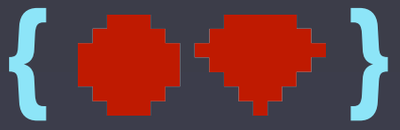
WAH LAU!

CSS CAN BE TESTED TOO!

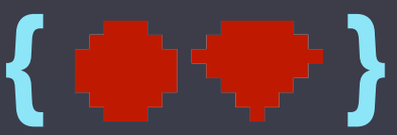


PRESENTED BY

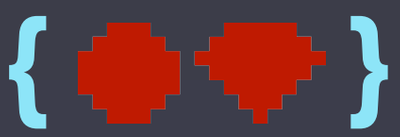
WINSTON TEO

@WINSTONYW

SOFTWARE ENGINEER @ { NEW CONTEXT }



DO YOU WRITE CSS?



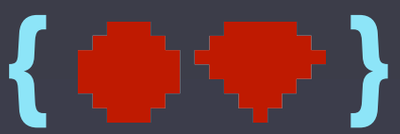
CSS

OR

CSS

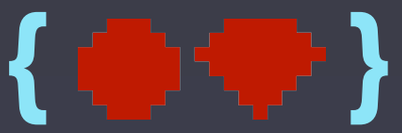
WINSTON

LOVES CSS



BUT

WE HAVE A PROBLEM



My stylesheets are always in a MESS

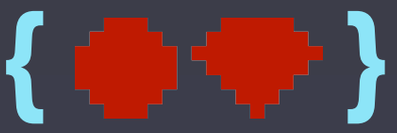

BEAUTIFUL
CSS
MESSY
NEW STYLES ARE ADDED
EXISTING STYLES ARE NOT REUSED
UNUSED STYLES ARE NOT REMOVED
DON’T FIX IT IF IT’S NOT BROKEN
TIME

BEAUTIFUL

WEBSITE

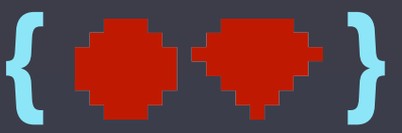
CSS

UGLY



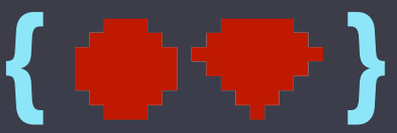
CSS FRAMEWORKS

ARE GREAT WAYS TO WRITE CSS



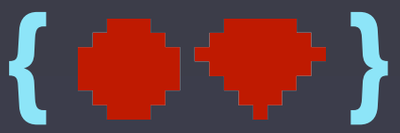
CSS FRAMEWORKS

ARE NOT SOLUTIONS



CSS FRAMEWORKS

ARE PRONE TO ABUSE

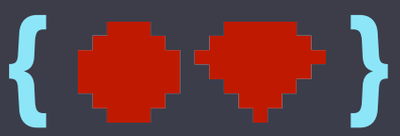


FORGOTTEN

$VARIABLES

AND

@MIXINS



NESTINGS {

NESTINGS {

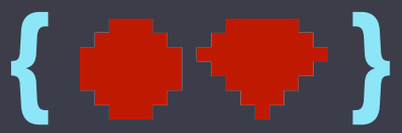
NESTINGS {

NESTINGS { AND MORE NESTINGS.. }

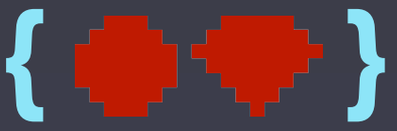
}

}

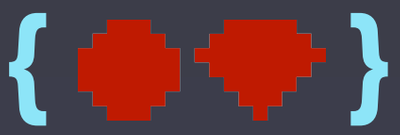
}



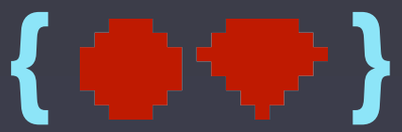
WHAT'S THE SOLUTION?



TEST YOUR CSS!

