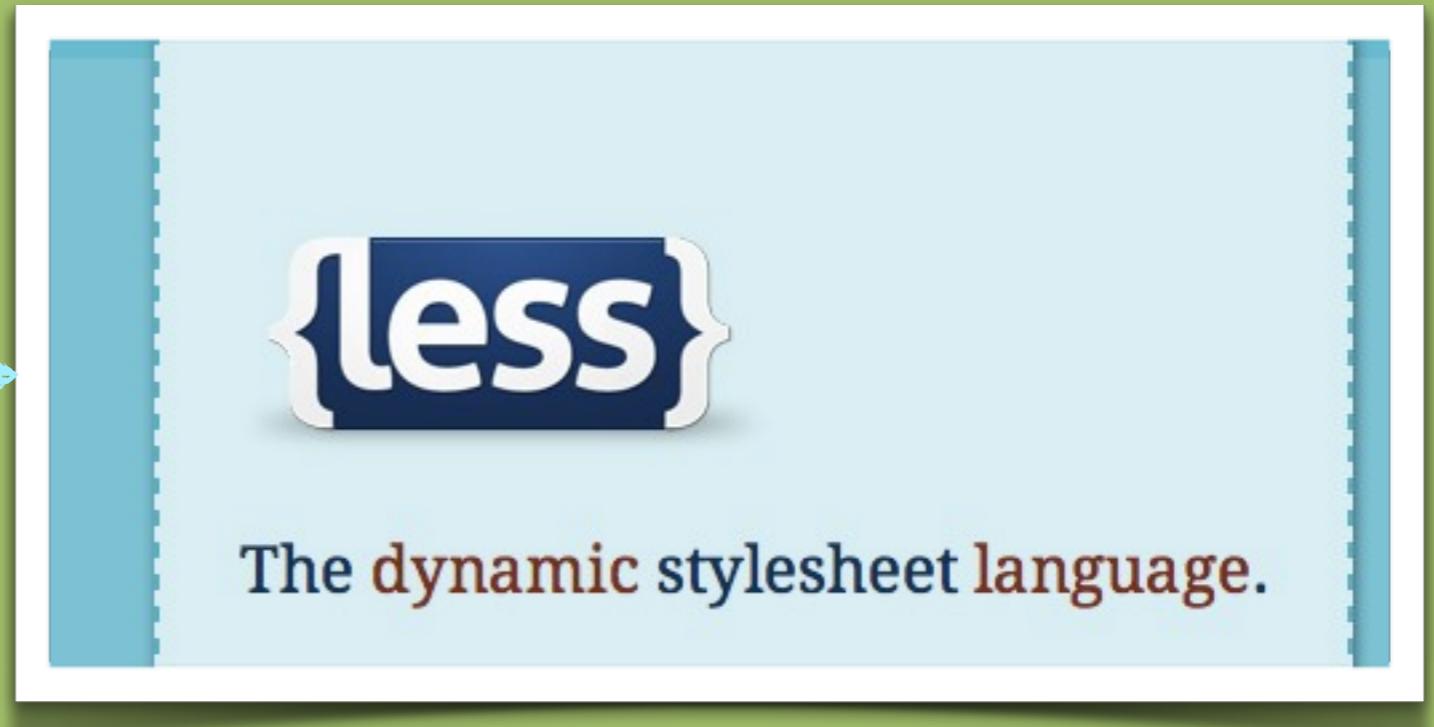


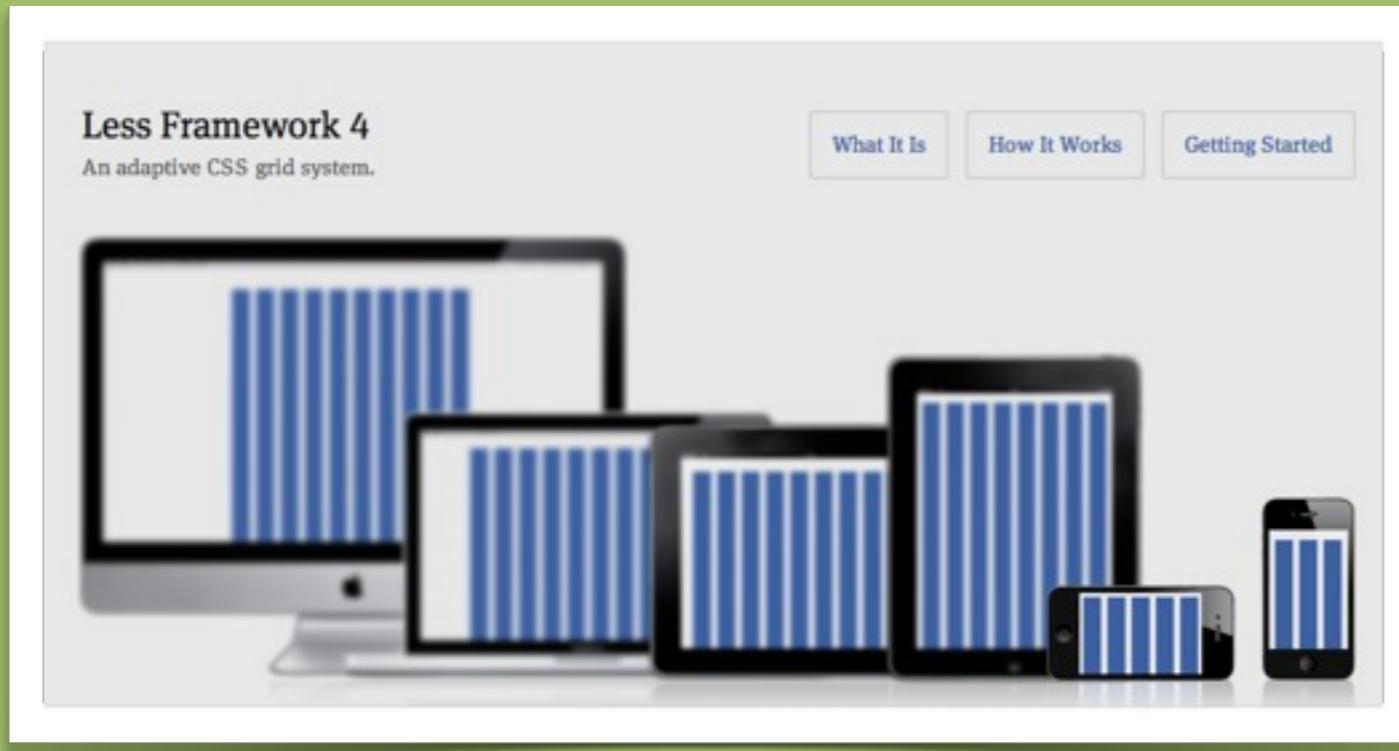
Simplifying CSS through



{ The Droids
you are
looking for



<http://lesscss.org/>



NOT the
Droids you
are looking for }

