separated by semicolons

- Each declaration includes a CSS property name and a value, separated by a colon

- A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces

The ID Selector

- The id selector uses the id attribute of an HTML element to select a specific element.

- The id of an element should be unique within a page, so the id selector is used to select one unique element!

- To select an element with a specific id, write a hash (#) character, followed by the id of the element.

HTML

```html
<p id="para1">Some text here</p>
```

CSS

```css
#para1 {
    text-align: center;
    color: red;
}
```

The Class Selector

- The id selector uses the id attribute of an HTML element to select a specific element.

- The id of an element should be unique within a page, so the id selector is used to select one unique element!

- To select an element with a specific id, write a hash (#) character, followed by the id of the element.
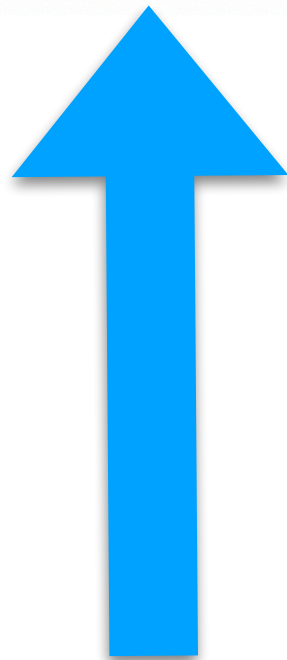
HTML

`<p class="center">Some text here</p>`

CSS

```css
.center {
    text-align: center;
    color: red;
}


p.center {
    text-align: center;
    color: red;
}
```

HTML Elements can use more than one class

```html
<p class="center large">This paragraph refers to two classes.</p>
```

Grouping Selectors

```css
h1 {
    text-align: center;
    color: red;
}

h2 {
    text-align: center;
    color: red;
}

p {
    text-align: center;
    color: red;
}
```

```css
h1, h2, p {
    text-align: center;
    color: red;
}
```

CSS Comments

```css
p {
    color: red;
    /* This is a single-line comment */
    text-align: center;
}

/* This is
a multi-line
comment */
```

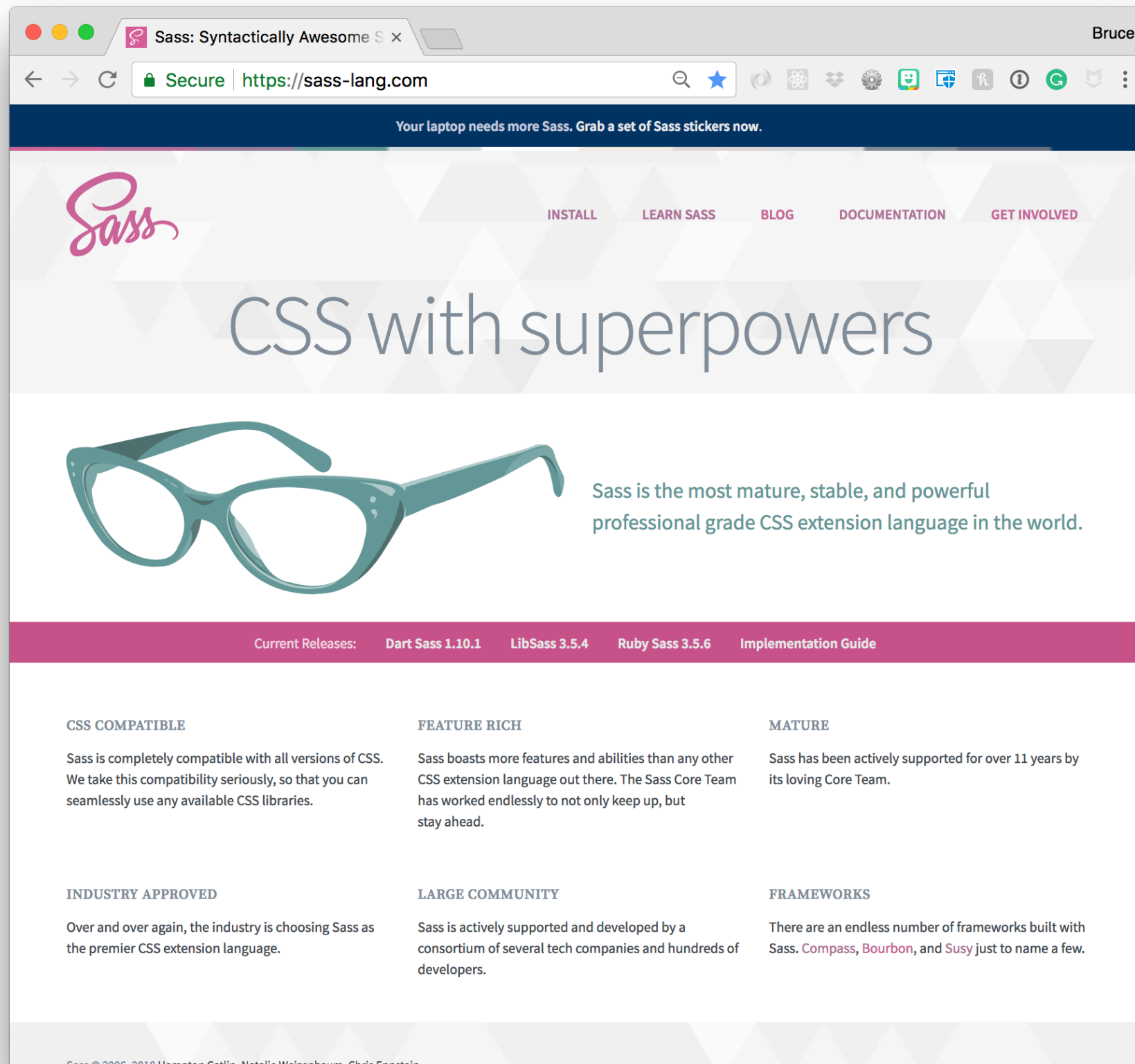# What is it?

