FRONTEND DEV TOOLS

Intro

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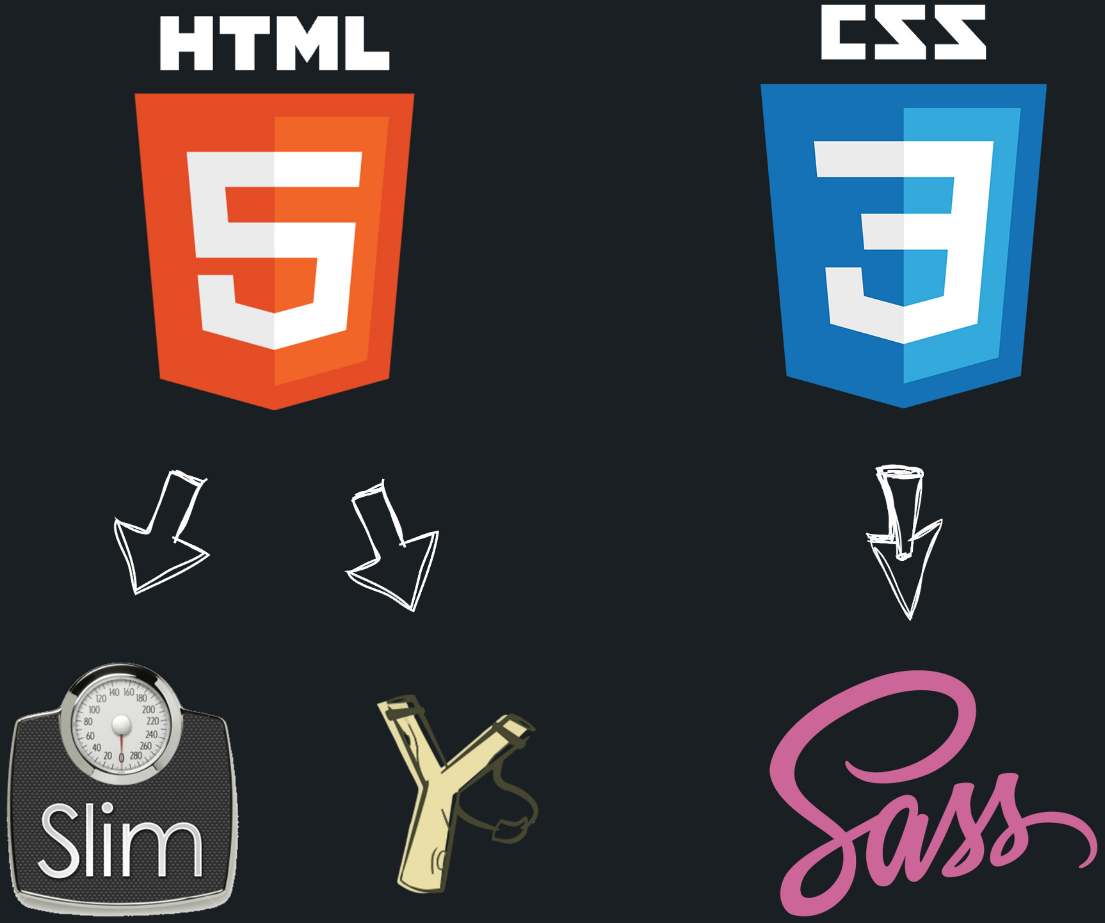