<http://lessframework.com/>



There Will Be Code

Agenda

What's wrong with CSS?

Less

Concepts

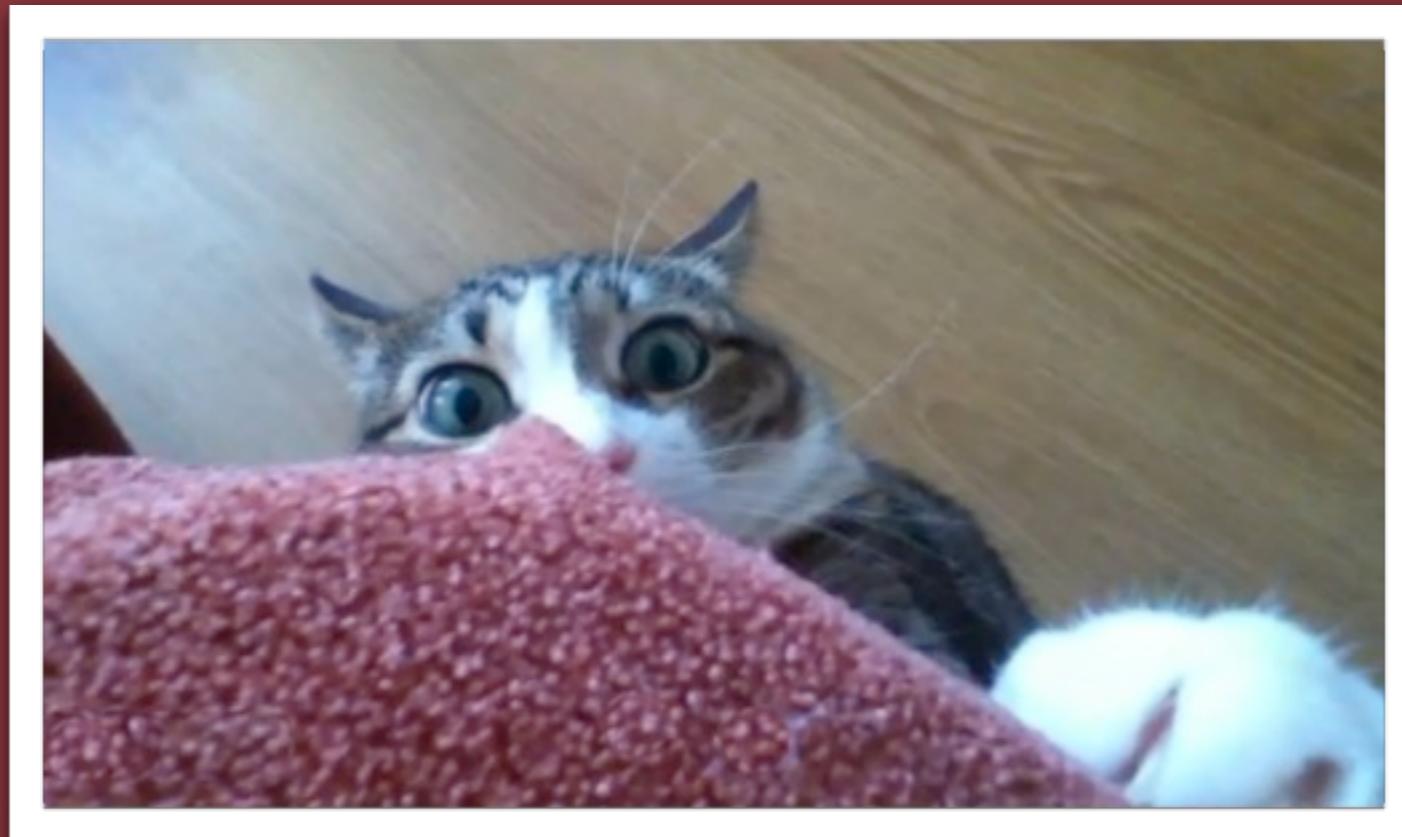
Less in Practice

Tools

Installation

Questions

What's wrong with CSS?



