LessCSS

Myles Braithwaite

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Behind every beautiful thing, there's some kind of pain.

— Bob Dylan

What is LessCSS?

Why?

Ask anyone CSS Sucks!

Not Really
But it's hard.

```html
<h1 style="font-family:Helvetica;font-size:2em;font-weight:normal;">
    <span style="font-weight:bold;">Myles</span>
    <span style="display:none;">Alden</span>
    <span>Braithwaite</span>
</h1>
```

How?

Variables

```
@black: #141414;

p {
    color: @black;
}
```

Tangent
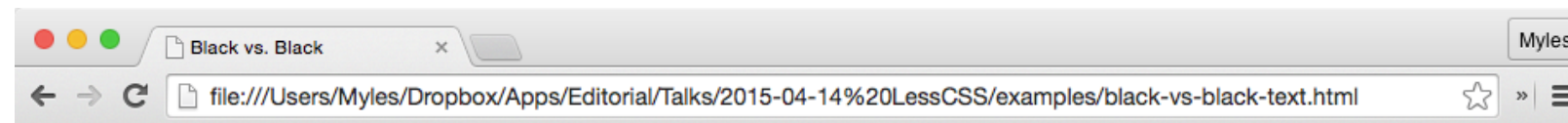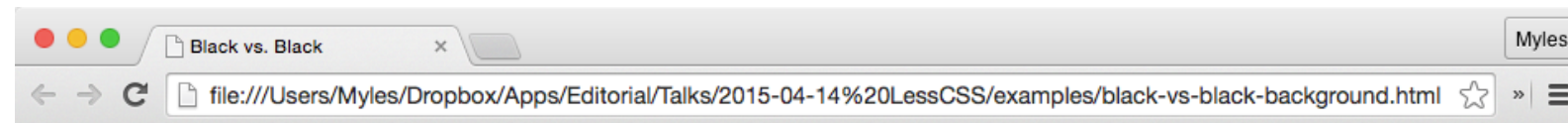
Design Tip: Never Use Black by *Ian Storm Taylor*.

http://myles.github.io/2015-04-14-lesscss/black-vs-black-web-site-text.html

http://myles.github.io/2015-04-14-lesscss/black-vs-black-web-site-background.html

Built in Functions

```less
@blue: rgb(0, 161, 226);
@dark-blue: darken(@blue, 10%);
@light-blue: lighten(@blue, 10%);

a {
    color: @blue;
    text-decoration: none;
    border-bottom: 1px solid @dark-blue;
    &:hover {
        color: @dark-blue;
        border-bottom-color: @blue;
    }
    &:active {
        color: @light-blue;
        border-bottom-color: @dark-blue;
    }
}
```

Fuctions

- **Miscellaneous**: `color`, `image-size`, `image-width`, `image-height`, `convert`, `data-uri`, `default`, `unit`, `get-unit`, and `svg-gradient`.

- **String**: `escape`, `e`, `% format`, and `replace`.

- **List**: `length` and `extract`.

- **Type**: `isnumber`, `isstring`, `iscolor`, `iskeyword`, `isurl`, `ispixel`, `isem`, `ispercentage`, `isunix`, and `isruleset`.

Functions *Math*

— **Math**: `ceil`, `floor`, `percentage`, round, `sqrt`, abs, `sin`, `asin`, cos, `acos`, `tan`, `atan`, `pi`, pow, mod, `min`, and `max`.

Fuctions *Colour*

— **Colour Definition**: rgb, rgba, argb, hsl, hsla, hsv, and hsva.

— **Colour Channel**: hue, saturation, lightness, hsvhue, hsvsaturation, hsvvaule, red, green, blue, alpha, luma, and luminance.

Fuctions *Colour* (continuted)

— **Color Operation**: `saturate`, `desaturate`, `lighten`, `darken`, `fadein`, `Colour`, `fade`, `spin`, `mix`, `greyscale`, and `contrast`.

