CSS MODULES

Riku Rouvila
github.com/rikukissa

index.html

```
1   <!DOCTYPE html>
2   <html>
3     <head>
4       <link rel="stylesheet" href="index.css">
5       <meta charset="utf-8">
6     </head>
7     <body>
8       <h1 class="title">
9         Riku's homepage
10      </h1>
11
12      <p>Welcome to my homepage!</p>
13
14      <button class="button">
15        Click for dänk memes
16      </button>
17    </body>
18  </html>
19
```
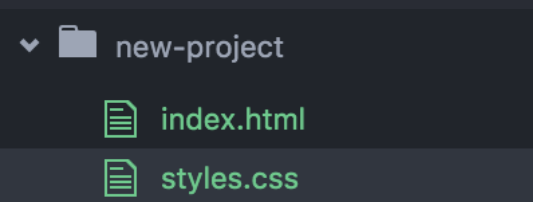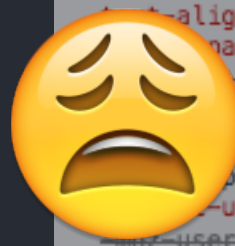
styles.css

```
1   .title {
2     font-size: 20px;
3   }
4
5   .button {
6     background: red;
7     padding: 1em 2em;
8     font-weight: bold;
9   }
10
```

All selectors are globally scoped

😩

```css
border: 1px solid transparent;
  border-radius: 4px;
}
.btn:focus,
.btn:active:focus,
.btn.active:focus,
.btn.focus,
.btn:active.focus,
.btn.active.focus {
  outline: 5px auto -webkit-focus-ring-color;
  outline-offset: -2px;
}
.btn:hover,
.btn:focus,
.btn.focus {
  color: #333;
  text-decoration: none;
}
.btn:active,
.btn.active {
  background-image: none;
  outline: 0;
  -webkit-box-shadow: inset 0 3px 5px rgba(0, 0, 0, .125);
          box-shadow: inset 0 3px 5px rgba(0, 0, 0, .125);
}
.btn.disabled,
.btn[disabled],
fieldset[disabled] .btn {
  cursor: not-allowed;
  filter: alpha(opacity=65);
  -webkit-box-shadow: none;
          box-shadow: none;
  opacity: .65;
}
.caret {
  display: inline-block;
  width: 0;
  height: 0;
  margin-left: 2px;
  vertical-align: middle;
  border-top: 4px dashed;
  border-top: 4px solid \9;
  border-right: 4px solid transparent;
  border-left: 4px solid transparent;
}
.dropup,
.dropdown {
  position: relative;
}
.dropdown-toggle:focus {
  outline: 0;
}
.dropdown-menu {
  position: absolute;
  top: 100%;
  left: 0;
  z-index: 1000;
  display: none;
```

```css
.btn-default:hover {                                    bootstrap.css:3060
  color: #333;
  background-color: #e6e6e6;
  border-color: #adadad;
}
.btn.focus, .btn:focus, .btn:hover {                    buttons.less:36
  color: #333;
  text-decoration: none;
}
.btn-default {                                          bootstrap.css:3049
  color: #333;
  background-color: #fff;
  border-color: #ccc;
}
.btn {                                                  buttons.less:13
  display: inline-block;
  padding: 6px 12px;
  margin-bottom: 0;
  font-size: 14px;
  font-weight: 400;
  line-height: 1.42857143;
  text-align: center;
  white-space: nowrap;
  vertical-align: middle;
  touch-action: manipulation;
  touch-action: manipulation;
  cursor: pointer;
  -webkit-user-select: none;
  -moz-user-select: none;
  -ms-user-select: none;
  user-select: none;
  background-image: none;
  border: 1px solid transparent;
  border-radius: 4px;
}
button, input, select, textarea {                       scaffolding.less:41
  font-family: inherit;
  font-size: inherit;
  line-height: inherit;
}
button, html input[type=button], input[type=reset], input[type=submit] {   normalize.less:290
  -webkit-appearance: button;
  cursor: pointer;
}
button, select {                                        normalize.less:277
  text-transform: none;
}
button {                                                normalize.less:266
  overflow: visible;
}
button, input, optgroup, select, textarea {             normalize.less:252
  margin: 0;
  font: inherit;
  color: inherit;
}
* {                                                     bootstrap.css:1062
  -webkit-box-sizing: border-box;
  -moz-box-sizing: border-box;
  box-sizing: border-box;
}
```

```javascript
window.char = '#';
window.length = 100;
window.points = 0;
window.paused = true;
window.emptyChar = '-';

window.startGame = function startGame() {
  window.paused = false;
  window.players = [];

  for(window.i = 0; window.i < 10; window.i++) {
    window.players.push(new window.Player());
  }

  window.game.start(players);
}
```