Repetitive

Repeats

```
#header {  
    background-color: #4455EE;  
}  
  
#footer {  
    color: #4455EE;  
}  
  
h3 {  
    color: #4455EE;  
}
```

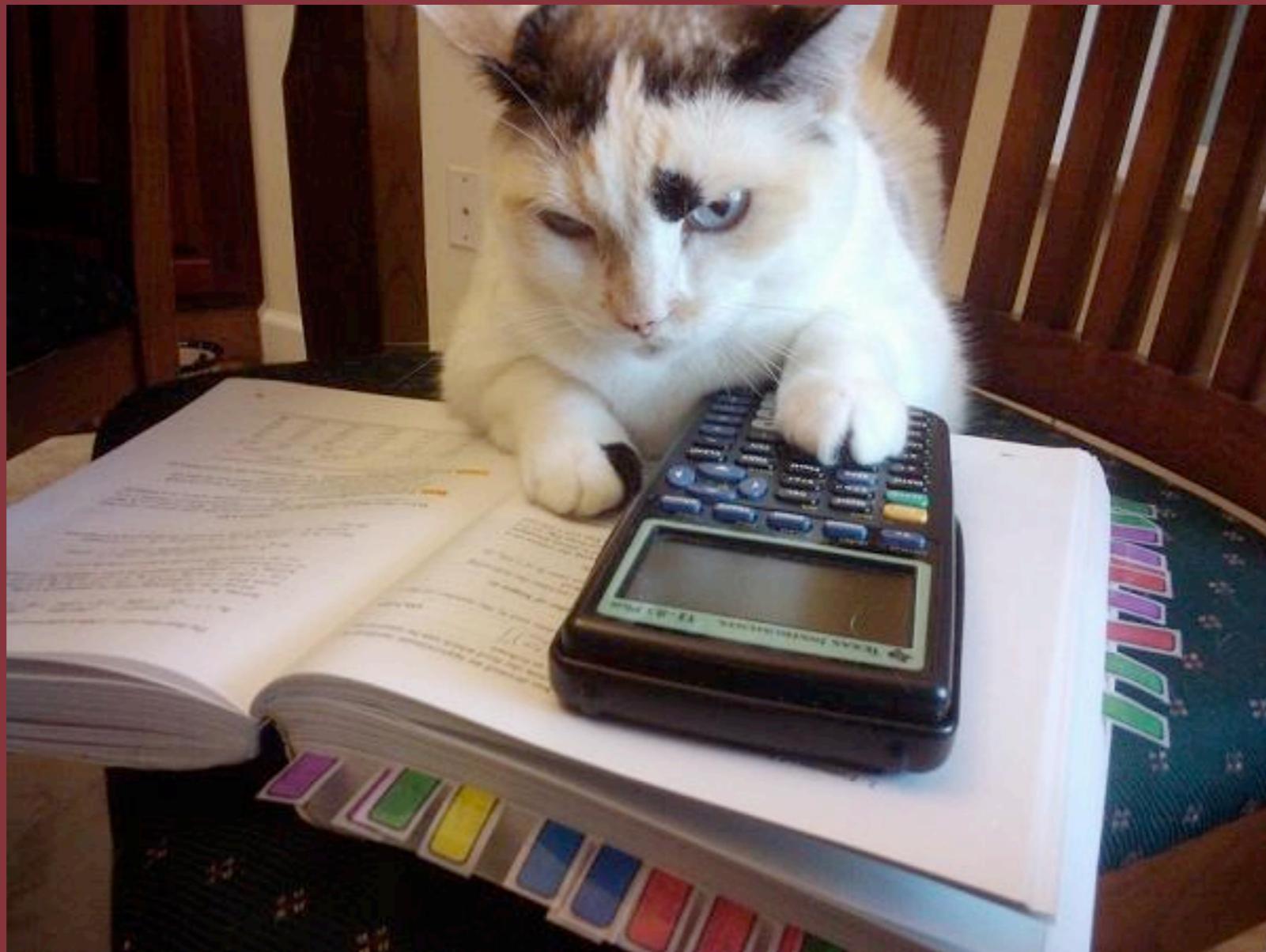
Hard to Maintain

```
#screenshot {  
    position: absolute;  
    right: 0;  
    top: 40px;  
    z-index: 1;  
    width: 563px;  
    height: 690px;  
    -webkit-border-radius: 5px;  
    -moz-border-radius: 5px;  
    border-radius: 5px;  
}
```

```
#signupForm {  
    width: 463px;  
    height: 300px;  
    padding: 40px 50px;  
    -webkit-border-radius: 5px;  
    -moz-border-radius: 5px;  
    border-radius: 5px;  
    text-align: left;  
}
```

Identical

Calculations



```
.folder1, .folder2, .folder3 {  
    display: inline-block;  
    width: 64px;  
    height: 64px;  
    background-image: url(sprite.png);  
    background-repeat: no-repeat;  
}  
  
.folder1 {  
    background-position: 0px 0px;  
}  
  
.folder2 {  
    background-position: -64px 0px;  
}  
  
.folder3 {  
    background-position: -128px 0px;  
}
```

You need to calculate
sprite positions

CSS is Flat

```
<div class="profiles">
  <header>
    <h1>cloudhead<span id="ext">.io</span></h1>
  </header>
</div>
```

HTML

```
.profiles {
  position: fixed;
  padding-left: 0px;
  bottom: 170px;
  right: 45px;
  text-align: right;
}

.profiles header {
  line-height: normal;
  margin-bottom: 15px;
  text-align: left;
  padding: 0;
}

.profiles header h1 {
  font-family: 'Droid Serif', 'Myriad Pro', 'Georgia', sans-serif;
  border-bottom: 1px dotted #bbb;
  margin-bottom: 15px;
  text-align: left;
  padding: 0;
  padding-bottom: 5px;
  font-size: 60px;
}
```

Flattened

CSS

Import Tax

```
@import url("data.css");
@import url("themes.css");

.bigtext {
  border: 2px solid red;
}
```

Separate requests



CSS Preprocessor

Superset of CSS

Alexis Sellier: Clouthead

Clean and Simple

Reduce Duplication



Concepts

Variables

Mixins

Nested Rules

Functions

Imports

Comments

Variables



My name is
#848482.



Friends call me
“Battleship Grey”.



