EMBER APP KIT

STARTING POINT FOR 'AMBITIOUS WEB APPLICATIONS'

by Manuel Wiedenmann

WHO AM I?

Ruby on Rails & Ember.js freelancer. Working with ember.js since summer 2012.

WHAT IS EMBER.JS

- Opinionated JS framework for SPAs
- Convention over Configuration
- URL based routing
- Data binding
- (Web) Components
- Ember Data for JSON/RESTFull APIs

WHO IS USING IT?

- Yahoo
- Netflix
- Travis CI
- Zendesk
- NBC News
- Discourse
- Vine.co
- Ghost
- Nest (acquired by Google)
- ...

EMBER.JS VS ANGULARJS

ember.js

A framework for creating ambitious web applications.

AngularJS

AngularJS is a toolset for building the framework most suited to your application development.

Fluent 2014, "Keynote With Yehuda Katz and Tom Dale"

WHAT DOES EMBER.JS LACK?

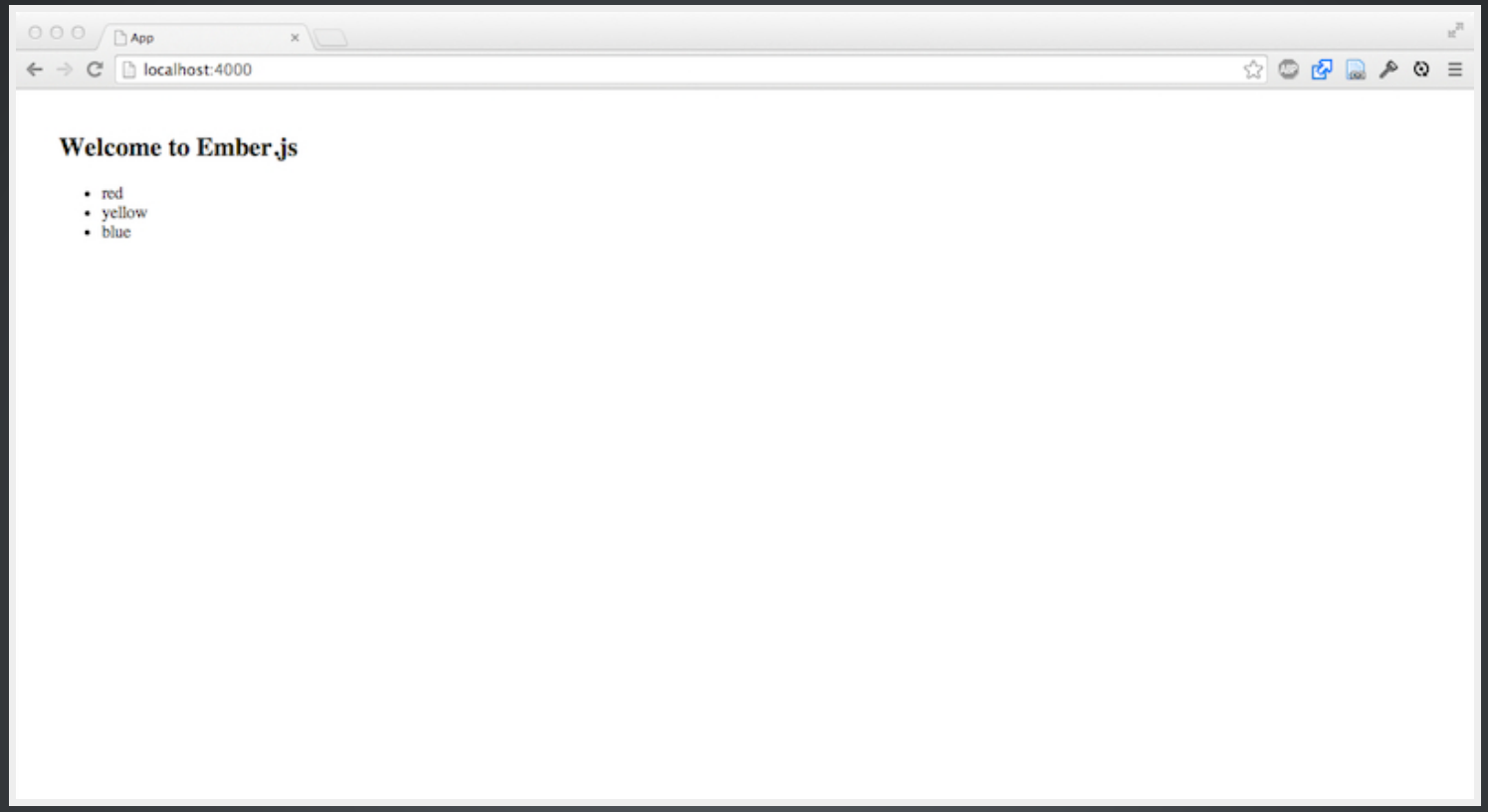
- Development environment
- Test environment
- Build environment