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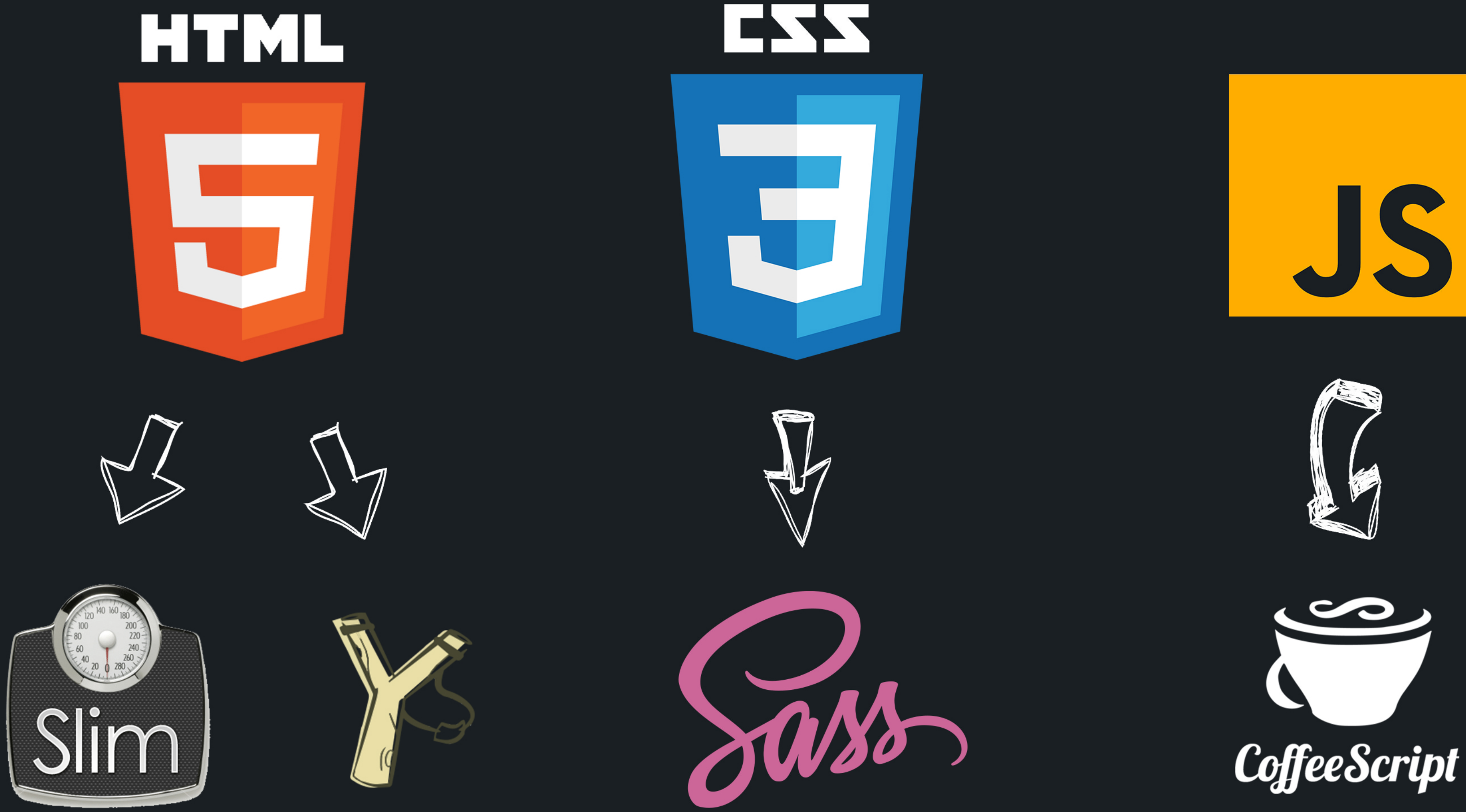

HTML VS HAML & SLIM

HTML

```html
<section id="users">
  <div class="user" data-user-id="45">
    <strong class="user__nickname">
      czajkovsky
    </strong>
    Some info about this user.
  </div>
</section>
```

HTML VS HAML & SLIM

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HAML

```haml
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HAML

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SLIM

```slim
section#users
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    strong.user__nickname czajkovsky
    | Some info about this user.
```

PROS

enforces on developer correct indent

you don’t have to remember about closing tags

code is much shorter

HTML VS HAML & SLIM

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new developer must be familiar with it
(learning takes 20 minutes)

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HAML VS SLIM

Slim is faster

HAML is more popular

Slim allows you to define custom shortcuts

CSS vs Sass (SCSS)

CSS

```css
.users {
  background: #fff;
}
.users h3 {
  color: #000;
}
```

CSS vs Sass (SCSS)

CSS

```css
.users {
  background: #fff;
}
.users h3 {
  color: #000;
}
```

SCSS

```scss
.users {
  background: #fff;
  h3 {
    color: #000;
  }
}
```

CSS vs Sass (SCSS)

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```css
.users {
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SCSS