— **Colour Blending**: `multiply`, `screen`, `overlay`, `softlight`, `hardlight`, `difference`, `exclusion`, `average`, and `negation`.

Loops

```less
.make-columns(4);

.make-columns(@n, @i: 1) when (@i =< @n) {
    .column-@{i} {
        width: (@i * 100% / @n);
    }
    .generate-columns(@n, (@i + 1));
}
```

Outputs

```css
.column-1 { width: 25%; }
.column-2 { width: 50%; }
.column-3 { width: 75%; }
.column-4 { width: 100%; }
```

Mixins

```less
.min-resolution(@size) {
    -webkit-min-device-pixel-ratio: @size;
    -moz-device-pixel-ratio: @size;
    min-resolution: @size;
}

.2x(@path, @w: auto, @h: auto) {
    background-image: url(@path);
    @2x_path: ~`@{path}.replace(/\.\w+$/, function(match) { return "@2x" + match; })`;
    @media (.min-resolution(1.5px)) {
        background-image: url("@{2x_path}");
        background-size: @w @h;
    }
}
```

Extend

```
article.pretty {
    header {
        h1 {
            font-family: 'Sanchez', @serif-family;
        }
    }
    section, footer {
        font-family: 'Questrial', @sans-serif-family;
    }
    section {
        color: @dark-gray;
    }
    footer {
        color: @gray;
    }
}
```

Extend Your Website With
BootstrapCSS

— Font-end Framework for web sites.

— http://getbootstrap.com/

Lorem Ipsum

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Section Two

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Section Three

Aliquam vitae tristique leo. Integer a auctor lorem. Mauris sodales elementum justo vel pellentesque. Vestibulum scelerisque diam feugiat purus vulputate ornare. Pellentesque malesuada lacinia massa at vestibulum. Fusce id nisi a augue laoreet fringilla. Phasellus at mauris tincidunt, lacinia turpis sed, lacinia nisi. Nunc iaculis ornare quam ac cursus. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus condimentum velit ac orci vehicula pharetra. Cras tempus dapibus odio, sit amet iaculis ligula ultricies id. Quisque gravida risus dapibus ipsum congue bibendum. Vestibulum placerat turpis bibendum erat sagittis mollis. Aliquam lectus elit, feugiat fermentum mi quis, porta congue ipsum. Ut nulla orci, gravida eget viverra et, faucibus lacinia enim. Integer porttitor ex leo, at rutrum mauris interdum ut.

Mauris tristique ex velit, vitae lobortis odio pretium eu. Nunc ut maximus tellus. In aliquam pharetra sem ut ultricies. Sed sit amet justo ac ex elementum luctus. Vestibulum mollis arcu id elit molestie, at efficitur sem luctus. Suspendisse pretium nisl ex, ac porttitor orci volutpat vel. Suspendisse congue nisl ac lectus tincidunt, vel imperdiet augue vestibulum. Nullam sem neque, tempor sed pretium ut, luctus quis eros. Duis porta commodo pulvinar. Integer posuere laoreet sollicitudin.

Section Four

Nulla sit amet massa id leo eleifend varius vel eu neque. Donec eleifend metus a eros interdum, non dictum nibh faucibus. Suspendisse vitae leo nec lectus feugiat volutpat. Donec bibendum quis massa vel faucibus. Nam a tempus leo, eu varius est. Vestibulum facilisis id quam id tincidunt. Cras consectetur nec mi sit amet dictum.