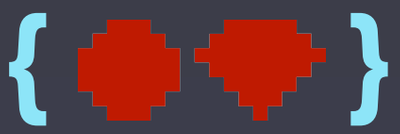


HUH?

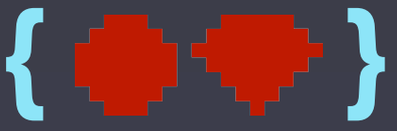


BENEFITS
OF TESTING YOUR SOFTWARE

- ENSURES CODE QUALITY
- REDUCES COST OF CHANGE
- MAKES SOFTWARE ENGINEERING FUN



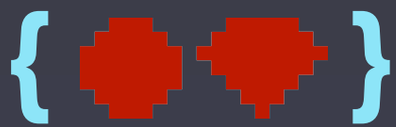
WHAT'S SO FUN?



RED

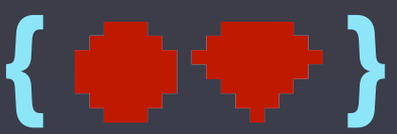
GREEN

REFACTOR



REFACTOR CSS

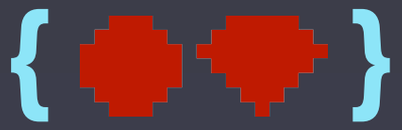
WITH CONFIDENCE



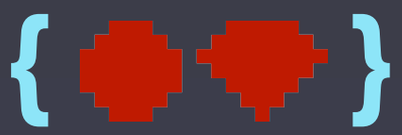
WE ARE ALREADY

TESTING

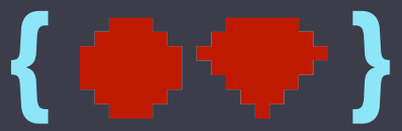
RUBY, HTML AND JS



WHY NOT CSS?



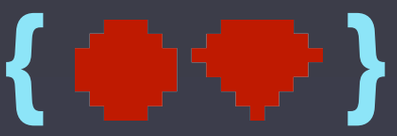
HOW?