```scss
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  background: #fff;
  h3 {
    color: #000;
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}
```

Sass

```sass
.users
  background: #fff;
  h3
    color: #000;
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CSS vs Sass (SCSS)

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```css
.users {
  background: #fff;
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  color: #000;
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SCSS

```scss
.users {
  background: #fff;
  h3 {
    color: #000;
  }
}
```

Sass

```sass
.users
  background: #fff;
  h3
    color: #000;
```

Pros

code is more DRY, much shorter and easier to maintain

CSS vs **Sass** (**SCSS**)

CSS

```
.users {
  background: #fff;
}
.users h3 {
  color: #000;
}
```

SCSS

```
.users {
  background: #fff;
  h3 {
    color: #000;
  }
}
```

Sass

```
.users
  background: #fff;
  h3
    color: #000;
```

Pros

code is more DRY, much shorter and easier to maintain

Cons

no cons :)

CSS vs **Sass** (**SCSS**)

CSS

```css
.users {
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```

SCSS

```scss
.users {
  background: #fff;
  h3 {
    color: #000;
  }
}
```

Sass

```sass
.users
  background: #fff;
  h3
    color: #000;
```

Pros

code is more DRY, much shorter and easier to maintain

Cons

no cons :)

Sass vs SCSS

Sass has more concise syntax
(doesn’t require curly brackets, semicolons)

SCSS is compatible with CSS

Sass variables & reference symbol

Variables

SCSS

```scss
$width: 1rem;
.foo {
  width: $width;
  height: $width;
}
```

CSS

```css
.foo {
  width: 1rem;
  height: 1rem;
}
```

Sass variables & reference symbol

Variables

SCSS

```scss
$width: 1rem;
.foo {
  width: $width;
  height: $width;
}
```

CSS

```css
.foo {
  width: 1rem;
  height: 1rem;
}
```

Reference symbol

SCSS

```scss
.foo {
  color: #f00;
  &.bar {
    height: #000;
  }
}
```

CSS

```css
.foo {
  color: #f00;
}
.foo.bar {
  color: #000;
}
```

Sass variables & reference symbol

Variables

SCSS

```scss
$width: 1rem;
.foo {
  width: $width;
  height: $width;
}
```

CSS

```css
.foo {
  width: 1rem;
  height: 1rem;
}
```

Reference symbol

SCSS

```scss
.foo {
  color: #f00;
  &.bar {
    height: #000;
  }
}
```

CSS

```css
.foo {
  color: #f00;
}
.foo.bar {
  color: #000;
}
```

SCSS

```scss
.foo {
  color: #f00;
  .ie7 & {
    height: #000;
  }
}
```

CSS

```css
.foo {
  color: #f00;
}
.ie7 .foo {
  color: #000;
}
```

Sass BEM syntax

Reference symbol - BEM syntax (Sass 3.3)

SCSS

```scss
.user {
  &__nickname {
    color: #f00;
  }
  &--unverified {
    background: #00f;
  }
}
```

CSS

```css
.user__nickname {
  color: #f00;
}
.user--unverified {
  background: #00f;
}
```

Sass BEM syntax

Reference symbol - BEM syntax (Sass 3.3)

SCSS

```scss
.user {
  &__nickname {
    color: #f00;
  }
  &--unverified {
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  }
}
```

CSS

```css
.user__nickname {
  color: #f00;
}
.user--unverified {
  background: #00f;
}
```

Pros

CSS reflects HTML structure

easier to read

Cons

HTML classes names can be long

Sass mixins & functions

Mixins

SCSS

```scss
@mixin square($size) {
  width: $size;
  height: $size;
}

.post {
  @include square(1rem);
}
```

CSS

```css
.post {
  width: 1rem;
  height: 1rem;
}
```

Sass mixins & functions

Mixins

SCSS

```scss
@mixin square($size) {
  width: $size;
  height: $size;
}

.post {
  @include square(1rem);
}
```

CSS

```css
.post {
  width: 1rem;
  height: 1rem;
}
```

Functions

SCSS

```scss
@function double($value) {
  @return $value * 2;
}

.post {
  width: double(14px);
}
```

CSS

```css
.post {
  width: 28px;
}
```

Sass @extend, placeholders

@extend the bad way

SCSS