JS Tutorial

JavaScript Best Practices

Avoid global variables, avoid new, avoid ==, avoid eval()

Avoid Global Variables

Minimize the use of global variables.

This includes all data types, objects, and functions.

Global variables and functions can be overwritten by other scripts.

Use local variables instead, and learn how to use closures.

BEM

.Block__Element—modifier

```css
.button {
  padding: 6px 12px;
  background: blue;
}

.button__icon {
  display: inline-block;
  width: 12px;
  height: 12px;
}

.button--disabled {
  opacity: 0.5;
  cursor: not-allowed;
}

.dropdown {
  position: relative;
}

.dropdown__toggle-button {
  background: red;
}

.dropdown__menu {
  position: absolute;
  top: 100%;
  left: 0;
  z-index: 1000;
```

Locally scoped CSS files

button.css

.button { /* ... */ }

header.css

.button { /* ... */ }

dropdown.css

.button { /* ... */ }

search.css

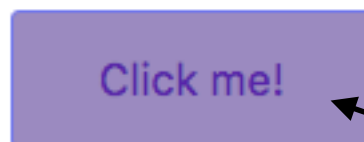.button { /* ... */ }
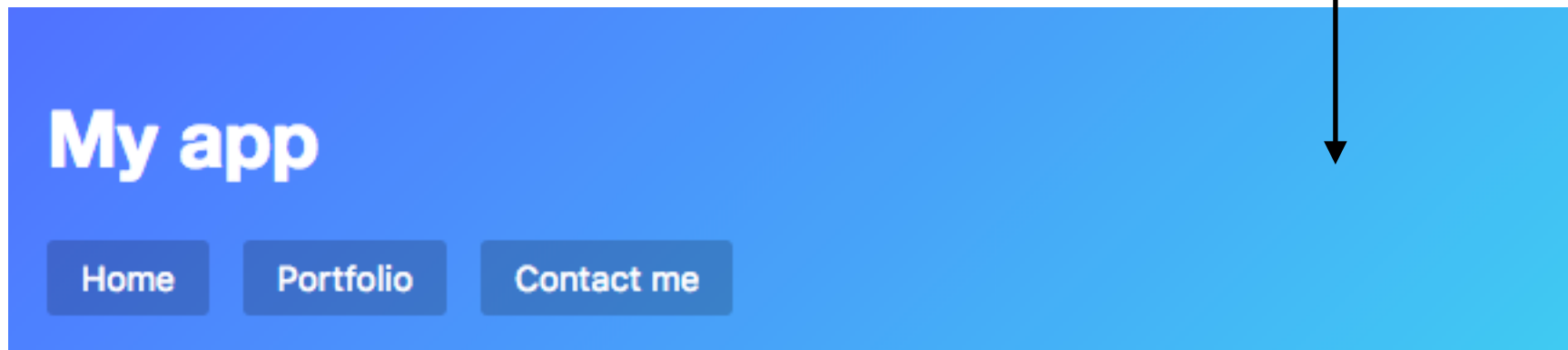
<Header />

My app

Home   Portfolio   Contact me

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed posuere interdum sem. Quisque ligula eros ullamcorper quis, lacinia quis facilisis sed sapien. Mauris varius diam vitae arcu. Sed arcu lectus auctor vitae, consectetuer et venenatis eget velit. Sed augue orci, lacinia eu tincidunt et eleifend nec lacus.