VISUAL INSPECTION

REQUIRES REVIEW OF EVERY SINGLE PAGE

- ADD/UPDATE SOME CSS
- REFRESH THE PAGE
- REPEAT
- CHECK ALL PAGES

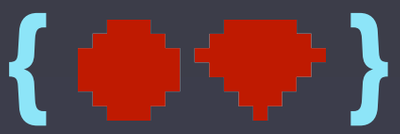



SCALE

STYLE GUIDE

REQUIRES REVIEW OF ONLY ONE PAGE

- MODULAR APPROACH TO BUILDING CSS
- REUSE OF CSS STYLES

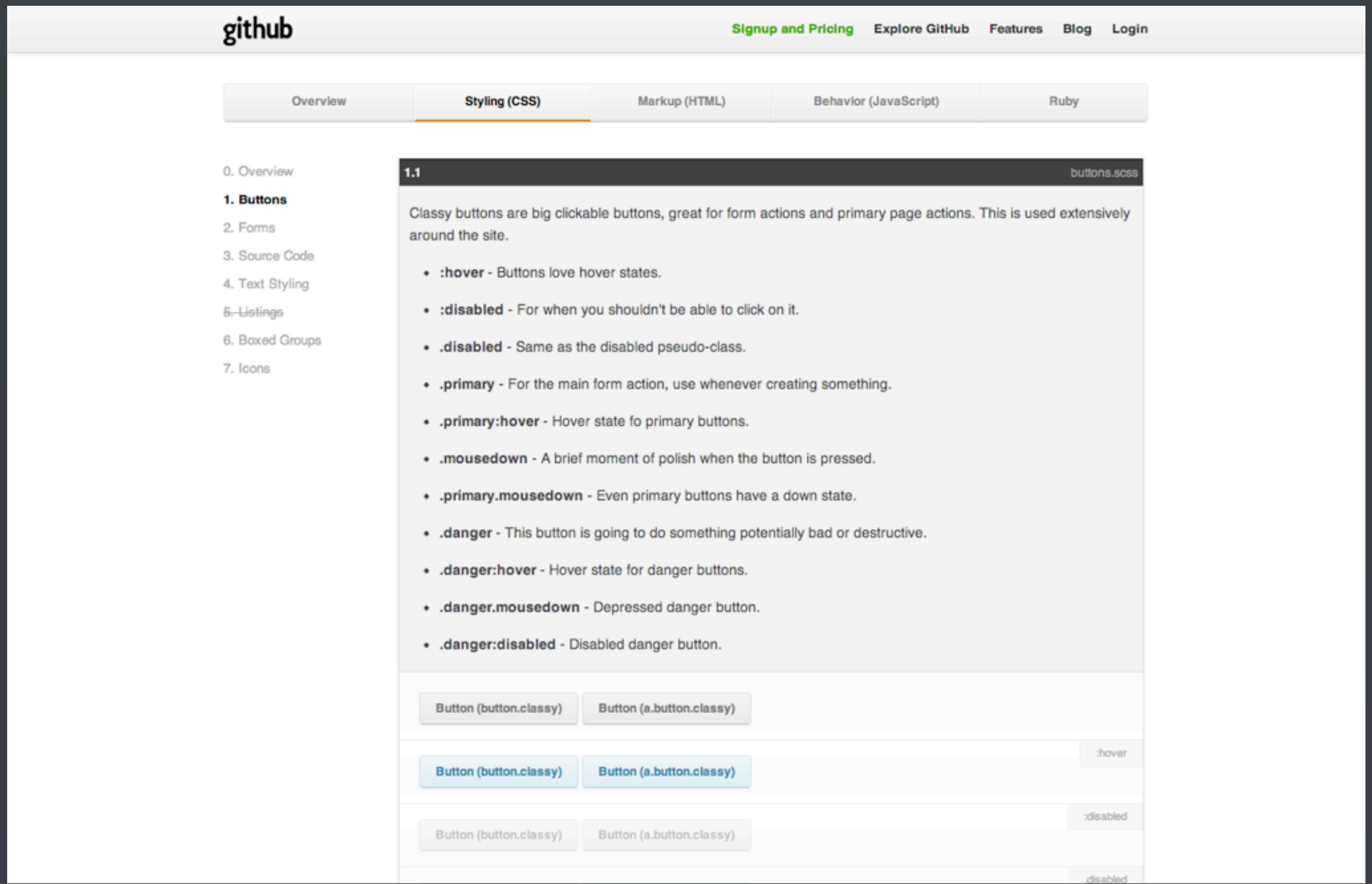


TWITTER

http://twitter.github.com/bootstrap/

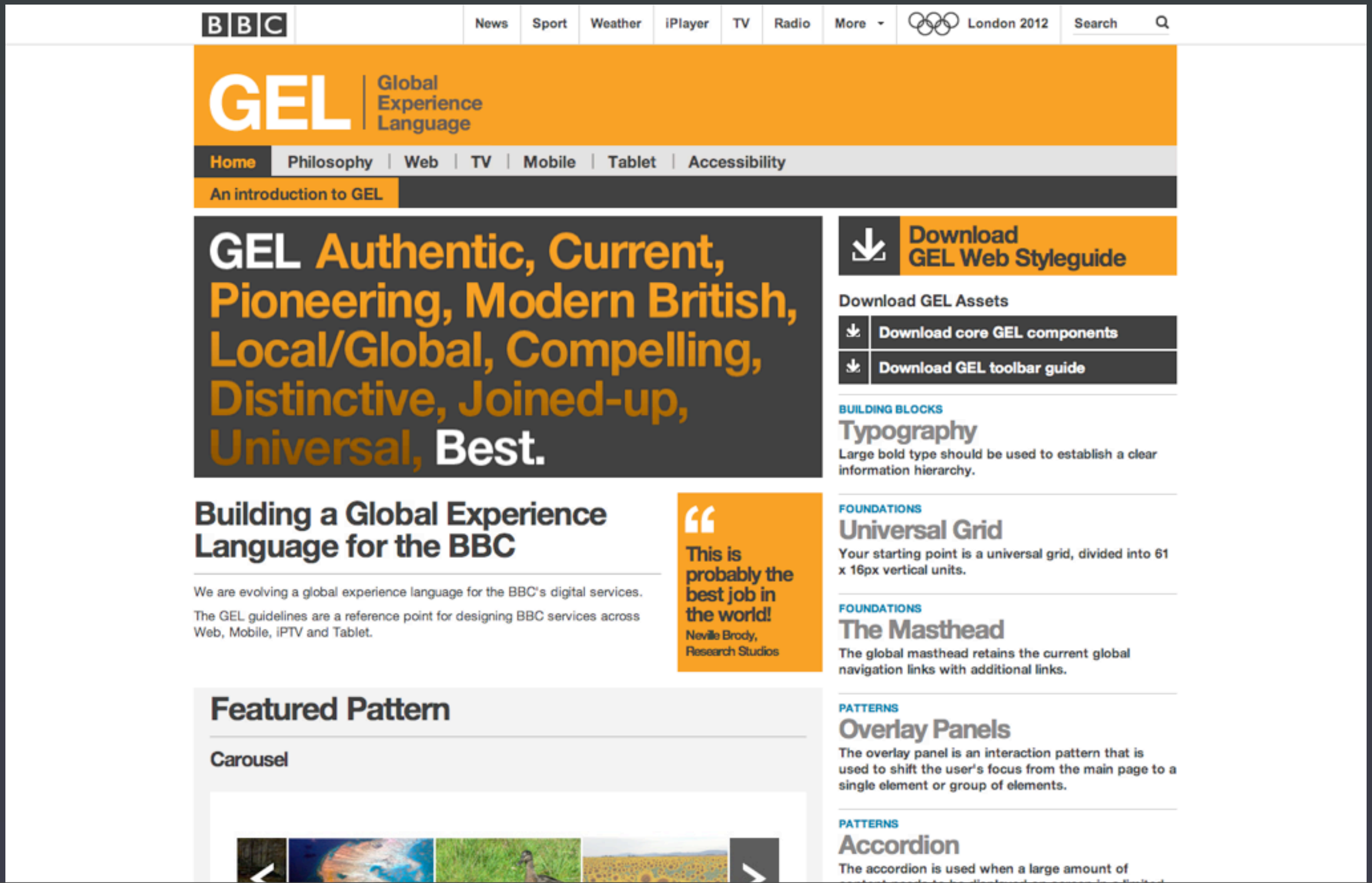
GITHUB

https://github.com/styleguide/css



BBC

http://www.bbc.co.uk/gel/



BBC

http://itservices.stanford.edu/service/web/design/styleguide/modern

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HTML & CSS Style Guide (Stanford Modern)

Home » University Web Resources » Stanford Self-help Web Design Resources » HTML & CSS Style Guide (Stanford Modern)

On this page:

Documentation, Design, and Development (DDD) has developed the current Stanford web templates to comply strictly with XHTML 1.0 and CSS (Cascading Style Sheets) standards set by the W3C (World Wide Web Consortium). CSS allows Web authors to address the graphical layout of a page separately from its content and logical structure. This makes for cleaner, easier-to-update HTML code and the potential to view single HTML files in multiple formats, as appropriate for different contexts and devices.

Tools for Validating Code

- W3C XHTML Validation Service
- W3C CSS Validation Service
- Total Validator (Accessibility Validation)

Cascading Style Sheets

The CSS 2.0 style sheets that define layout, sizes, colors, etc. for the web templates are available for preview.