Syntax

```
@name : value;
```

```
@battleShipGrey : #848482;
```

CSS

```
#header {  
    background-color: #4455EE;  
}  
  
#footer {  
    color: #4455EE;  
}  
  
h3 {  
    color: #4455EE;  
}
```

Repeats

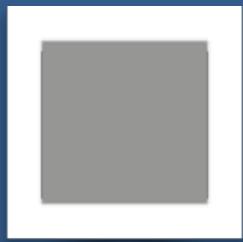
Less

```
@headingColour: #4455EE;  
  
#header {  
    background-color: @headingColour;  
}  
  
#footer {  
    color: @headingColour;  
}  
  
h3 {  
    color: @headingColour;  
}
```

Define once

Use many

Scope = Visibility



Battleship Grey

That Battleship
Grey is so cool!

So dreamy!

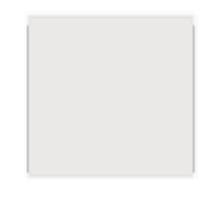
.sydney {

}

.ny {

}

I'm a big deal
in .london.

.london {  }

Platinum

Platinum?
Never heard of
it.

.brisbane { }

```
@battleshipGrey : #848482;

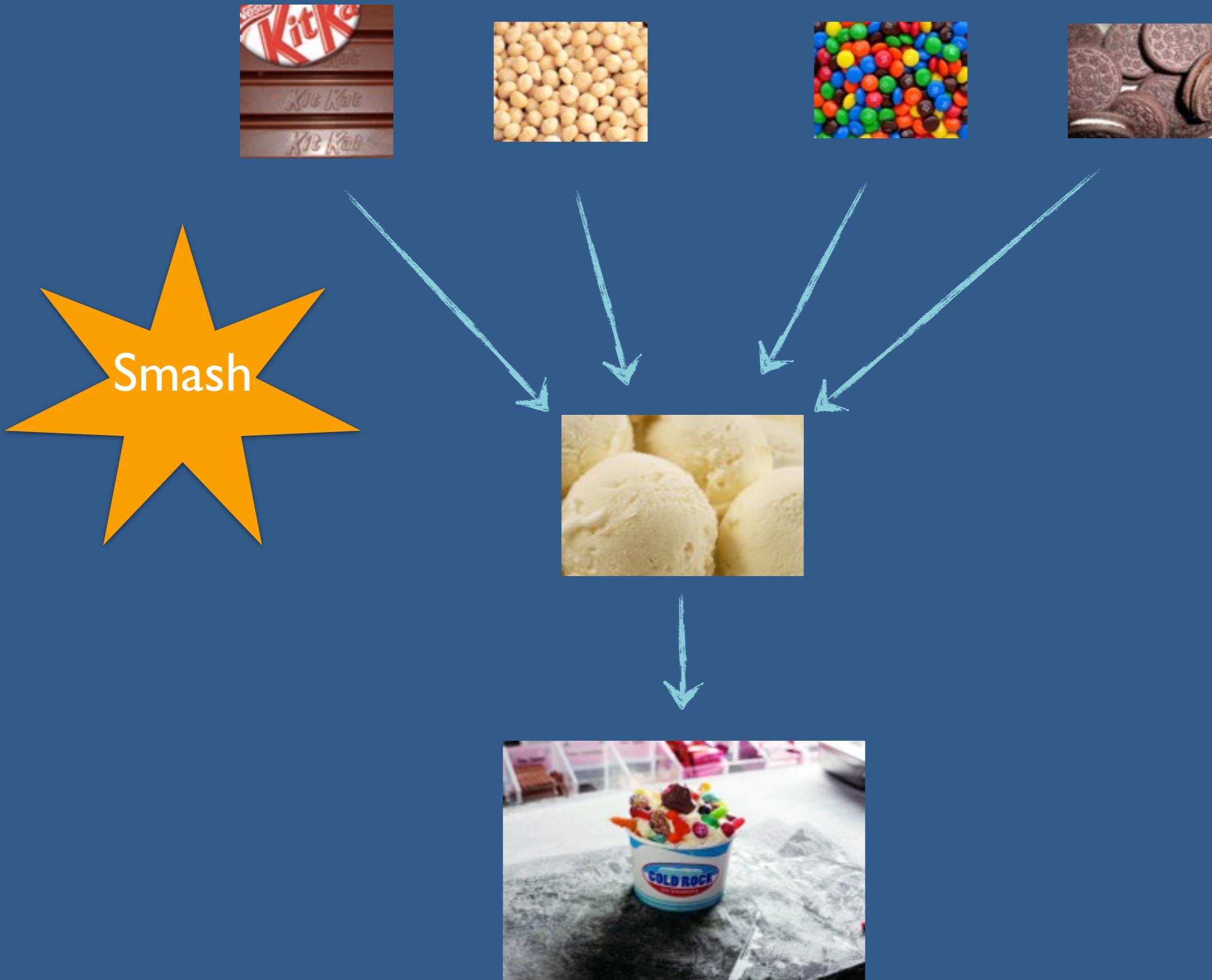
.ny {
  color: @battleshipGrey;
}

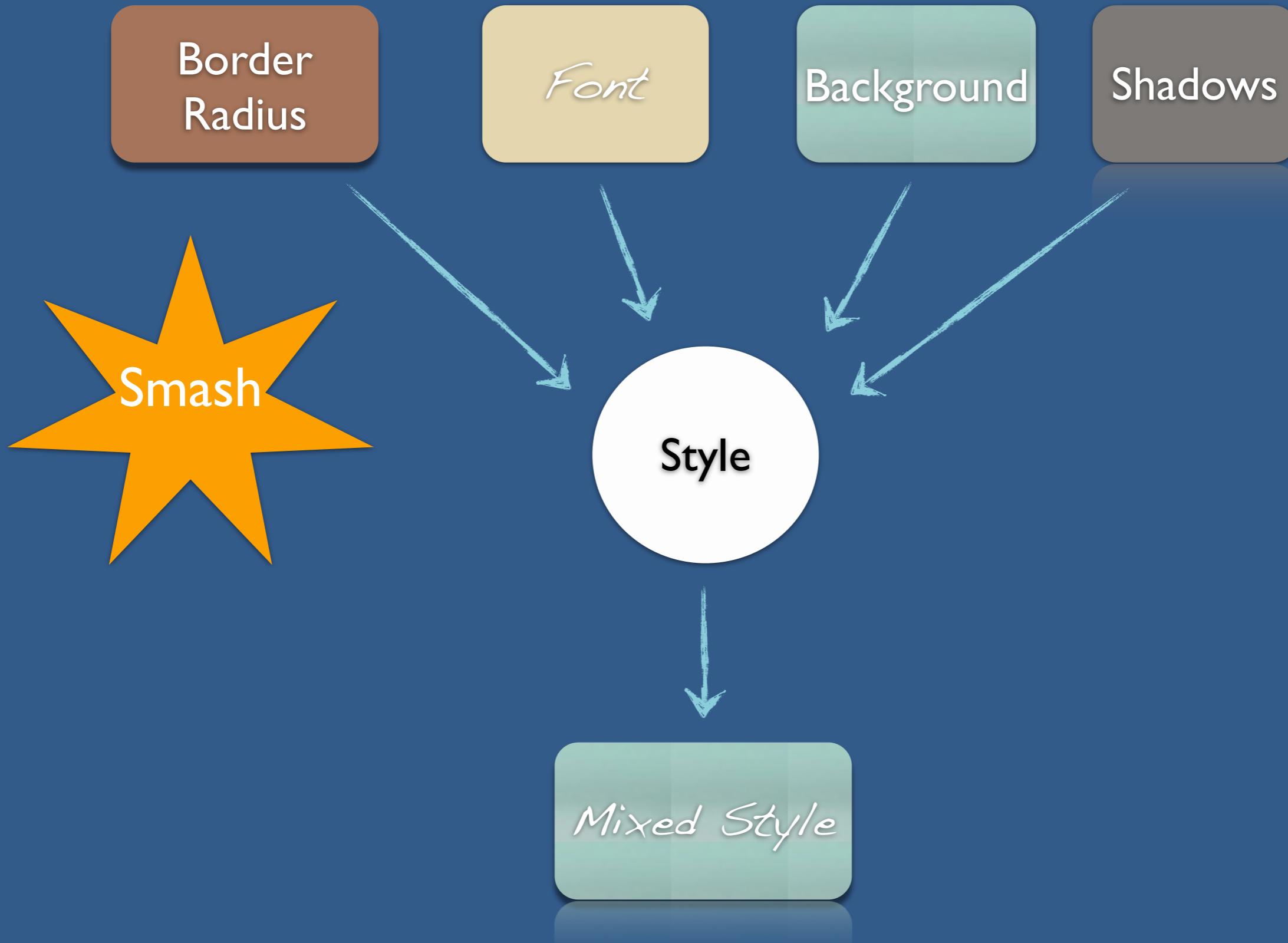
.sydney {
  color: @battleshipGrey;
}

.brisbane {
  //can't see platinum only battleshipGrey
}

.london {
  @platinum: #e5e4e2;
  color: @platinum;
}
```