Click me!

<Button />

header.css

```css
.header {
  background: linear-gradient(135deg, #6069ff 0%, #53cbf1 100%);
  padding: 1em;
  color: #fff;
}


.btn {
  padding: 0.5em 1em;
  border: 0;
  background: rgba(0, 0, 0, 0.2);
  color: #fff;
  font-size: 14px;
  margin-right: 1em;
  border-radius: 3px;
}
```

button.css

```css
.btn {
  padding: 1em 2em;
  border: 1px solid #776fec;
  background: #9c88bf;
  border-radius: 3px;
  cursor: pointer;
  font-size: 16px;
  color: #5b11a7;
}
```


<Header />

My app

Home   Portfolio   Contact me

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed posuere interdum sem. Quisque ligula eros ullamcorper quis, lacinia quis facilisis sed sapien. Mauris varius diam vitae arcu. Sed arcu lectus auctor vitae, consectetuer et venenatis eget velit. Sed augue orci, lacinia eu tincidunt et eleifend nec lacus.

Click me!

<Button />

```
<link rel="stylesheet" href="/css/button.css">
<link rel="stylesheet" href="/css/header.css">
```

```
.btn {                                          header.css:10
    padding: ▶0.5em 1em;
    border: ▶0;
    background: ▶■ rgba(0, 0, 0, 0.2);
    color: □#fff;
    font-size: 14px;
    margin-right: 1em;
    border-radius: ▶3px;
}
```
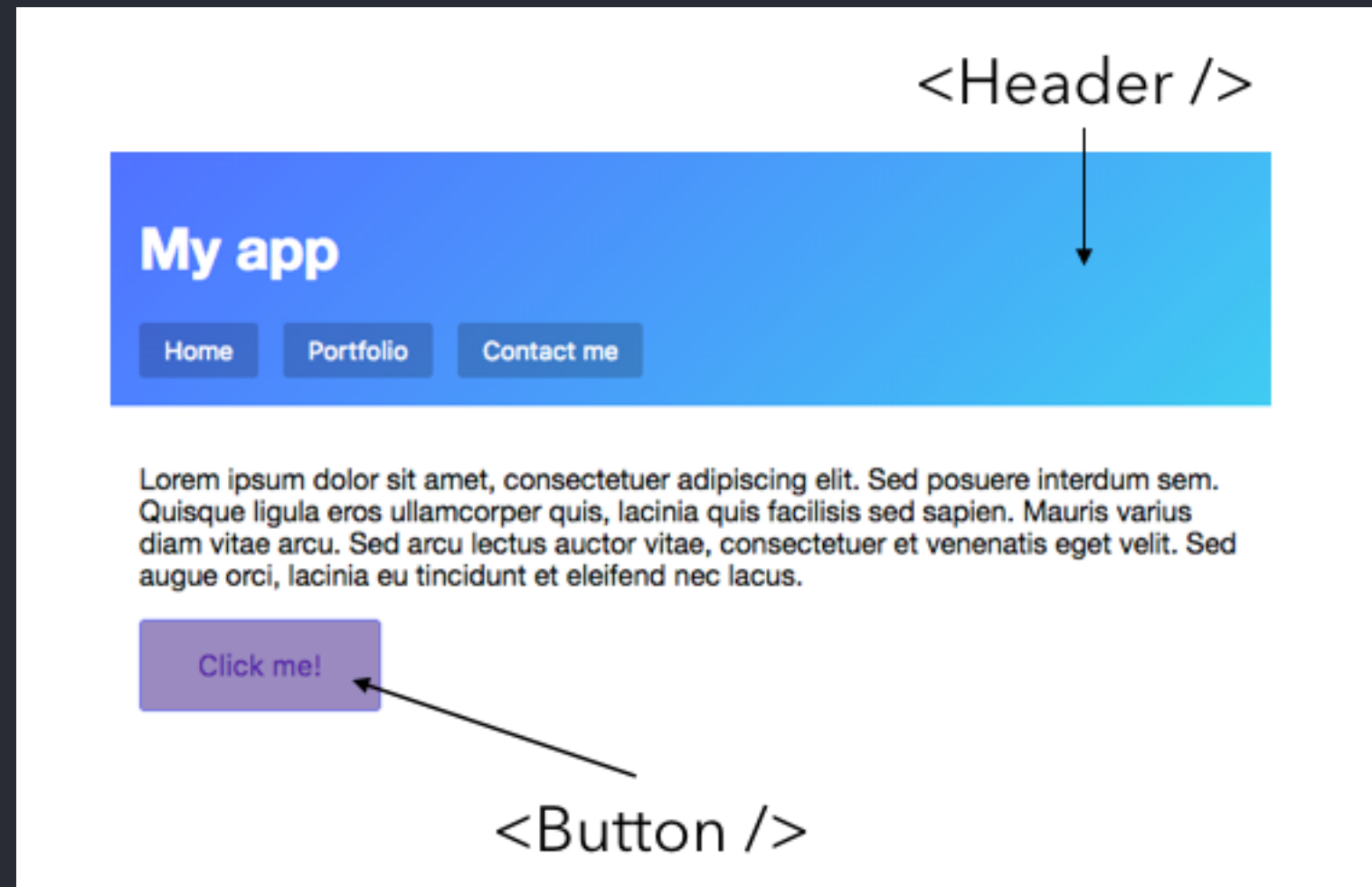
```
.btn {                                          button.css:2
    padding: ▶1em 2em;
    border: ▶1px solid ■#776fec;
    background: ▶■ #9c88bf;
    border-radius: ▶3px;
    cursor: pointer;
    font-size: 16px;
    color: ■#5b11a7;
}
```