```scss
.button {
  border-color: #f00;
}

.button--big {
  @extend .button;
  background: #00f;
}
```

CSS

```css
.button, .button--big {
  border-color: #f00;
}

.button--big {
  background: #00f;
}
```

Sass @extend, placeholders

@extend the bad way

SCSS

```scss
.button {
  border-color: #f00;
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```css
.button, .button--big {
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Placeholders

SCSS

```scss
%button {
  border-color: #f00;
}

.button--big {
  @extend %button;
  background: #00f;
}
```

CSS

```css
.button--big {
  border-color: #f00;
}

.button--big {
  background: #00f;
}
```

Sass ifs, loops & maps

If

```
.post {
  @if ($dark == true) {
    color: #000;
  } @else {
    color: #fff;
  }
}
.post {
  color: if($dark == true, #000, #fff);
}
```

Sass ifs, loops & maps

If

```scss
.post {
  @if ($dark == true) {
    color: #000;
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  }
}
.post {
  color: if($dark == true, #000, #fff);
}
```

For

```scss
@for $i from 3 through 1 {
  h#{4 - $i} {
    font-size: 2rem * $i;
  }
}
```

Sass ifs, loops & maps

If

```
.post {
  @if ($dark == true) {
    color: #000;
  } @else {
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.post {
  color: if($dark == true, #000, #fff);
}
```

Each

```
$alerts: (error, red, 1px),
         (success, green, 2px),
         (info, blue, 2px);
@each $type, $color, $border in $alerts {
  .alert--#{$type} {
    border: $border solid $color;
  }
}
```

For

```
@for $i from 3 through 1 {
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    font-size: 2rem * $i;
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Sass ifs, loops & maps

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Maps

```scss
$indexes: (
  menu:  999,
  badge: 1050
);

.foo {
  z-index: map-get($indexes, menu);
}
```

Sass @content directive

@content directive

SCSS

```scss
@mixin media($device, $only: false) {
  ...
  @media screen and (min-width: $min-width) {
    @content;
  }
  ...
}
// full mixin https://netguru.co/blog/categories/css

.foo {
  @include media(tablet, true) {
    background: #f00;
  }
}
```

Sass @content directive

@content directive

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  ...
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// full mixin https://netguru.co/blog/categories/css

.foo {
  @include media(tablet, true) {
    background: #f00;
  }
}
```

CSS

```css
@media screen and (min-width: 48rem) and (max-width: 62rem) {
  .foo {
    background: #f00;
  }
}
```

CoffeeScript

```
class Lecture

  constructor: (@title, @author) ->
    @slides = []

  display_date: ->
    if @date? then @date else "Sorry, no info about date for #{@title}"

  add_slide: (name, duration) ->
    slide =
      name: name
      duration: duration
    @slides.push slide

  long_slides: ->
    s.name for s in @slides when s.duration > 3
```

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Pros

code is shorter by 1/3 without any incluence on execution time (is compiled to JS)

syntax (default in RoR from version 3.1)

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syntax (default in RoR from version 3.1)

Cons

syntax

CoffeeScript

@ Alias

```
@id # this.id
class Lecture
  @findByTitle: (title) ->
    ...
```

CoffeeScript

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@id # this.id
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Existential operator

```
'foo exists' if foo?
# typeof foo !== "undefined" &&
# foo !== null

foo?.prop?.subprop?
foo.prop ?= 'new val'
```

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```

Objects, arrays

```
# foo = { bar: 1, baz: 2 }
foo =
  bar: 1
  baz: 2

# range = [2, 3, 4, 5]
range = [2..5]
```

CoffeeScript

@ Alias

```
@id # this.id
class Lecture
  @findByTitle: (title) ->
    ...
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Existential operator

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'foo exists' if foo?
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# foo = { bar: 1, baz: 2 }
foo =
  bar: 1
  baz: 2

# range = [2, 3, 4, 5]
range = [2..5]
```

Loops & comprehensions

```
for name, i in ['HAML', 'CSS', 'JS']
  alert "#{i}: #{name}"

# a = [{ name: 'HAML', duration: 5 }, ...]
s.name for s in a when s.duration > 3
```

