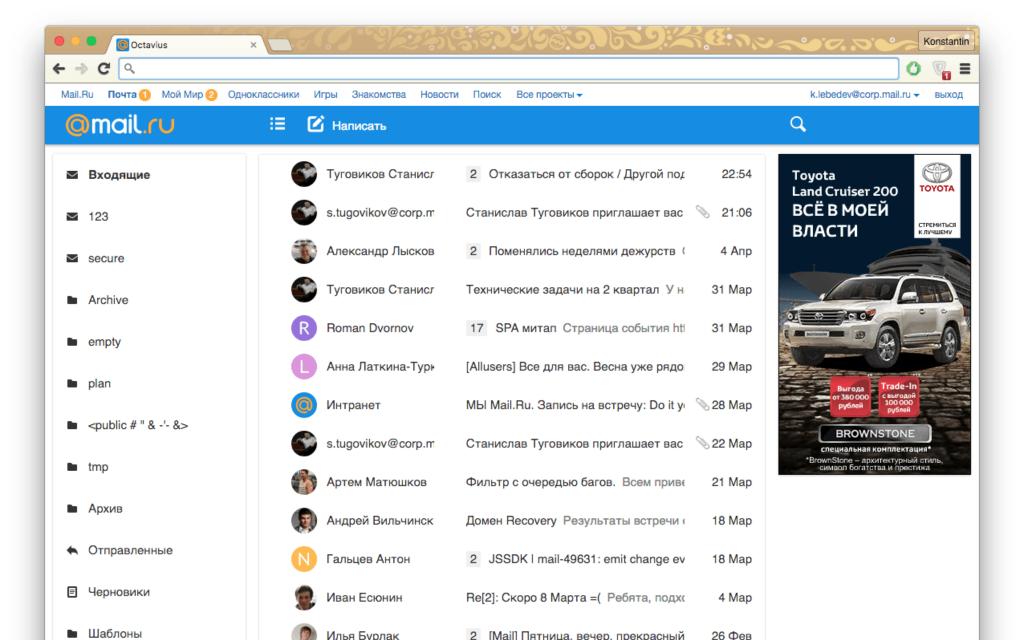
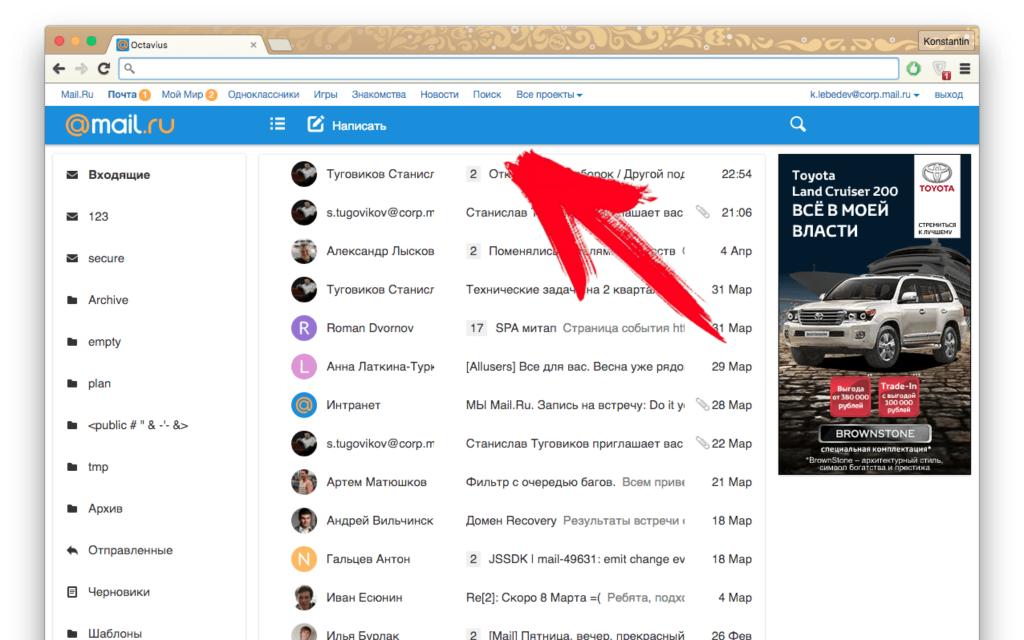
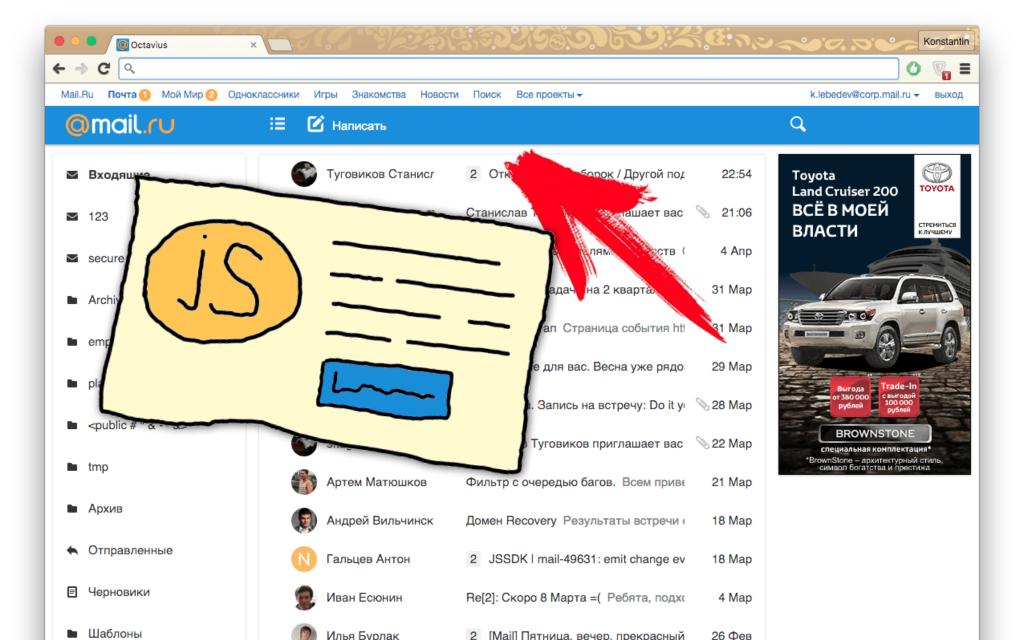
### Упрощаем «жизнь»