=> Tooling

THAT'S WHERE EAK STEPS IN

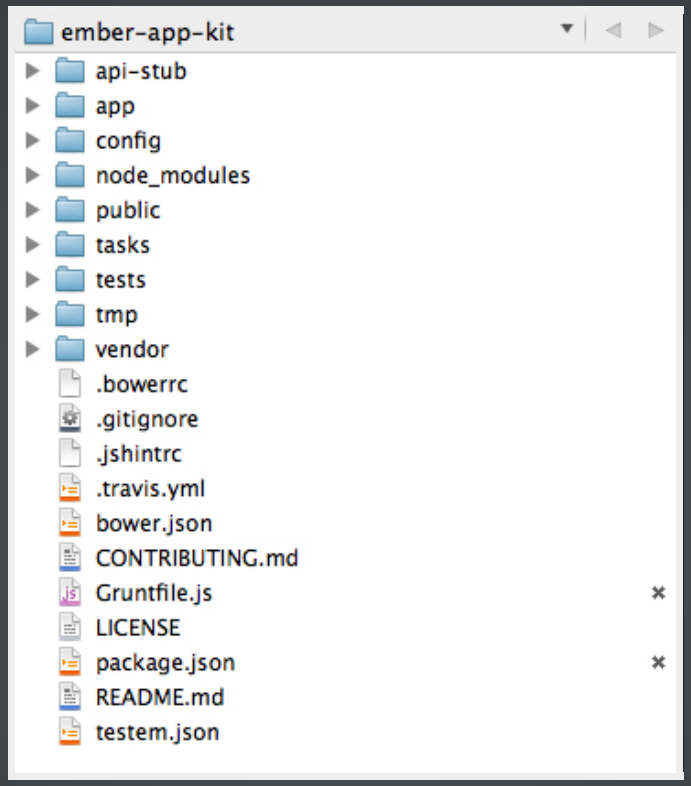
HOW TO GET STARTED

```
git clone git@github.com:stefanpenner/ember-app-kit.git
cd ember-app-kit && rm -rf .git

npm install -g grunt-cli
npm install -g bower
npm install

grunt server


Running "expressServer:debug" (expressServer) task
Using API Stub
>> Started development server on port 8000.

Running "watch" task
Waiting...
```

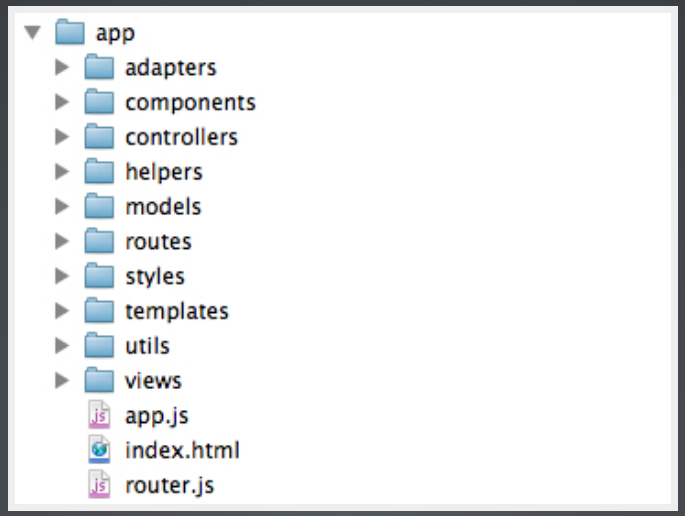

App
localhost:4000
Welcome to Ember.js
red
yellow
blue

WHAT'S IN THE BOX?