Sass

Syntactically

Awesome

Style

Sheets

http://sass-lang.com

Sass

CSS with superpowers

Sass

The most mature, stable, and powerful professional grade CSS extension language in the world.

CSS Compatible

Sass is completely compatible with all versions of CSS. We take this compatibility seriously, so that you can seamlessly use any available CSS libraries.

Industry Approved

Over and over again, the industry is choosing Sass as the premier CSS extension language.

Feature Rich

Sass boasts more features and abilities than any other CSS extension language out there. The Sass Core Team has worked endlessly to not only keep up, but stay ahead.

Large Community

Sass is actively supported and developed by a consortium of several tech companies and hundreds of developers.

Mature

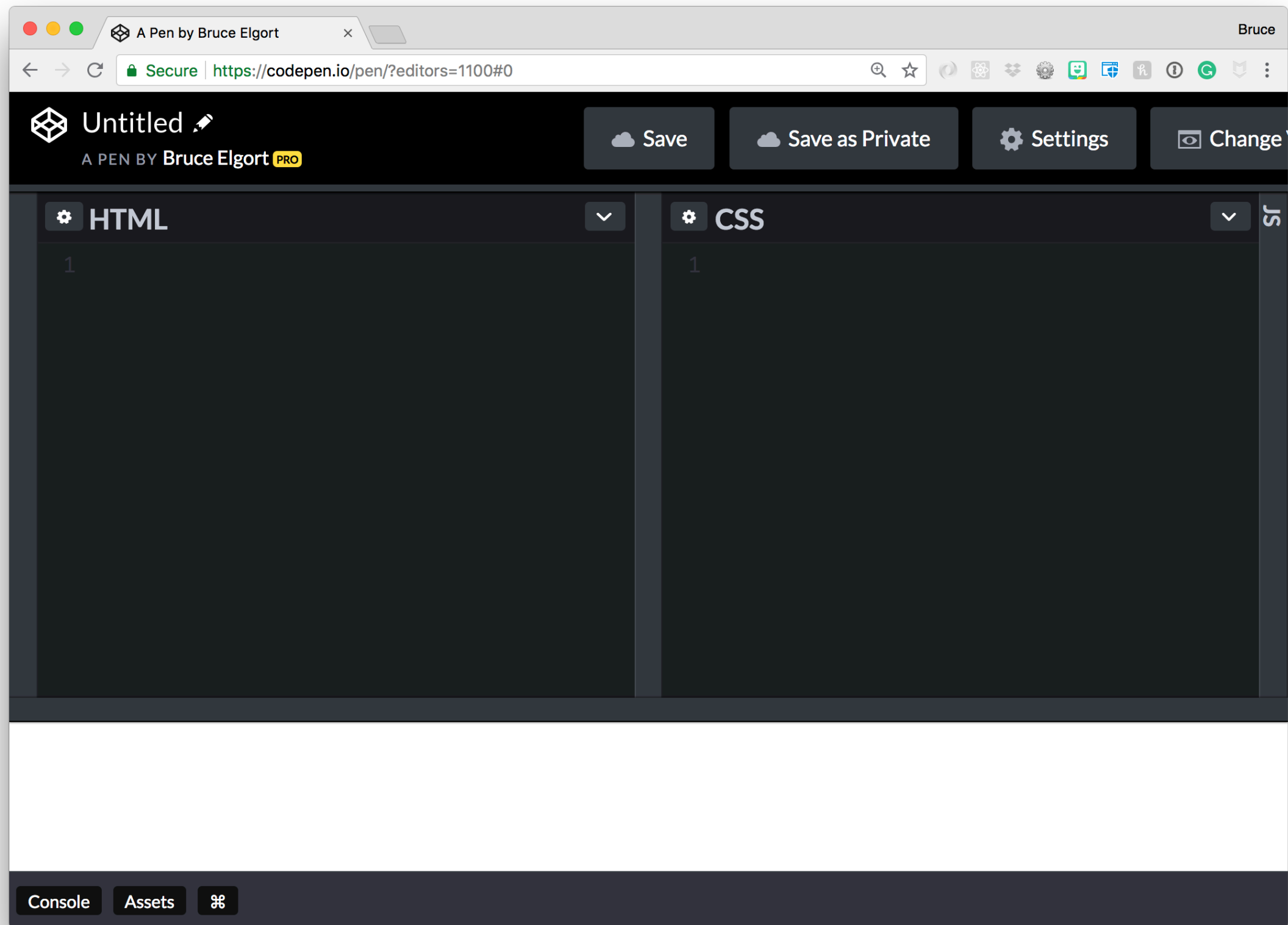Sass has been actively supported for over 11 years by its loving Core Team.