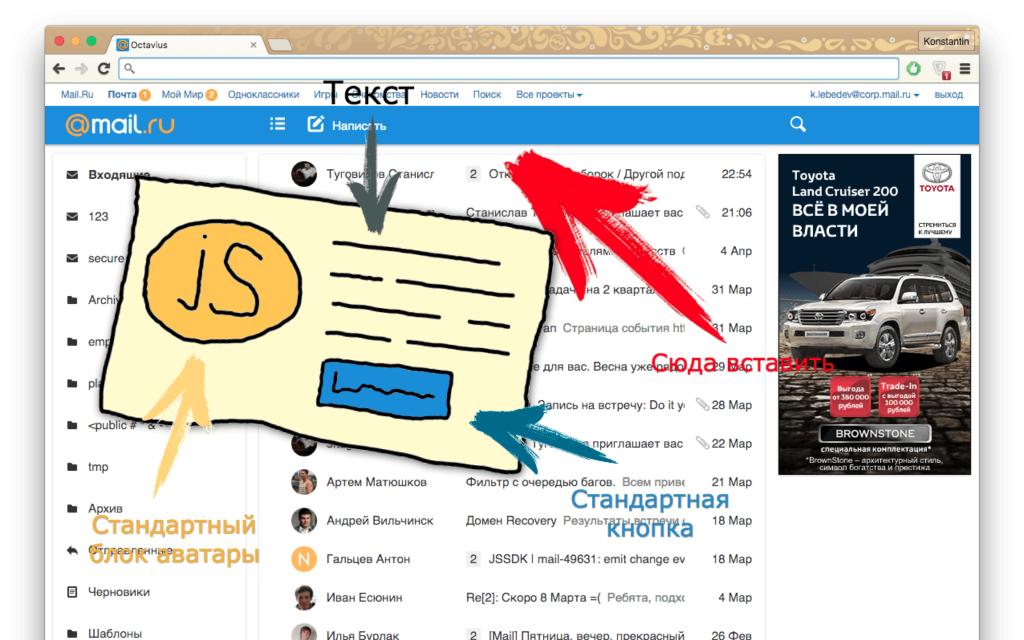
Лебедев Константин

## Задача

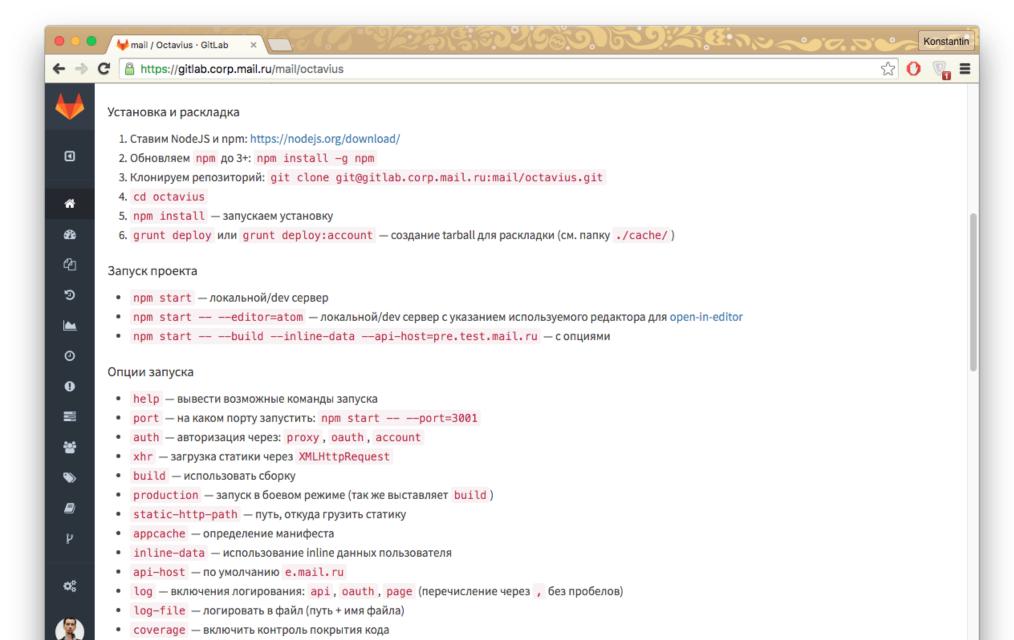








# Project/README



### npm install