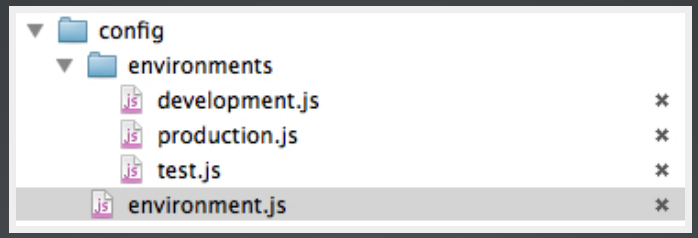
FOLDER LAYOUT



FOLDER LAYOUT APP

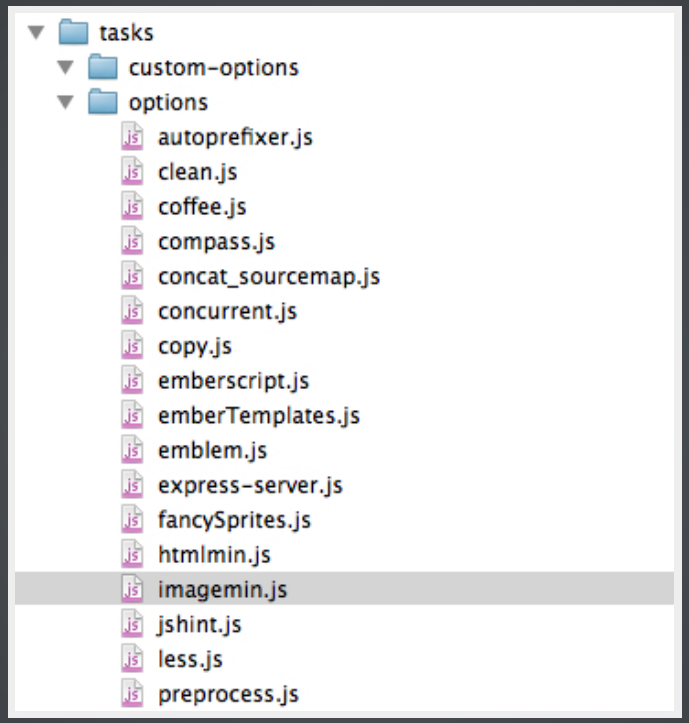


FOLDER LAYOUT CONFIG



GRUNTFILE.JS

Best Grunt config I have seen so far



GRUNT TASKS

```
grunt
grunt server
grunt test
grunt test:server
grunt dist
grunt server:dist
```

all use jshint to help you hack beautiful JS

CSS OR CSS PREPROCESSORS

- LESS
- SASS
- Compass
- Stylus

```
// Grundfile.js
// * for LESS, run `npm install --save-dev grunt-contrib-less`
// * for SCSS (without SASS), run `npm install --save-dev grunt-sass`
// * for Compass, run `npm install --save-dev grunt-contrib-compass`
// * for Stylus/Nib, `npm install --save-dev grunt-contrib-stylus`
```

JAVASCRIPT AND/OR COFFEESCRIPT

You can even use EmberScript

```
// Grundfile.js
// * for Coffeescript, run `npm install --save-dev grunt-contrib-coffee`
// * For EmberScript, run `npm install --save-dev grunt-ember-script`
```

TEMPLATES

- Handlebars
- Emblem.js (like Haml)
- and soon HTMLBars

```
// Grundfile.js
// * for Emblem, run the following commands:
//   `npm uninstall --save-dev grunt-ember-templates`
//   `npm install --save-dev grunt-emblem`
//   `bower install emblem.js --save`
```

LOOM GENERATORS

```
generate component x-buttonset
generate controller users/mini-profile
generate controller application type:array
generate helper capitalize
generate mixin queryable
generate route index
generate template profile
generate view index
```

MORE

```
// Grundfile.js
// * for LiveReload, `npm install --save-dev connect-livereload`
// * for displaying the execution time of the grunt tasks,
//   `npm install --save-dev time-grunt`
// * for minimizing the index.html at the end of the dist task
//   `npm install --save-dev grunt-contrib-htmlmin`
// * for minimizing images in the dist task
//   `npm install --save-dev grunt-contrib-imagemin`
// * for using images based CSS sprites (http://youtu.be/xD8DW6IQ6r0)
//   `npm install --save-dev grunt-fancy-sprites`
//   `bower install --save fancy-sprites-scss`
// * for automatically adding CSS vendor prefixes (autoprefixer)
//   `npm install --save-dev grunt-autoprefixer`
// * for package import validations
//   `npm install --save-dev grunt-es6-import-validate`
```

DEPENDENCY MANAGEMENT

Bower

BOWER.JSON

```
{
  "name": "ember-app-kit",
  "dependencies": {
    "handlebars": "~1.1.2",
    "jquery": "~1.9.1",
    "qunit": "~1.12.0",
    "ember-qunit": "https://github.com/rpflorence/ember-qunit.git#master",
    "ember": "~1.4.0",
    "ember-data": "~1.0.0-beta.7",
    "ember-resolver": "git://github.com/stefanpenner/ember-jj-abrams-resolver.git#mas
    "ic-ajax": "~0.3.0",
    "ember-testing-httpRespond": "~0.1.1"
  },
  "resolutions": {
    "ember": "~1.4.0"
  }
}
```

MODULES & THE RESOLVER

Rather than use AMD (Require.js) or CommonJS (Browserify) modules, apps built using the Ember App Kit use ES6 modules through the ES6 module transpiler. This means that you can build your apps using syntax from future JavaScript versions, but output AMD modules that can be used by existing JavaScript libraries today.