Mixins





Syntax

```
.mixinName {  
    property1 : value1;  
    propertyN : valueN;  
}
```

```
#screenshot {  
  position: absolute;  
  right: 0;  
  top: 40px;  
  z-index: 1;  
  width: 563px;  
  height: 690px;  
  .border_radius;  
}
```

search and replace

```
#signupForm {  
  width: 463px;  
  height: 300px;  
  padding: 40px 50px;  
  .border_radius;  
  text-align: left;  
}
```

search and replace

```
.border_radius {  
  -webkit-border-radius: 5px;  
  -moz-border-radius: 5px;  
  border-radius: 5px;  
}
```

Mixin

CSS

```
#screenshot {  
    position: absolute;  
    right: 0;  
    top: 40px;  
    z-index: 1;  
    width: 563px;  
    height: 690px;  
    -webkit-border-radius: 5px;  
    -moz-border-radius: 5px;  
    border-radius: 5px;  
}
```

```
#signupForm {  
    width: 463px;  
    height: 300px;  
    padding: 40px 50px;  
    -webkit-border-radius: 5px;  
    -moz-border-radius: 5px;  
    border-radius: 5px;  
    text-align: left;  
}
```

What if I want to **change** the
value of a property?

Syntax

Parameter



```
.mixinName(@name) {  
  property : @name;  
}
```

```
.mixinName(2px);  
@name = 2px
```

```
#screenshot {  
  position: absolute;  
  right: 0;  
  top: 40px;  
  z-index: 1;  
  width: 563px;  
  height: 690px;  
  .border_radius(5px);  
}
```

search and replace

```
#signupForm {  
  width: 463px;  
  height: 300px;  
  padding: 40px 50px;  
  .border_radius(10px);  
  text-align: left;  
}
```

search and replace

```
.border_radius(@radius) {  
  -webkit-border-radius: @radius;  
  -moz-border-radius: @radius;  
  border-radius: @radius;  
}
```

Mixin

CSS

```
#screenshot {  
    position: absolute;  
    right: 0;  
    top: 40px;  
    z-index: 1;  
    width: 563px;  
    height: 690px;  
    -webkit-border-radius: 5px;  
    -moz-border-radius: 5px;  
    border-radius: 5px;  
}
```

```
#signupForm {  
    width: 463px;  
    height: 300px;  
    padding: 40px 50px;  
    -webkit-border-radius: 10px;  
    -moz-border-radius: 10px;  
    border-radius: 10px;  
    text-align: left;  
}
```

What if I want to **change** the
value of a property
sometimes?