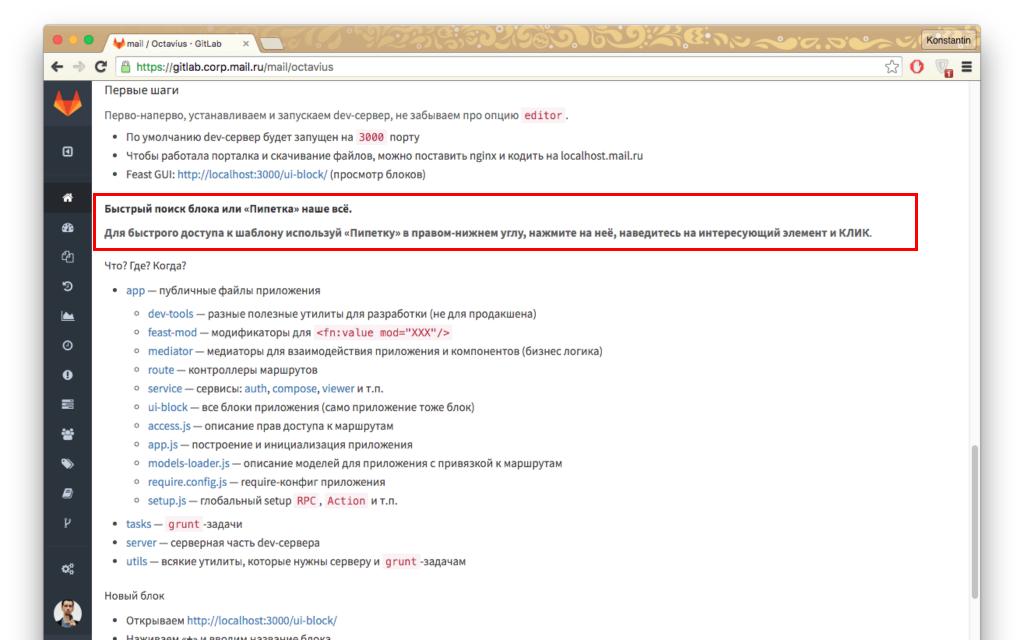
Не заыбвайте про

#### preinstall

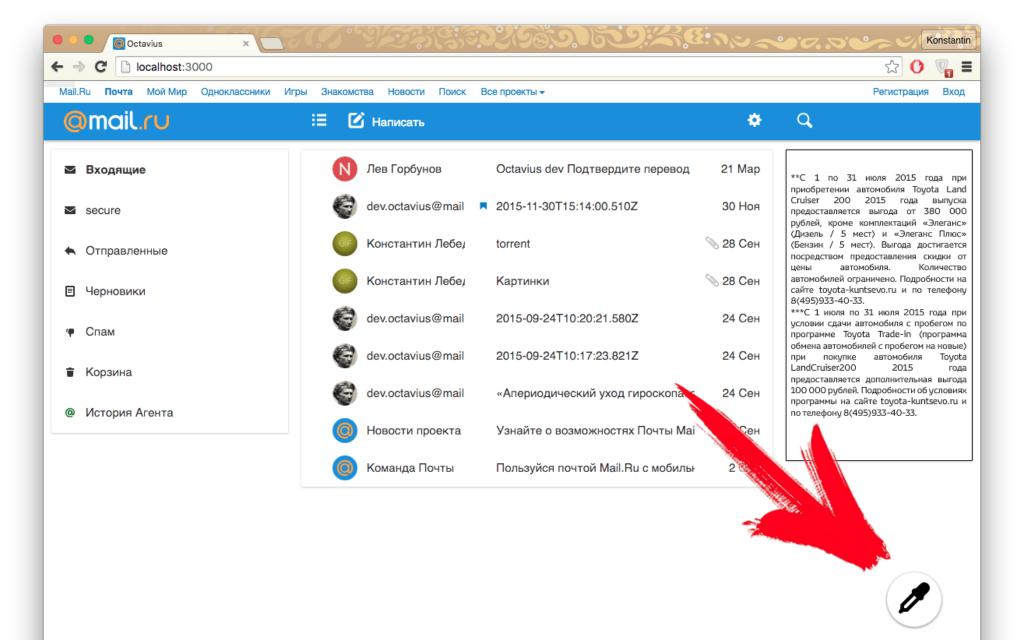
— Установка registry на локальное хранилище