Frameworks

There are an endless number of frameworks built with Sass.

Compass, Bourbon, and Susy just to name a few.

1. Variables
2. @import
3. Color Functions
4. Mixins
5. @extend

So…

- So how do we get from Sass to CSS?

- Browsers cannot read Sass "CSS".

- Sass has to be processed into CSS

- The file extensions for Sass files is **.scss**

- **SCSS** stands for "**Sassy CSS**"

https://codepen.io

Bruce

Secure | https://codepen.io/pen/

Untitled ✏

A PEN BY **Bruce Elgort** PRO

☁ Save   ☁ Save as Private   ⚙ Settings   👁 Change View

⚙ HTML

1

Pen Settings

Save & close

HTML **CSS** JavaScript Behavior   Pen Details

CSS Preprocessor   Need an add-on?   ?

SCSS   ▲▼

CSS Base   ?

○ Normalize   ○ Reset   ⦿ Neither

Vendor Prefixing   ?

○ Autoprefixer   ○ Prefixfree   ⦿ Neither

Add External Stylesheets/Pens   ?

Any URL's added here will be added as `<link>`s in order, and before the CSS in the editor. If you link to another Pen, it will include the CSS from that Pen. If the preprocessor matches, it will attempt to combine them before processing.

Console   Assets   ⌘

Variables

Bruce

Secure | https://codepen.io/belgort/pen/MBExqN?editors=1100#0

Untitled ✎

A PEN BY **Bruce Elgort** PRO

☁ Save   ⤙ Fork   ⚙ Settings   👁 Change View

⚙ **HTML**   ⌄

1

⚙ **CSS** (SCSS)   ⌄   JS

```scss
1   $main-color: #333333;
2   $main-background-color: #DADADA;
3
4   body {
5       color: $main-color;
6       background: $main-background-color;
7   }
```

Console   Assets   Comments   ⌘   Last saved less than a minute ago ⬈   Delete   Share   Export   Embed   Collections ▾

Mixins

A Pen by Bruce Elgort ✕

🔍 ← → ↻ 🔒 Secure | https://codepen.io/belgort/pen/MBExqN?editors=1100

Untitled ✏

A PEN BY **Bruce Elgort** PRO

☁ Save   ⌄ Fork   ⚙ Settings   ◻ Change View

⚙ HTML ⌄

```
1  <p class="box">This is text</p>
2  <p class="box2">This is some more text</p>
3
```