Without CSS Modules
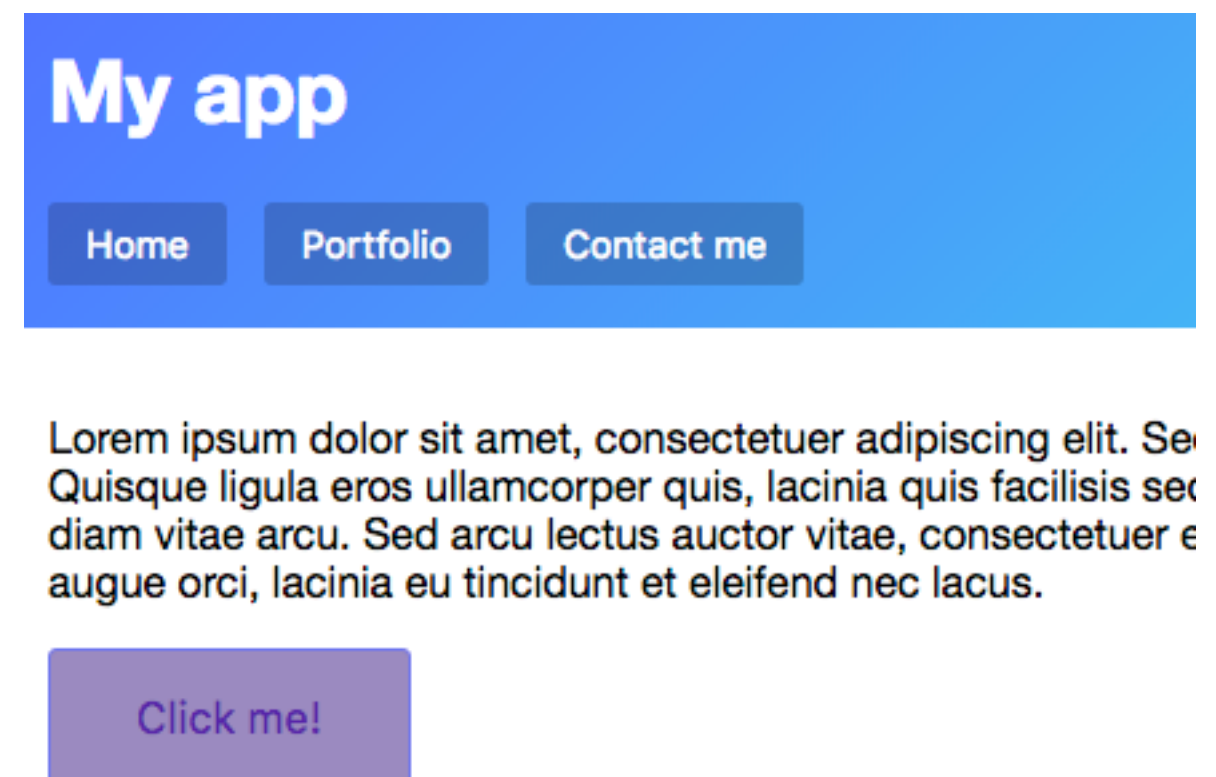
```
.btn {                          header.css:10
    padding:▶0.5em 1em;
    border:▶0;
    background:▶■ rgba(0, 0, 0, 0.2);
    color: □#fff;
    font-size: 14px;
    margin-right: 1em;
    border-radius:▶3px;
}

.btn {                          button.css:2
    padding:▶1em 2em;
    border:▶1px solid ■ #776fec;
    background:▶■ #9c88bf;