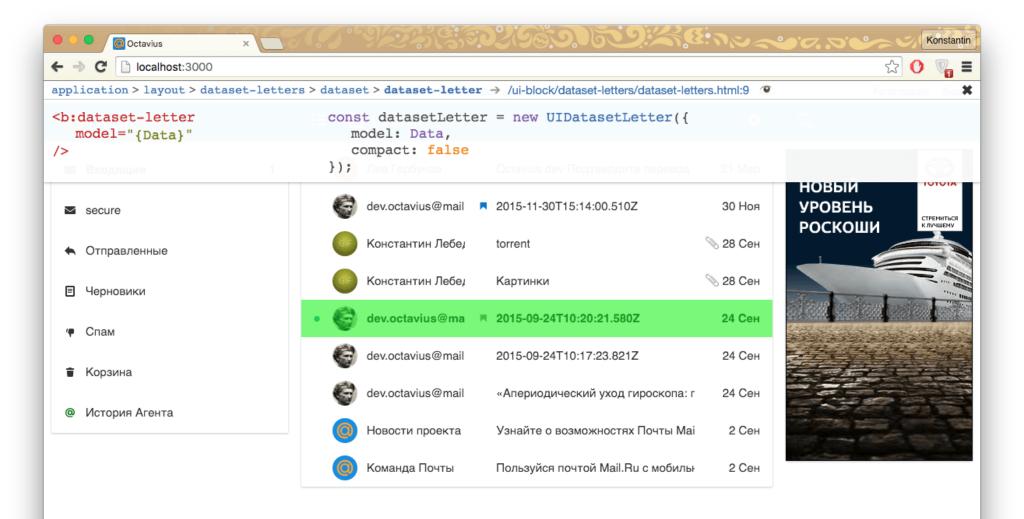
#### postinstall

- Добавление githook'ов
  - pre-commit: grunt dev
  - post-merge: npm install
- jam install обновление jam-пакетов