EXPORT & IMPORT OF MODULES

```
App.FooRoute = Ember.Route.extend({
  model: function() {
    return ['red', 'yellow', 'blue'];
  }
});
```

app/routes/foo.js

```
var FooRoute = Ember.Route.extend({
  model: function() {
    return ['red', 'yellow', 'blue'];
  }
});

export default FooRoute;
```

```
import FooRoute from "appkit/routes/foo";
```

OVERVIEW

Lookup	File
adapters/post	app/adapters/post.js
components/post-title	app/components/post-title.js
controllers/post	app/controllers/post.js
helpers/translate-title	app/helpers/translate-title.js
models/post	app/models/post.js
routes/post	app/routes/post.js
serializers/post	app/serializers/post.js
transforms/array	app/transforms/array.js
views/post	app/views/post.js

MOCK OR PROXY YOUR API

MOCK API RESPONSES

```
// package.json
APIMethod: "stub"
```

```
// api-stub/routes.js
module.exports = function(server) {
  server.namespace("/api", function() {
    server.get('/posts', function(req, res) {
      res.send({
        post: {
          body: "hello mocking world"
        }
      });
    });
  });
};
```

PROXY API REQUESTS

```
// package.json
APIMethod: "proxy",
proxyURL: "http://apiserver.dev:3000",
proxyPath: "/api"
```

TESTING

- QUnit test framework
- ember-qunit test helpers
- Test'em test runner

EMBER-QUNIT

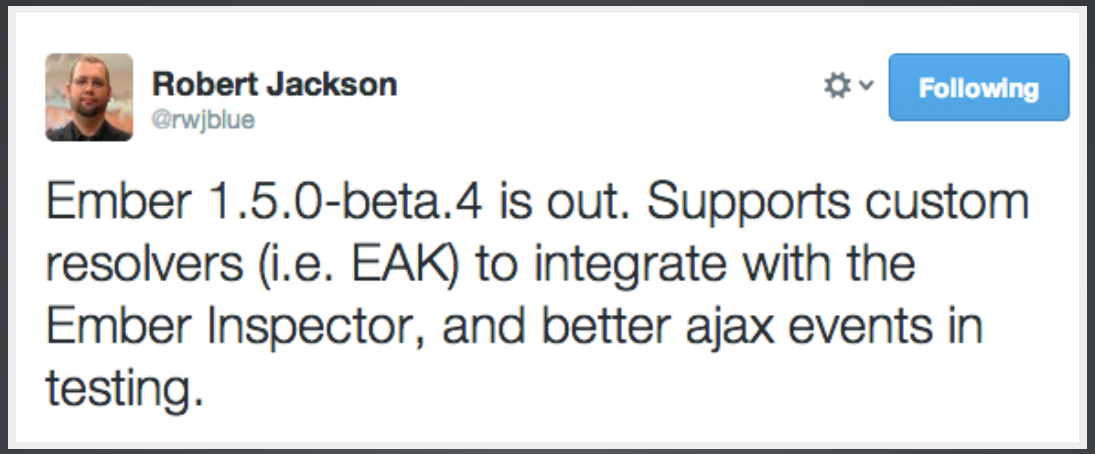
- moduleFor
- moduleForModel
- moduleForComponent

```
moduleFor('route:index', "Unit - IndexRoute", {
  //needs: ['controller:index'],  only neccessary if you want to load other items int
  setup: function () {},
  teardown: function () {}
} );
```

MODULEFORMODEL

```
import { test, moduleForModel } from 'appkit/tests/helpers/module-for';
import Post from 'appkit/models/post';

moduleForModel('post', 'Post Model', {
  needs: ['model:comment']
});

test("Post is a valid ember-data Model", function () {
  var post = this.subject({title: 'A title for a post', user: 'bob'});
  ok(post);
  ok(post instanceof DS.Model);
  ok(post instanceof Post);
});
```

THINGS TO COME



HTMLBARS

Around 3x faster than Handlebars
You can opt out from jQuery

htmlbars @github

BROCCOLI

Browser compilation library – a build tool for applications that run in the browser

It's super fast!

broccoli @github

EMBER-CLI

ember-cli will replace EAK

ember-cli @github

HIRE ME!

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@fsmanuel
github.com/fsmanuel

Q&A