- Section Two
- Section Three
- Section Four

Authored by a computer on 14th April, 2015

article.html

```html
<main>
    <article>
        <header>
            <h1>Article Title</h1>
        </header>
        <section>
            <!-- the body of the article -->
        </section>
        <aside>
            <!-- table of contents -->
        </aside>
        <footer>
            <!-- author, published date, copyright -->
        </footer>
    </article>
</main>
```

_layout.less

```less
/* _layout.less START */
main {
    .container();
}
article {
    .make-row();
}
header, footer {
    .make-xs-column(12);
}

section {
    .make-sm-column(8);
}

aside {
    .make-sm-column(4);
    .hidden-xs();
}
/* _layout.less END */
```

Lorem Ipsum

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_typography.less

```
/* _typography.less START */
@font-family-base: 'Questrial', @font-family-sans-serif;
@headings-font-family: 'Sanchez', @font-family-serif;

article {
  header {
    .page-header();
  }

  section {
    p {
      &:first-of-type { .lead(); }
    }
  }

  footer {
    padding-top: ((@line-height-computed / 2) - 1);
    margin: (@line-height-computed * 2) 0 @line-height-computed;
    border-top: 1px solid @page-header-border-color;
  }
}
/* _typography.less END */
```

`_aside.less`

```less
/* _aside.less START */
article {
  aside {
    position: relative;

    .inner {
      position: fixed;
    }

    ul {
      .nav();
      .nav-pills();
      .nav-stacked();
    }
  }
}
/* _aside.less END */
```

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_logo.less

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```less
/* _logo.less START */
aside {
    .logo {
        .text-hide();
        .thumbnail();

        width: 170px;
        height: 170px;

        background-image: url('gtalug.png');
    }
}
/* _logo.less END */
```

style.less

```less
@import "bt/bootstrap.less";

@import "_layout.less";
@import "_typography.less";
@import "_aside.less";
@import "_logo.less";
```

style.css

```css
/* _layout.less START */
main { margin-right: auto; margin-left: auto; padding-left: 15px; padding-right: 15px; }
@media (min-width: 768px) {
  main { width: 750px; }
}
@media (min-width: 992px) {
  main { width: 970px; }
}
@media (min-width: 1200px) {
  main { width: 1170px; }
}
main > .navbar-header, main > .navbar-collapse { margin-right: -15px; margin-left: -15px; }
@media (min-width: 768px) {
  main > .navbar-header, main > .navbar-collapse { margin-right: 0; margin-left: 0; }
}
article { margin-left: -15px; margin-right: -15px; }
header, footer { position: relative; float: left; width: 100%; min-height: 1px; padding-left: 15px; padding-right: 15px; }
section { position: relative; min-height: 1px; padding-left: 15px; padding-right: 15px; }
@media (min-width: 768px) {
  section { float: left; width: 66.66666667%; }
}
aside { position: relative; min-height: 1px; padding-left: 15px; padding-right: 15px; }
@media (min-width: 768px) {
  aside { float: left; width: 33.33333333%; }
}
@media (max-width: 767px) {
  aside { display: none !important; }
}
/* _layout.less END */
```

style.css

```
/* _typography.less START */
article header { padding-bottom: 9px; margin: 40px 0 20px; border-bottom: 1px solid #eeeeee; }
article section p:first-of-type { margin-bottom: 20px; font-size: 16px; font-weight: 300; line-height: 1.4; }
@media (min-width: 768px) {
  article section p:first-of-type { font-size: 21px; }
}
article footer { padding-top: 9px; margin: 40px 0 20px; border-top: 1px solid #eeeeee; }
/* _typography.less END */
```

style.css

```css
/* _aside.less START */
article aside { position: relative; }
article aside .inner { position: fixed; }
article aside ul { margin-bottom: 0; padding-left: 0; list-style: none; }
article aside ul > li { position: relative; display: block; }
article aside ul > li > a { position: relative; display: block; padding: 10px 15px; }
article aside ul > li > a:hover, article aside ul > li > a:focus { text-decoration: none; background-color: #eeeeee; }
article aside ul > li.disabled > a { color: #777777; }
article aside ul > li.disabled > a:hover, article aside ul > li.disabled > a:focus {
    color: #777777; text-decoration: none; background-color: transparent; cursor: not-allowed; }
article aside ul .open > a, article aside ul .open > a:hover, article aside ul .open > a:focus {
    background-color: #eeeeee; border-color: #337ab7; }
article aside ul .nav-divider { height: 1px; margin: 9px 0; overflow: hidden; background-color: #e5e5e5; }
article aside ul > li > a > img { max-width: none; }
article aside ul > li { float: left; }
article aside ul > li > a { border-radius: 4px; }
article aside ul > li + li { margin-left: 2px; }
article aside ul > li.active > a, article aside ul > li.active > a:hover, article aside ul > li.active > a:focus {
    color: #ffffff; background-color: #337ab7; }
article aside ul > li { float: none; }
article aside ul > li + li { margin-top: 2px; margin-left: 0; }
/* _aside.less END */
```

style.css