Sidebar Icons

To invoke these styles you must label your navigation lists `<ul class="calendar">` or paragraphs `<p class="calendar">` with one of these specific class names:

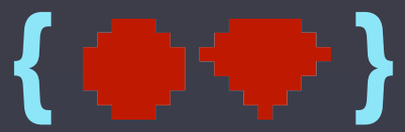
class="calendar" class="computing" class="contact" class="document" class="download"

class="email" class="faq" class="forms" class="login" class="medical"

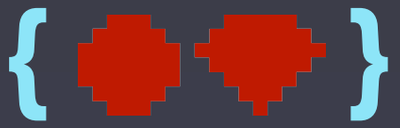
class="navigate" class="people" class="search" class="see-also" class="users"

class="video"

ENOUGH?



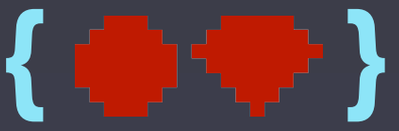
THAT'S NOT TESTING



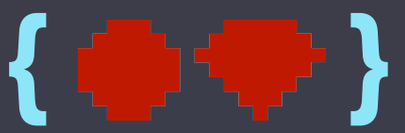
PROOF OF CONCEPT

CACTUS

CSS TESTING FRAMEWORK



GITHUB.COM/WINSTON/CACTUS



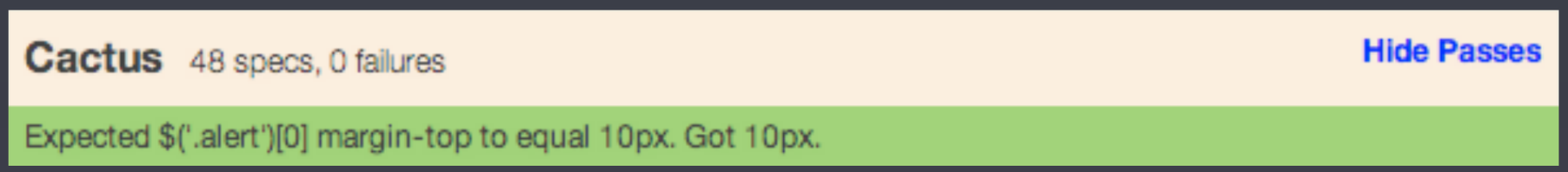
CACTUS GEM

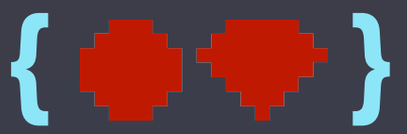
TESTS YOUR CSS WITH JAVASCRIPT

- ASSERT CSS STYLES

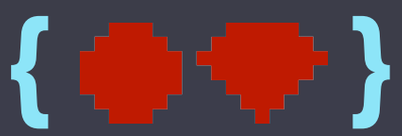
```
Cactus.expect(".header", "width").toEqual("800px");
Cactus.expect(".header", "height").toEqual("200px");
```

