SourceLair

Building an in-browser IDE with JavaScript

Hi, I am Paris

I work for SourceLair

A website that lets people code in their browsers.

Let's talk about managing static assets.

THE CODEBASE

Back-end is built on Django and Tornado.

Client is built on vanilla JavaScript.

CLIENT SIDE GOALS

- Sport actual IDE features (terminal, auto complete)
- Provide great performance (native like)
- Keep development pleasant (we ❤ writing code)

CLIENT SIDE REQUIREMENTS

- Extensible and scalable design
- Low-footprint code

STATIC ASSET MANAGEMENT GOALS

- Make development blazing fast
- Keep production blazing fast

BLAZING FAST DEVELOPMENT REQUIREMENTS

- Modular architecture
- Inspect each `js` file separately in browser
- Integration with Django's `staticfiles` app

TOOLS USED

- github.com/jrburke/requirejs
- github.com/etianen/django-require

BLAZING FAST PRODUCTION

- One single monolithic file
- Minimum size
- Served through CDN

TOOLS USED

- github.com/jrburke/r.js
- github.com/jrburke/almond
- github.com/django-cumulus/django-cumulus

SOME CODE

settings.py

```
REQUIRE_STANDALONE_MODULES = {
    'home/js/main': {
        'out': 'home/js/main.js',
        'build_profile': 'home/main.build.js'
    },
    'users/js/main': {
        'out': 'users/js/main.js',
        'build_profile': 'users/main.build.js'
    },
    'guides/js/main': {
        'out': 'guides/js/main.js',
        'build_profile': 'guides/main.build.js'
    },
```

home/js/main.build.js

```
requirejs.config({
    'baseUrl': '/static/',
    'paths': {
        // the left side is the module ID,
        // the right side is the path to
        // the jQuery file, relative to baseUrl.
        // Also, the path should NOT include
        // the '.js' file extension.
        jquery: 'home/js/vendor/jquery/dist/jquery.min'
    }
});

require(['home/js/home']);
```

Template

```
        <div id="cRights" class="row">
            <span> &copy; {% now "Y" %} SourceLair,
        </div>
    </footer>

    {% require_module 'home/js/main' %}
```

Development rendering

```
    <div id="cRights" class="row">
        <span> &copy; 2015 SourceLair, Private Company </span>
    </div>
</footer>

<script src="/static/home/js/vendor/requirejs/require.js" data-main="/static/home/js/main.js"></script>
```

Production rendering

```
    <div id="cRights" class="row">
        <span> &copy; 2015 SourceLair, Private Company </span>
    </div>
</footer>

<script src="https://2c83f56a78b49667fe56-b12053cd728125dfe3469627dcec4b31.ssl.cf2.rackcdn.com/home/js/main.4e982d2033a1.js"></script>
```

GAINS

- very simple structure
- pleasant development
- fast production performance

ISSUES

- Non-standard module system (AMD)
- Mandatory `js` file encapsulation in closure
- Reloading in development loads **177** `js` files

THE FUTURE

React, ECMAScript 2015 modules, Browsersync?

- github.com/facebook/react
- github.com/babel/babel
- github.com/cyberdelia/django-pipeline
- github.com/Browsersync/browser-sync

WOULD YOU LIKE TO JOIN US?

We are searching for a talented Junior JavaScript Engineer.

sourcelair.workable.com

Thank you.

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