⚙ CSS (SCSS) ⌄

```scss
1  @mixin transform($property) {
2      -webkit-transform: $property;
3          -ms-transform: $property;
4              transform: $property;
5  }
6
7  .box {
8      @include transform(rotate(30deg));
9      border:2px solid black;
10     height:50px;
11     width:50px;
12 }
13
14 .box2 {
15     border:2px solid black;
16     height:50px;
17     width:50px;
18     @include transform(rotate(45deg));
19 }
20
```

This is text

This is some more text

Console   Assets   Comments   ⌘   Last saved less than a minute ago ☐   Delete   Share   Export   Embed   Collections ▼

Secure | https://codepen.io/belgort/pen/MBExqN?editors=1100

Untitled ✏️
A PEN BY **Bruce Elgort** PRO

☁️ Save   ⌄ Fork   ⚙️ Settings   👁 Change View

⚙️ **HTML** ⌄

```html
1 ▾ <p class="box">This is text</p>
2 ▾ <p class="box2">This is some more text</p>
3
```

⚙️ **CSS** (SCSS) ⌄

```scss
1 ▾ .box {
2     -webkit-transform: rotate(30deg);
3     -ms-transform: rotate(30deg);
4     transform: rotate(30deg);
5     border: 2px solid black;
6     height: 50px;
7     width: 50px;
8 }
9
10 ▾ .box2 {
11     border: 2px solid black;
12     height: 50px;
13     width: 50px;
14     -webkit-transform: rotate(45deg);
15     -ms-transform: rotate(45deg);
16     transform: rotate(45deg);
17 }
18
```

This is text

This is some more text

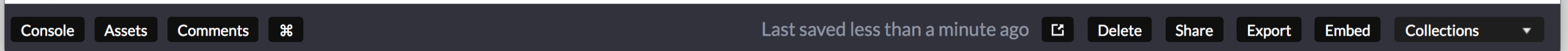Console   Assets   Comments   ⌘   Last saved less than a minute ago   Delete   Share   Export   Embed   Collections ⌄

Nesting

Secure https://codepen.io/belgort/pen/MBExqN?editors=1100

Bruce

Untitled ✎
A PEN BY **Bruce Elgort** PRO

Save | Fork | Settings | Change View

HTML

```html
<header>
  <nav>
    <ul>
      <li>Home</li>
      <li>Order</li>
      <li>About</li>
    </ul>
  </nav>
</header>
```

CSS (SCSS)

```scss
header {
  nav {
    ul {
      margin: 0;
      padding: 0;
      list-style: none;
      li {
        float: left;
        width: 100px;
        height: 100px;
        padding: 0 5px 5px 0;
      }
    }
  }
}
```

Home   Order   About

Console | Assets | Comments | ⌘   Last saved less than a minute ago   Delete | Share | Export | Embed | Collections

Bruce

Secure | https://codepen.io/belgort/pen/MBExqN?editors=1100

Untitled ✏
A PEN BY Bruce Elgort PRO

Save   Fork   Settings   Change View

HTML

```
1   <header>
2     <nav>
3       <ul>
4         <li>Home</li>
5         <li>Order</li>
6         <li>About</li>
7       </ul>
8     </nav>
9   </header>
```

CSS (SCSS)

```scss
1   header nav ul {
2     margin: 0;
3     padding: 0;
4     list-style: none;
5   }
6   header nav ul li {
7     float: left;
8     width: 100px;
9     height: 100px;
10    padding: 0 5px 5px 0;
11  }
12
```

JS

Home   Order   About

Console   Assets   Comments   ⌘   Last saved less than a minute ago   Delete   Share   Export   Embed   Collections

Using the & with nesting

CSS (SCSS)

```scss
.parent {
  .child {
    color: #FFFFFF;
  }
}
```

⚙ **CSS** (SCSS)

```scss
.parent .child {
    color: #FFFFFF;
}
```

CSS (SCSS)

```scss
.some-class {
  &.another-class {
    color: #FFFFFF;
  }
}
```