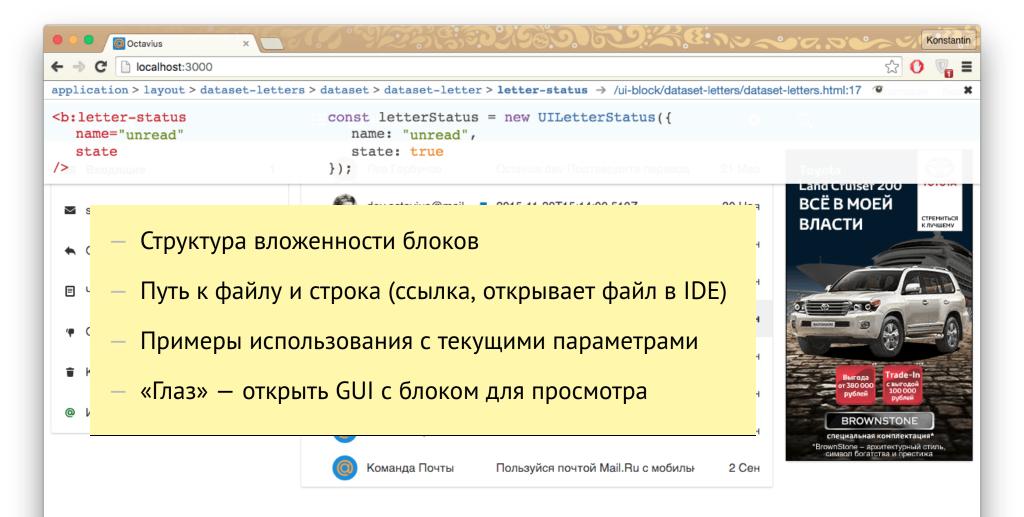




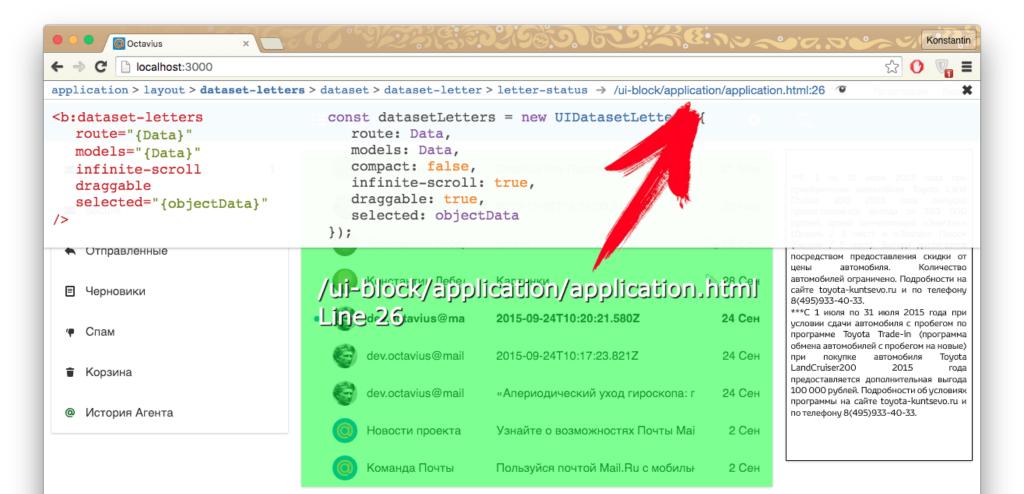