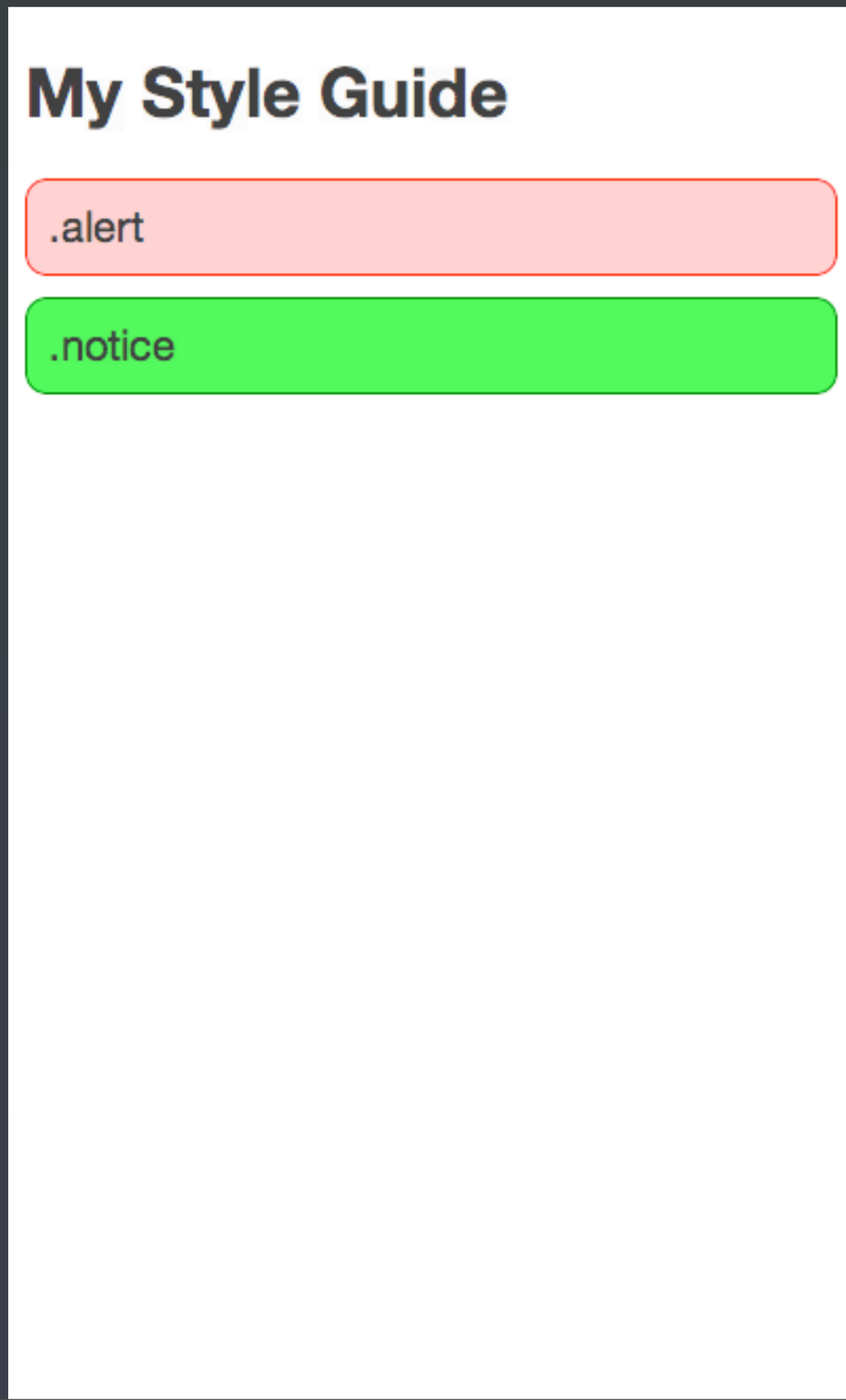
- PASSES AND FAILURES IN DEV AND TEST ENV





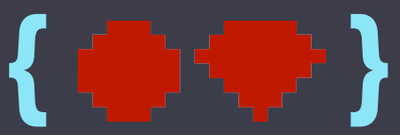
DEMO TIME



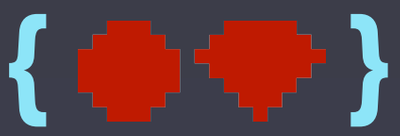



```scss
/* assets/stylesheets/flash.scss */

.alert {
  padding: 10px;
  margin: 10px 0;
  @include border-radius(10px);
  font-size: 20px;

  border: 1px solid red;
  background: lighten(red, 40%);
}

.notice {
  padding: 10px;
  margin: 10px 0;
  @include border-radius(10px);
  font-size: 20px;

  border: 1px solid green;
  background: lighten(green, 40%);
}
```