CSS (SCSS)

```scss
.some-class.another-class {
  color: #FFFFFF;
}
```

CSS (SCSS)

```scss
.button {
  &:visited { color: #000000; }
  &:hover { background: #DADADA; }
  &:active { color: #FF5100; }
}
```
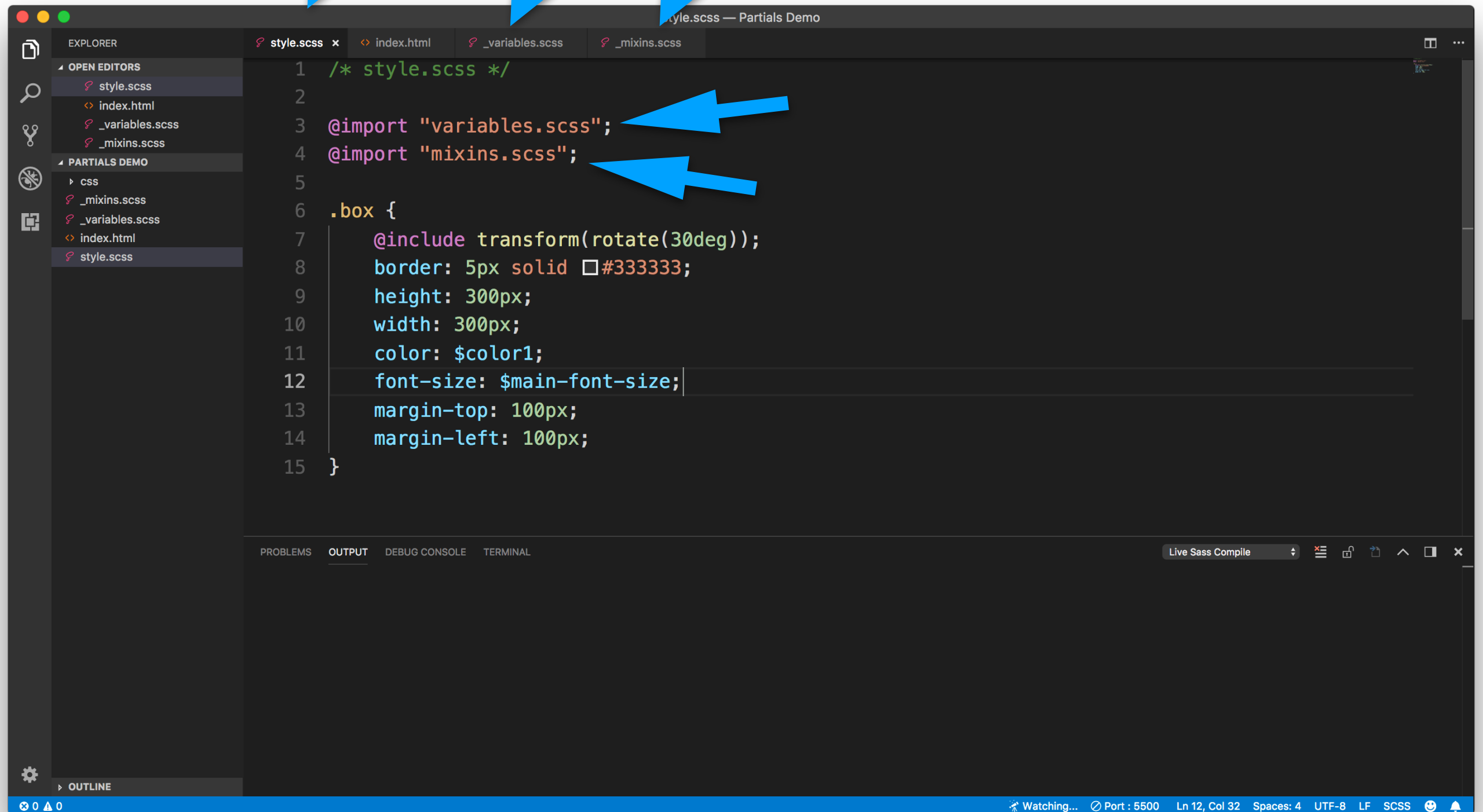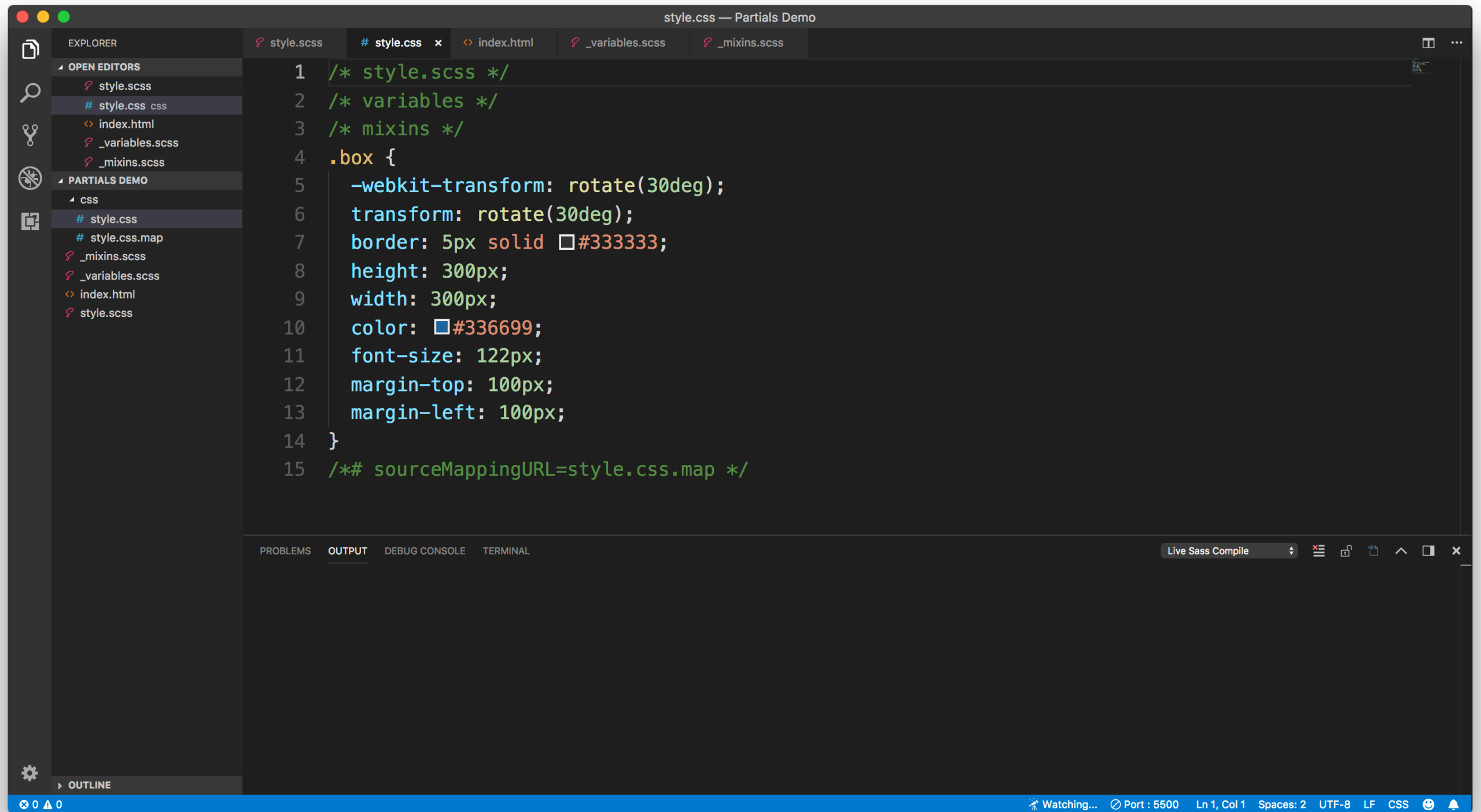
CSS (SCSS)

```scss
1  .button:visited {
2    color: #000000;
3  }

4  .button:hover {
5    background: #DADADA;
6  }

7  .button:active {
8    color: #FF5100;
9  }
```