    border-radius:▶3px;
    cursor: pointer;
    font-size: 16px;
    color: ■ #5b11a7;
}
```
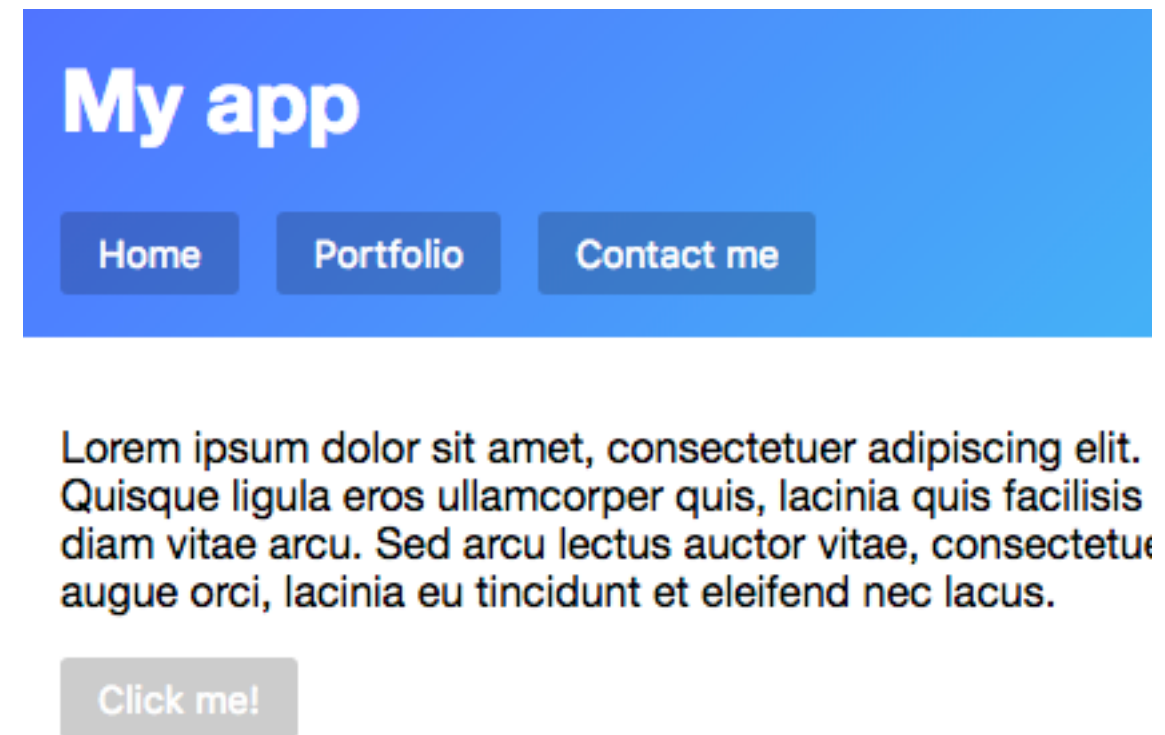
With CSS Modules

```
.btn {                          button.css:2
    padding:▶1em 2em;
    border:▶1px solid ■ #776fec;
    background:▶■ #9c88bf;
    border-radius:▶3px;
    cursor: pointer;
    font-size: 16px;
    color: ■ #5b11a7;
}
```