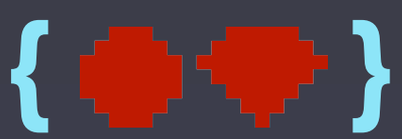
```
/* public/cactus_spec/application_spec.js */

//////////
// .alert

Cactus.expect(".alert").toHaveMargin("10px 0px");
Cactus.expect(".alert").toHavePadding("10px");
Cactus.expect(".alert").toHaveBorderWidth("1px");

Cactus.expect(".alert").toHaveBorderColor("#FF0000");
Cactus.expect(
  ".alert", "background-color"
).toHaveColor("#FFCCCC");

Cactus.expect(".alert p", "font-size").toEqual("20px");
```



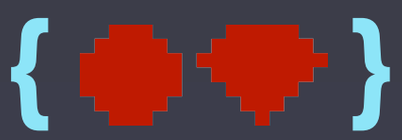
```
/* public/cactus_spec/application_spec.js */

//////////
// .notice

Cactus.expect(".notice").toHaveMargin("10px 0px");
Cactus.expect(".notice").toHavePadding("10px");
Cactus.expect(".notice").toHaveBorderWidth("1px");

Cactus.expect(".notice").toHaveBorderColor("#008000");
Cactus.expect(
  ".notice", "background-color"
).toHaveColor("#4DFF4D");

Cactus.expect(".notice p", "font-size").toEqual("20px");
```



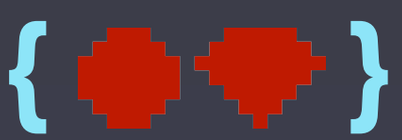
```
/* assets/stylesheets/flash_refactored_1.scss */

@mixin flash {
  padding: 10px;
  margin: 10px 0;
  @include border-radius(10px);
  font-size: 20px;
}

.alert {
  @include flash;

  border: 1px solid red;
  background: lighten(red, 40%);
}

.notice {
  @include flash;

  border: 1px solid green;
  background: lighten(green, 40%);
}
```



```
/* assets/stylesheets/flash_refactored_2.scss */

.round-box {
  padding: 10px;
  margin: 10px 0;
  border: 1px solid;
  @include border-radius(10px);
}
.large-font {
  font-size: 20px;
}

.alert {
  @extend .round-box;
  @extend .large-font;

  border-color: red;
  background: lighten(red, 40%);
}

.notice {
  @extend .round-box;
  @extend .large-font;

  border-color: green;
  background: lighten(green, 40%);
}
```

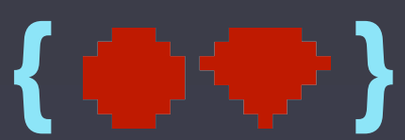


```
/* public/cactus_spec/application_spec.js */

//////////
// Refactored

function test_round_box(selector) {
  Cactus.expect(selector).toHaveMargin("10px 0px");
  Cactus.expect(selector).toHavePadding("10px");
  Cactus.expect(selector).toHaveBorderWidth("1px");
}

function test_large_font(selector) {
  Cactus.expect(selector, "font-size").toEqual("20px");
}

test_round_box(".alert");
test_large_font(".alert p");
Cactus.expect(".alert").toHaveBorderColor("#FF0000");
Cactus.expect(".alert", "background-color").toHaveColor("#FFCCCC");

test_round_box(".notice");
test_large_font(".notice p");
Cactus.expect(".notice").toHaveBorderColor("#008000");
Cactus.expect(".notice", "background-color").toHaveColor("#4DFF4D");
```



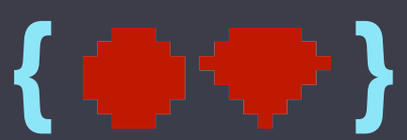
```
/* views/application/index.haml */

.profile
  = image_tag "p1.jpg", alt: "Winston Teo"
  .name Winston Teo


/* public/cactus_spec/application_spec.js */

Cactus.expect(".profile", "width").toEqual("200px");
test_round_box(".profile");
test_large_font(".profile .name");
```

```
/* assets/stylesheets/profile.scss */

.profile {
  width      : 200px;
  @extend .round-box;
  text-align: center;

  .name {
    @extend .large-font;
  }
}
```



```
/* views/application/index.haml */

.profile
  = image_tag "p1.jpg", alt: "Winston Teo"
  .name Winston Teo
  %p Smart and Handsome

/* public/cactus_spec/application_spec.js */

Cactus.expect(".profile", "width").toEqual("200px");
test_round_box(".profile");
test_large_font(".profile .name");
Cactus.expect(".profile p", "font-size").toEqual("12px");
```