```css
/* _logo.less START */
aside .logo { font: 0/0 a; color: transparent; text-shadow: none;
    background-color: transparent; border: 0; display: block; padding: 4px;
    margin-bottom: 20px; line-height: 1.42857143; background-color: #ffffff;
    border: 1px solid #dddddd; border-radius: 4px;
    -webkit-transition: border 0.2s ease-in-out;
    -o-transition: border 0.2s ease-in-out;
    transition: border 0.2s ease-in-out; width: 170px;
    height: 170px; background-image: url('gtalug.png'); }
aside .logo > img, aside .logo a > img { margin-left: auto; margin-right: auto; }
aaside .logo:hover, aaside .logo:focus, aaside .logo.active { border-color: #337ab7; }
aside .logo .caption { padding: 9px; color: #333333; }
/* _logo.less END */
```

```
$ wc *.less
        16          27         218 _aside.less
        19          30         219 _layout.less
        12          22         191 _logo.less
        21          50         470 _typography.less
         5          10         126 style.less
        73         139        1224 total

$ lessc --clean-css style.less | wc
         0        1496      119568
```

```
$ uncss http://127.0.0.1:8000/article.html > style.css
$ wc style.css
    370      606     5426 style.css
$ yuicompressor style.css -o style.min.css
$ wc style.min.css
      0       86     4348 style.min.css
```

Installation/Usage

Command Line

— `npm install -g lessc`

— `lessc style.less > style.css`

Client-side usage

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

<script src="less.js" type="text/javascript"></script>
```

Sass

Syntactically Awesome Style Sheets

Variables

Sass

```scss
$color: #141414;

p {
    color: $color;
}
```

Less

```less
@color: #141414;

p {
    color: @color;
}
```

Nesting

Sass and Less

```
a {
    color: red;
    &:hover {
        color: blue;
    }
}
```

Mixins

Sass

```
@mixin bordered {
    border-top: dotted 1px black;
    border-bottom: solid 2px black; }

span { @include bordered; }
```

Less

```
.bordered {
    border-top: dotted 1px black;
    border-bottom: solid 2px black; }

span { .bordered(); }
```

Selector Inheritance *Sass Only*

```
.bordered { border: 1px solid black; }

span.one { @extend .bordered; color: blue; }

span.two { @extend .bordered; color: red; }
```

Output

```
.bordered, span.one, span.two { border: 1px solid black; }

span.one { color: blue; }

span.two { color: red; }
```

Myles Braithwaite
@mylesb

SASS has a really cool for each function.

📍 Henry Farm, Toronto

↩ ⟳ ★ ᴵᴵᴵ •••

```
$icons: twitter github instagram email;

@each $icon in $icons {
    .#{$icon} a {
        background-image: image-url("#{$icon}.svg");
    }
}
```

2:13 PM - 31 Mar 2015

Reply to @mylesb

Trends

#housie ↗ Promoted by TD (Canada)   #EqualPayDay   Percy Sledge   #ToTheGirls

Guitar Hero   WWDC   Queen's Park   #BringBackOurGirls   Dennis Quaid   #HIMSS15

Sass is pretty cool
And is worth it's own talk

Questions

Contact Me

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Attributions

— Black Cat photographed by *Simon Law*.