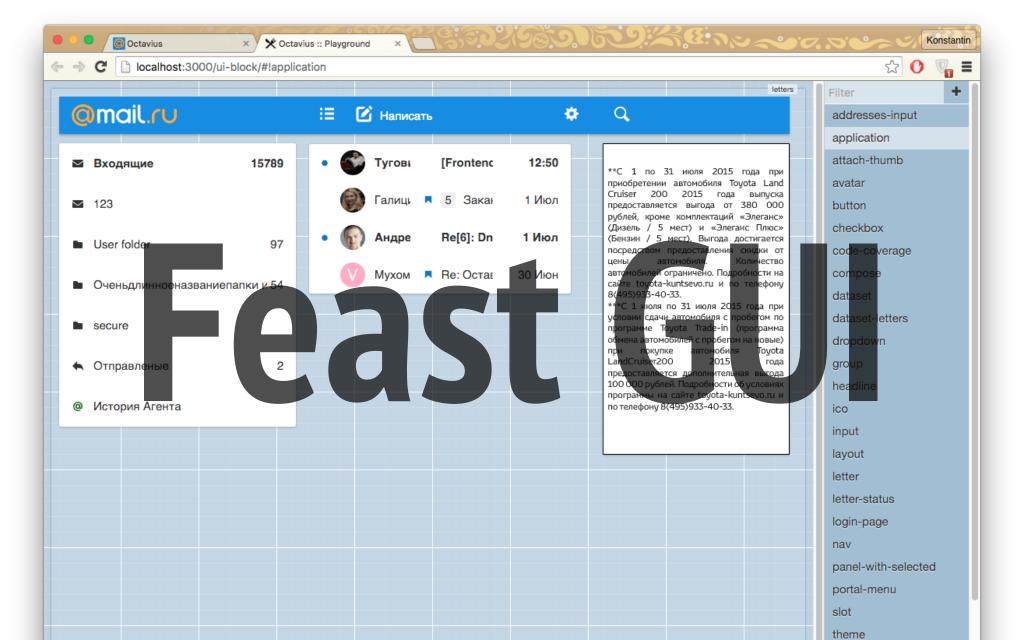


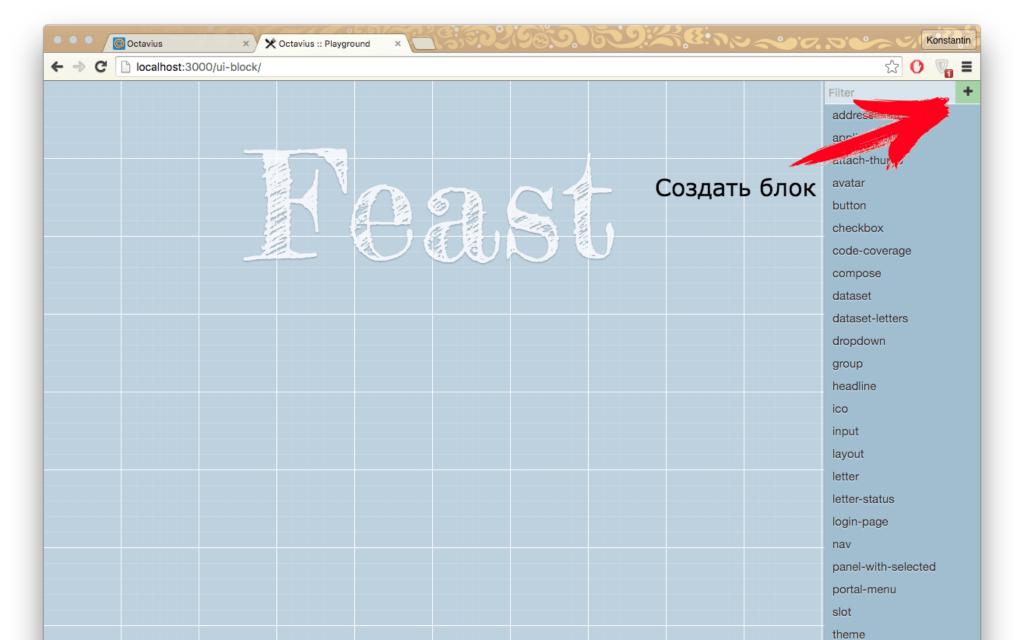