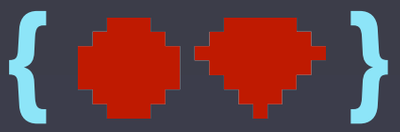
```
/* assets/stylesheets/profile.scss */

.profile {
  width      : 200px;
  @extend .round-box;
  text-align: center;

  .name {
    @extend .large-font;
  }
}

p { font-size: 12px;}
```



RUN SPECS

FAIL

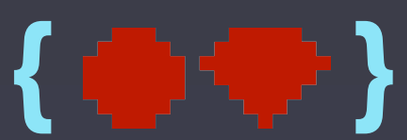
MAKE SPECS PASS



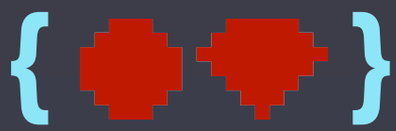
```haml
/* views/application/index.haml */

.profile
  = image_tag "p1.jpg", alt: "Winston Teo"
  .name Winston Teo
  %p Smart and Handsome
```

```
/* public/cactus_spec/application_spec.js */

Cactus.expect(".profile", "width").toEqual("200px");
test_round_box(".profile");
test_large_font(".profile .name");
Cactus.expect(".profile p", "font-size").toEqual("12px");
```

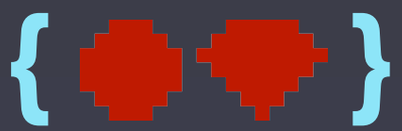
```
/* assets/stylesheets/profile.scss */

.profile {
  width      : 200px;
  @extend .round-box;
  text-align: center;

  .name {
    @extend .large-font;
  }

  p { font-size: 12px;}
}
```



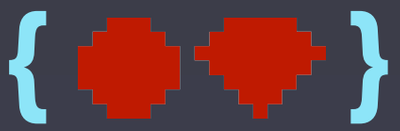
AUTOMATED TESTS



```
/* spec/spec_helper.rb */

RSpec::Matchers.define :be_cactus do
  match do |actual|
    all(".cactus_fail").blank?
  end

  failure_message_for_should do |actual|
    message = "Oei! Something's wrong with the CSS on
               '#{actual.current_url} lah!'\n"
    all(".cactus_fail").each do |failure|
      message += "- #{failure.text}\n"
    end
    message
  end
end

/* spec/requests/cactus_spec.rb */

require 'spec_helper'

describe 'rspec and capybara integration with cactus', js: true do
  it "is cactus-ready " do
    visit root_path
    page.should be_cactus
  end
end
```



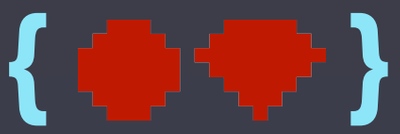
TDD?



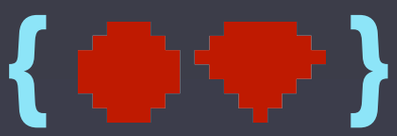
CACTUS WORKFLOW

THE NOT-SO-TDD WAY

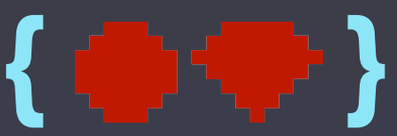
- ITERATE ON STYLEGUIDE
- LOCKDOWN STYLEGUIDE
- WRITE CACTUS SPECS AROUND STYLEGUIDE
- ~ REGRESSION TESTING



POSSIBILITIES



ARE YOU CONVINCED?



WAH LAU!
CSS CAN BE TESTED TOO!

THANK YOU

@WINSTONYW