Partials (@import)

- Partials are like CSS @import

- They eliminate the need for multiple HTTP Get Requests

- @import imports the contents of the partial SCSS or CSS file into the main stylesheet

- Partial SCSS filenames begin with an underscore

- When you @import a partial SCSS file you do not need to include the _

style.scss ×   <> index.html   _variables.scss   _mixins.scss

```scss
/* style.scss */

@import "variables.scss";
@import "mixins.scss";

.box {
    @include transform(rotate(30deg));
    border: 5px solid #333333;
    height: 300px;
    width: 300px;
    color: $color1;
    font-size: $main-font-size;
    margin-top: 100px;
    margin-left: 100px;
}
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL

```scss
/* style.scss */
/* variables */
/* mixins */
.box {
  -webkit-transform: rotate(30deg);
  transform: rotate(30deg);
  border: 5px solid #333333;
  height: 300px;
  width: 300px;
  color: #336699;
  font-size: 122px;
  margin-top: 100px;
  margin-left: 100px;
}
/*# sourceMappingURL=style.css.map */
```

@extend

- This is one of the most useful features of Sass

- Using **@extend** lets you share a set of CSS properties from one selector to another.

- It helps keep your Sass very DRY (**D**on't **R**epeat **Y**ourself)

Untitled ✏️

A PEN BY **Bruce Elgort** PRO

Save   Fork   Settings   Change View

HTML ⌄

```html
<button class="btn">Submit</button>
<button class="btn-reverse">Cancel</button>
```

CSS (SCSS) ⌄

```scss
.btn {
  padding: 6px 12px;
  line-height: 140%;
  text-align: center;
  veritcal-align: middle;
  border: 1px solid transparent;
  border-radius: 4px;
  background: #C61C6f;
  color: #FCF4DC;
}

.btn-reverse {
  @extend .btn;
  background: #FCF4DC;
  color: #C61C6f;
}
```

Submit   Cancel

Secure | https://codepen.io/belgort/pen/MBExqN?editors=1100

Untitled ✏️

A PEN BY **Bruce Elgort** PRO

☁️ Save   ⤳ Fork   ⚙️ Settings   👁️ Change View

⚙️ **HTML** ⌄

```
1  <button class="btn">Submit</button>
2  <button class="btn-reverse">Cancel</button>
3
```

⚙️ **CSS** (SCSS) ⌄

```scss
1  .btn, .btn-reverse {
2    padding: 6px 12px;
3    line-height: 140%;
4    text-align: center;
5    veritcal-align: middle;
6    border: 1px solid transparent;
7    border-radius: 4px;
8    background: #C61C6f;
9    color: #FCF4DC;
10  }
11
12  .btn-reverse {
13    background: #FCF4DC;
14    color: #C61C6f;
15  }
16
```

Submit   Cancel

Console   Assets   Comments   ⌘   Last saved less than a minute ago   ⬈   Delete   Share   Export   Embed   Collections ⌄

Placeholders

- Placeholders allow you to have code that you can extend however there is one primary difference

- Placeholder code is not included in the processed CSS

CSS (SCSS)

```scss
.awesome {
    height: 100px;
    width: 200px;
}

body {
    @extend .awesome;
}

p {
    @extend .awesome;
}
```

```scss
CSS (scs
1  .awesome, body, p {
2      height: 100px;
3      width: 200px;
4  }
5
```
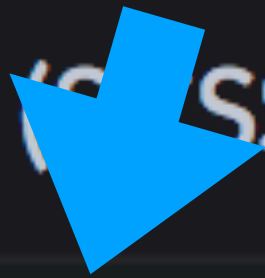
```scss
%awesome {
    height: 100px;
    width: 200px;
}

body {
    @extend %awesome;
}

p {
    @extend %awesome;
}
```

⚙ CSS (css)

```css
1  body, p {
2      height: 100px;
3      width: 200px;
4  }
5
```

Control Directives and Expressions

@if - used to make decisions
@for - a counted loop
@while - a non counted loop

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

CSS (SCSS)

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

CSS (SCSS)

```scss
@for $i from 1 through 3 {
    .item-#{$i} { width: 2em * $i; }
}
```

⚙ CSS (SCSS)

```scss
.item-1 {
    width: 2em;
}

.item-2 {
    width: 4em;
}

.item-3 {
    width: 6em;
}
```

```scss
$i: 6;
@while $i > 0 {
  .item-#{$i} { width: 2em * $i; }
  $i: $i - 2;
}
```

CSS (SCSS)

```scss
.item-6 {
    width: 12em;
}

.item-4 {
    width: 8em;
}

.item-2 {
    width: 4em;
}
```

Using Sass in Dreamweaver

- Built right into Dreamweaver CC 2018

- Support for Bourbon library

- Support for Bourbon Bitters Library

- Support for Bourbon Neat Library

- Let's take a look…

Visual Studio Code

- Install Live Sass Compiler

  - Gives you syntax highlighting

  - SCSS file processing

  - Live Page Previews

- Let's take a look…

Using the Gulp Task Runner

- Requires Node.js

- Requires NPM (Node Package Manager)

- Let's take a look…

Final Exam Time!

Let's Play a Game…

1. From the app store download "Kahoot! Play & Create"

2. If you are using a PC point your web browser to:

   http://kahoot.it

3. Type in the **PIN** that Bruce will show on the screen

4. Get ready to rumble!!!