Syntax

Default Value

Parameter



```
.mixinName(@name:default) {  
  property :@name;  
}
```

```
.mixinName(2px);      @name = 2px
```

```
.mixinName;          @name = default
```

```
#screenshot {  
    position: absolute;  
    right: 0;  
    top: 40px;  
    z-index: 1;  
    width: 563px;  
    height: 690px;  
    .border_radius;  
}
```

search and replace

```
#signupForm {  
    width: 463px;  
    height: 300px;  
    padding: 40px 50px;  
    .border_radius(10px);  
    text-align: left;  
}
```

search and replace

```
.border_radius(@radius:5px) {  
    -webkit-border-radius: @radius;  
    -moz-border-radius: @radius;  
    border-radius: @radius;  
}
```

Mixin

CSS

```
#screenshot {  
    position: absolute;  
    right: 0;  
    top: 40px;  
    z-index: 1;  
    width: 563px;  
    height: 690px;  
    -webkit-border-radius: 5px;  
    -moz-border-radius: 5px;  
    border-radius: 5px;  
}
```

```
#signupForm {  
    width: 463px;  
    height: 300px;  
    padding: 40px 50px;  
    -webkit-border-radius: 10px;  
    -moz-border-radius: 10px;  
    border-radius: 10px;  
    text-align: left;  
}
```

```
.screenshot_transition {  
  .transition(top, 0.5s, ease-out);  
}  
  
.form-transition {  
  .transition(color, 0.2s);  
}  
  
.close_transition {  
  .transition(opacity, 0.3s);  
}  
  
.mask_transition {  
  .transition(all, 0.3s);  
}
```

```
.transition(@type, @time, @ease: linear) {  
  -webkit-transition: @type @time @ease;  
  -moz-transition: @type @time @ease;  
  transition: @type @time @ease;  
}
```

Mixin

```
.screenshot_transition {  
    -webkit-transition: top 0.5s ease-out;  
    -moz-transition: top 0.5s ease-out;  
    transition: top 0.5s ease-out;  
}  
.form-transition {  
    -webkit-transition: color 0.2s linear;  
    -moz-transition: color 0.2s linear;  
    transition: color 0.2s linear;  
}  
.close_transition {  
    -webkit-transition: opacity 0.3s linear;  
    -moz-transition: opacity 0.3s linear;  
    transition: opacity 0.3s linear;  
}  
.mask_transition {  
    -webkit-transition: all 0.3s linear;  
    -moz-transition: all 0.3s linear;  
    transition: all 0.3s linear;  
}
```

But wait! There's more!

Pattern Matching Guards

The power of mixins **compels** you (to learn more).

Nested Rules

<HTML>

<has>

<structure>

• html has structure { }

```
<div class="profiles">
  <header>
    <h1>cloudhead<span id="ext">.io</span></h1>
  </header>
</div>
```

HTML

```
.profiles {
  position: fixed;
  padding-left: 0px;
  bottom: 170px;
  right: 45px;
  text-align: right;
}

.profiles header {
  line-height: normal;
  margin-bottom: 15px;
  text-align: left;
  padding: 0;
}

.profiles header h1 {
  font-family: 'Droid Serif', 'Myriad Pro', 'Georgia', sans-serif;
  border-bottom: 1px dotted #bbb;
  margin-bottom: 15px;
  text-align: left;
  padding: 0;
  padding-bottom: 5px;
  font-size: 60px;
}
```

Flattened

CSS

```
<div class="profiles">
  <header>
    <h1>cloudhead<span id="ext">.io</span></h1>
  </header>
</div>
```

HTML

```
.profiles {
  position: fixed;
  padding-left: 0px;
  bottom: 170px;
  right: 45px;
  text-align: right;

  child of .profiles
```

```
header {
  line-height: normal;
  margin-bottom: 15px;
  text-align: left;
  padding: 0;

  child of header
```

```
h1 {
  font-family: @profileHeaderFont;
  border-bottom: 1px dotted @lightGray;
  margin-bottom: 15px;
  text-align: left;
  padding: 0;
  padding-bottom: 5px;
  font-size: 60px;
}
```

Less

Functions

Inputs



Magic
happens
here



Outputs/Outcomes

Colour

`fadein(@colour, 20%);` → colour

`fadeout(@colour, 20%);` → colour

lighten

darken

saturate

desaturate

fade

spin

mix

Math

`round(1.67);` → 2

`ceil(2.4);` → 3

`floor(2.6);` → 2

`percentage(0.5);` → 50%

Arithmetic

@thinBorder: 5px + 10;

@thickBorder: @thinBorder * 2;

@sectionHeight: 150px;

height: (@sectionHeight / 2) + 10px;

```
@spriteSide: 64px;

.folder1, .folder2, .folder3 {
  display: inline-block;
  width: @spriteSide;
  height: @spriteSide;
  background-image: url(sprite.png);
  background-repeat: no-repeat;
}

.folder1 {
  background-position: (@spriteSide*0) 0px;
}

.folder2 {
  background-position: -(@spriteSide*1) 0px;
}

.folder3 {
  background-position: -(@spriteSide*2) 0px;
}
```

Sprite positions
calculated for you

Imports

Syntax

```
@import “file.less”;
```

```
@import “file”;
```

```
@import “file.css”;
```

copy content

```
@import "theme";
```

copy content

```
@import "mixins";
```

Less

styles

styles which use
theme and mixins

Imports without the tax

Comments

//single-line comments

silent

Still More Features

Namespaces

String Interpolation

Escaping

Javascript Evaluation



in Practice

Design Faster

Reduce Duplication

-vendor-prefix support is Easy

The Compiler Helps You

Easy to convert CSS to Less

Easier to use Themes

No Sprite Math!