Generated CSS file

```css
html, body {
  margin: 0;
  font-family: 'Helvetica Neue';
}
.page__page___1ut7d {
  padding: 1em;
}


.button__btn___30KE4 {
  padding: 1em 2em;
  border: 1px solid #776fec;
  background: #9c88bf;
  border-radius: 3px;
  cursor: pointer;
  font-size: 16px;
  color: #5b11a7;
}


.header__header___sBbZe {
  background: linear-gradient(135deg, #6069ff 0%, #53c
  padding: 1em;
  color: #fff;
}

.header__btn___3bEoh {
  padding: 0.5em 1em;
  border: 0;
  background: rgba(0, 0, 0, 0.2);
  color: #fff;
  font-size: 14px;
  margin-right: 1em;
  border-radius: 3px;
}
```

button.css
.btn

header.css
.btn

Header.js

```javascript
import React from 'react';

export default React.createClass({
  render() {
    return (
      <div className="header">
        <h1>My app</h1>

        <button className="btn">
          Home
        </button>
        <button className="btn">
          Portfolio
        </button>
        <button className="btn">
          Contact me
        </button>
      </div>
    )
  }
});
```

Generated CSS

```css
.header__header___sBbZe {
  background: linear-gradient(135deg,
  padding: 1em;
  color: #fff;
}

.header__btn___3bEoh {
  padding: 0.5em 1em;
  border: 0;
  background: rgba(0, 0, 0, 0.2);
  color: #fff;
  font-size: 14px;
  margin-right: 1em;
  border-radius: 3px;
}
```

.header !== .header__header__sBbZe

Header.js

```javascript
import React from 'react';
import styles from './header.css';




{

  header: 'header__header___sBbZe',
  btn: 'header__btn___3bEoh'
}
```

Header.js

```javascript
import React from 'react';

import styles from './header.css';

/*
 * {
 *   header: 'header__header___sBbZe',
 *   btn: 'header__btn___3bEoh'
 * }
 */

export default React.createClass({
  render() {
    return (
      <div className={styles.header}>
        <h1>My app</h1>

        <button className={styles.btn}>
          Home
        </button>
        <button className={styles.btn}>
          Portfolio
        </button>
        <button className={styles.btn}>
          Contact me
        </button>
      </div>
    )
  }
});
```

```css
.header__header___sBbZe {
  background: linear-gradient(135deg, #6069ff 0%, #5
  padding: 1em;
  color: #fff;
}


.header__btn___3bEoh {
  padding: 0.5em 1em;
  border: 0;
  background: rgba(0, 0, 0, 0.2);
  color: #fff;
  font-size: 14px;
  margin-right: 1em;
  border-radius: 3px;
}
```

No more classname collisions

- **Much** easier to come up with descriptive names
- You don't have to worry about breaking other modules

Explicit style dependency

- No separate "styling" concept

My app

<MyApp />
 <Page /> logic + markup
  <Header /> logic + markup
  <Button /> logic + markup

CSS styles

My app

<MyApp />
  <Page /> logic + markup + page styles
    <Header /> logic + markup + header styles
    <Button /> logic + markup + button styles

Explicit style dependency

- No separate "styling" concept
- Easy use third party components

- react-dropdown
  - dist
    - index.js
  - LICENSE
  - package.json
  - README.md
  - style.css

Separation of real CSS classes

- You can refactor your CSS without having to modify your components
- It is possible to automatically optimize CSS and remove unused styles

```
{
  header: 'optimized___SDS32 optimized___bSyH2p optimized___jhSH4p'
}
```

Thanks!