CoffeeScript

Functions

```coffeescript
foo = (bar) ->
  # your function body

square = (x) -> x * x

power = (a = 1, b = 2) ->
  Math.pow(a, b)
```

CoffeeScript

Functions

```
foo = (bar) ->
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Auto return

```
foo: ->
  # your function body
  "this will be returned"
```

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Functions

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foo = (bar) ->
  # your function body

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power = (a = 1, b = 2) ->
  Math.pow(a, b)
```

Flow control

```
'boring...' if sleeping_folks > 2
unless foo is 1
if bar isnt 2 and baz is 7
'mid-length' if 3 < l.duration < 5
```

Auto return

```
foo: ->
  # your function body
  "this will be returned"
```

CoffeeScript

Functions

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foo = (bar) ->
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```coffeescript
'boring...' if sleeping_folks > 2
unless foo is 1
if bar isnt 2 and baz is 7
'mid-length' if 3 < l.duration < 5
```

Interpolation

```coffeescript
"#{title} by #{author}" # OK
'#{title} by #{author}' # won't work
```

CoffeeScript

Fat arrow

```
class Lecture

  prepare: (@subject) ->

  notify: ->
    alert @subject()

class Speaker

  constructor: (@name) ->
    @lecture = new Lecture
    @lecture.prepare () => "New lecture by #{@name}"

p = new Speaker('czajkovsky')
p.lecture.notify()
```

CoffeeScript

Fat arrow

```
class Lecture

  prepare: (@subject) ->

  notify: ->
    alert @subject()

class Speaker

  constructor: (@name) ->
    @lecture = new Lecture
    @lecture.prepare () => "New lecture by #{@name}"

p = new Speaker('czajkovsky')
p.lecture.notify()
```

Multiple assignment

```
[month, day, year] = 'June 2 14'.split ' '
```

CoffeeScript

```
class Lecture

  constructor: (@title, @author) ->
    @slides = []

  display_date: ->
    if @date? then @date else "Sorry, no info about date for #{@title}"

  long_slides: ->
    s.name for s in @slides when s.duration > 3

  add_slide: (name, duration) ->
    slide =
      name: name
      duration: duration
    @slides.push slide
```

CoffeeScript

```
class Lecture

  constructor: (@title, @author) ->
    @slides = []

  display_date: ->
    if @date? then @date else "Sorry, no info about date for #{@title}"

  long_slides: ->
    s.name for s in @slides when s.duration > 3

  add_slide: (name, duration) ->
    slide =
      name: name
      duration: duration
    @slides.push slide
```

```
l = new Lecture('Front-end tools', 'czajkovsky')
l.display_date()
# Sorry, no info about date for Front-end tools
```

CoffeeScript

```coffeescript
class Lecture

  constructor: (@title, @author) ->
    @slides = []

  display_date: ->
    if @date? then @date else "Sorry, no info about date for #{@title}"

  long_slides: ->
    s.name for s in @slides when s.duration > 3

  add_slide: (name, duration) ->
    slide =
      name: name
      duration: duration
    @slides.push slide
```

```coffeescript
l = new Lecture('Front-end tools', 'czajkovsky')
l.display_date()
# Sorry, no info about date for Front-end tools

l.date = '02/06/2014 18:30'
l.display_date()
# 02/06/2014 18:30
```

CoffeeScript

```coffeescript
class Lecture

  constructor: (@title, @author) ->
    @slides = []

  display_date: ->
    if @date? then @date else "Sorry, no info about date for #{@title}"

  long_slides: ->
    s.name for s in @slides when s.duration > 3

  add_slide: (name, duration) ->
    slide =
      name: name
      duration: duration
    @slides.push slide
```

```coffeescript
l = new Lecture('Front-end tools', 'czajkovsky')
l.display_date()
# Sorry, no info about date for Front-end tools

l.date = '02/06/2014 18:30'
l.display_date()
# 02/06/2014 18:30

l.add_slide('HAML', 2)
l.add_slide('Sass', 5)
l.add_slide('CoffeeScript', 4)
l.long_slides()
# ["Sass", "CoffeeScript"]
```