Free Imports Encourage
Better Composition

Silent Comments are Great!

What You can't see can **Affect**
You

Keep it Simple



Chrome with JS locally

Cross origin requests are only supported for HTTP

google-chrome -allow-file-access-from-files

<http://stackoverflow.com/questions/7942277/less-css-minimal-setup-failure>

Bugs in the Less will Affect You



<https://github.com/cloudhead/less.js/issues/610>

String @{Inter}polation

<https://github.com/cloudhead/less.js/issues/294>

Installation

2. Methods

I. with Javascript

```
<link rel="stylesheet/less"  
      type="text/css"  
      href="styles.less">
```

```
<script src="less.js"></script>
```

#!watch

2. with CSS

I. Install Node.js

<http://nodejs.org/>

2. Install less

`npm install less`

3a) You compile Less to CSS

`lessc styles.less styles.css`

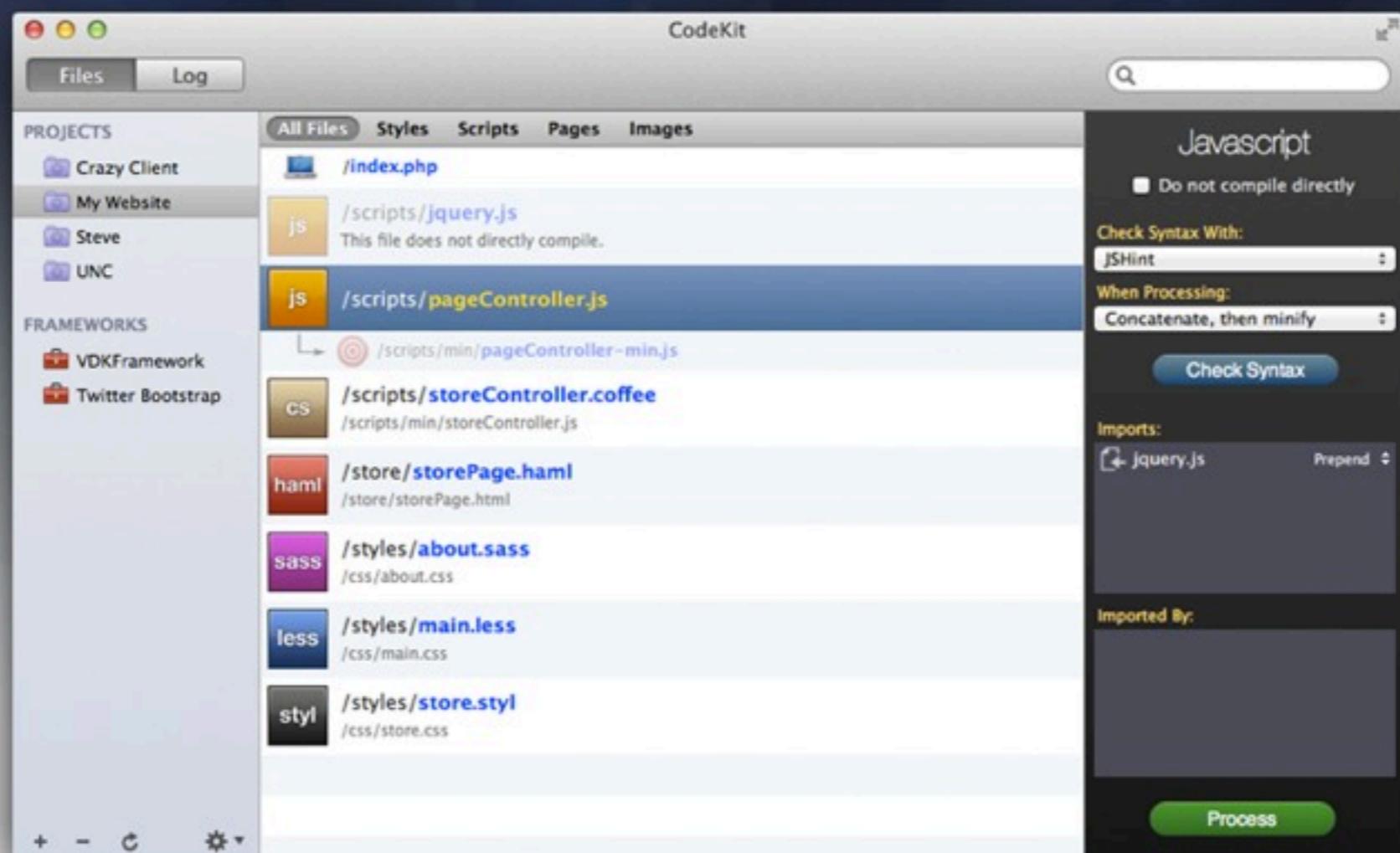
3b) Tools compile Less to CSS

Tools

Syntax Highlighting

.less => .css

Refactoring



It's like steroids for web developers.

CodeKit automatically compiles Less, Sass, Stylus, CoffeeScript, Jade

[Download](#) :

<http://incident57.com/codekit/>

SIMPLIFYING WEBSITE PROGRAMMING

SimpLESS compiles LESS into beautiful CSS



Short intro

It's easy to understand why thousands of developers use SimpLESS. It compiles your *.less files into valid CSS.

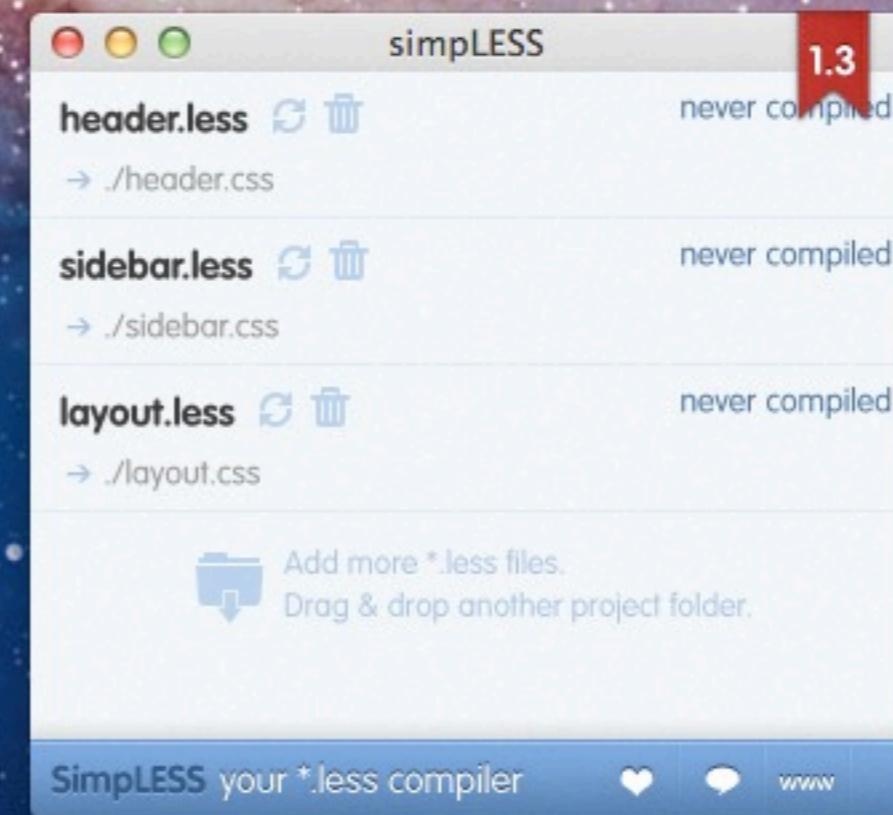
Available **for free** for mac, linux and pc.

[Download SimpLESS](#)

IT'S FREE FOR EVERY PLATFORM

[Source Code](#)

PROJECT ON GITHUB



<http://wearekiss.com/simpless>

The screenshot shows the Crunch application window. On the left, there's a sidebar with icons for creating a new file, opening a folder, and saving. A large button labeled 'CRUNCH IT!' is prominently displayed. Below these are two buttons: 'Website Files' and 'main.less'. The main area is a code editor with the following LESS code:

```
1 //colours
2 @lightGray: #bbb;
3 @darkRed: #b83000;
4 @curlyBraceColour: white;
5 @defaultTextColour: black;
6
7 //fonts
8 @defaultFont: 'Georgia', Times, serif;
9 @headingFont: 'Myriad Pro', 'Droid Serif', 'Georgia', serif;
10 @profileHeaderFont: 'Droid Serif', 'Myriad Pro', 'Georgia', sans-serif;
11
12 body {
13   margin: 0 auto;
14   font-family: @defaultFont;
15   font-size: 20px;
16   line-height: 1.6em;
17   padding: 15px;
18   width: 720px;
19 }
20
21 h1, h2, h3, h4 {
22   font-family: @headingFont;
23   display: inline;
24   margin: 0;
25   font-weight: normal;
26 }
27
28 ul, li {
29 }
```

<http://crunchapp.net/>



Windows GUI for LESS.js

WinLess

Less Build Event Script

Online Less Compiler

Online LESS Compiler

This Online LESS Compiler can help you to learn LESS. You can go through the examples below or try your own LESS code.

The examples are based on the [official LESS documentation](#)

[Variables](#) | [Mixins](#) | [Parametric mixins](#)

[Nested rules](#) | [Operations](#) | [Color functions](#)

[Namespaces](#) | [Scope](#) | [Comments](#) | [Importing](#)

[String interpolation](#) | [Escaping](#)

```
// Declaring variables  
@size: 2px;  
@border-width: @size;  
@red: #842210;
```

```
// Using variables  
div#header {  
    border: @border-width solid @red;  
}
```

Compile

```
div#header {  
    border: 2px solid #842210;  
}
```

<http://winless.org>

Least

Least helps you move from your old-fashioned CSS files to something shiny: CSS pre-processors!

Input

[Load demo file](#)[Convert!](#)[Select all](#)

```
.profiles header {  
    line-height: normal;  
    margin-bottom: 15px;  
    text-align: left;  
    padding: 0;  
}  
  
.profiles header h1 {  
    font-family: 'Droid Serif', 'Myriad Pro', 'Georgia', sans-serif;  
    border-bottom: 1px dotted #bbb;  
    margin-bottom: 15px;  
    text-align: left;  
    padding: 0;  
    padding-bottom: 5px;  
    font-size: 60px;  
}
```

Output

```
.profiles {  
    header {  
        line-height: normal;  
        margin-bottom: 15px;  
        text-align: left;  
        padding: 0;  
        h1 {  
            font-family: 'Droid Serif', 'Myriad Pro', 'Georgia', sans-serif;  
            border-bottom: 1px dotted #bbb;  
            margin-bottom: 15px;  
            text-align: left;  
            padding: 0;  
            padding-bottom: 5px;  
            font-size: 60px;  
        }  
    }  
}
```

Warning! Known issues with `@media` queries.

Output language

LESS / Sass Stylus

Indent using

Two spaces Four spaces Tabs

<http://toki-woki.net/p/least/>



<https://github.com/ssanj/less-presentation>

simple
cloudhead

Questions

Thoughts

Thank You!

sanj@uniqueimprints.com

@ssanj