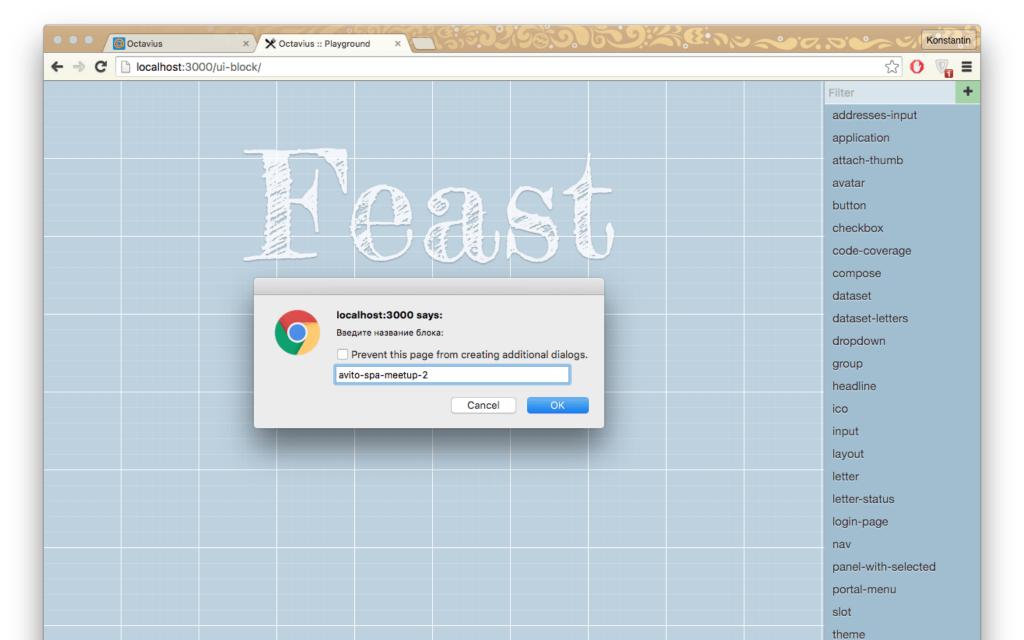


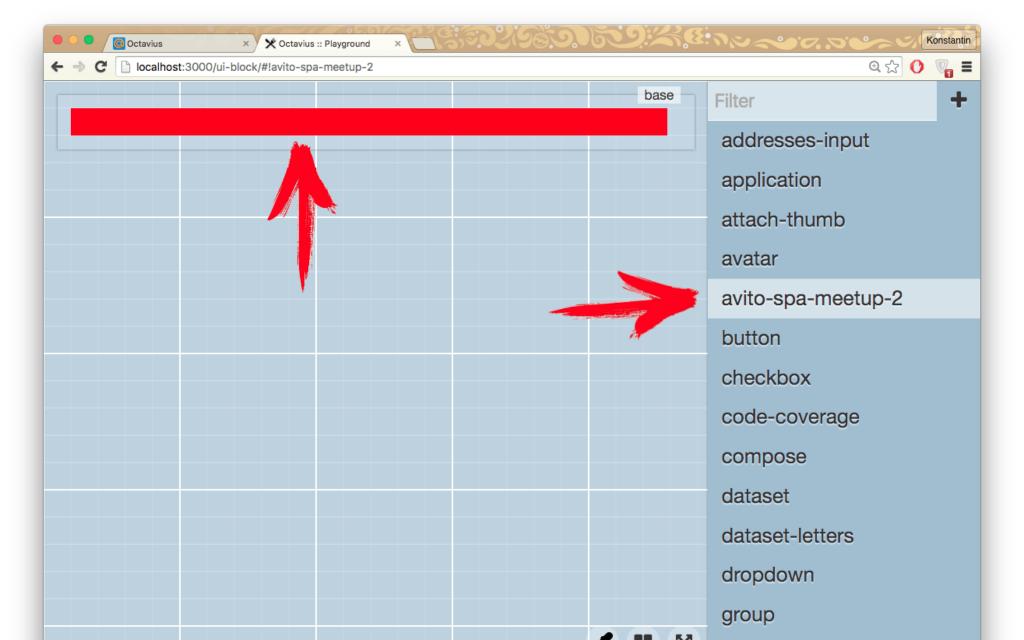










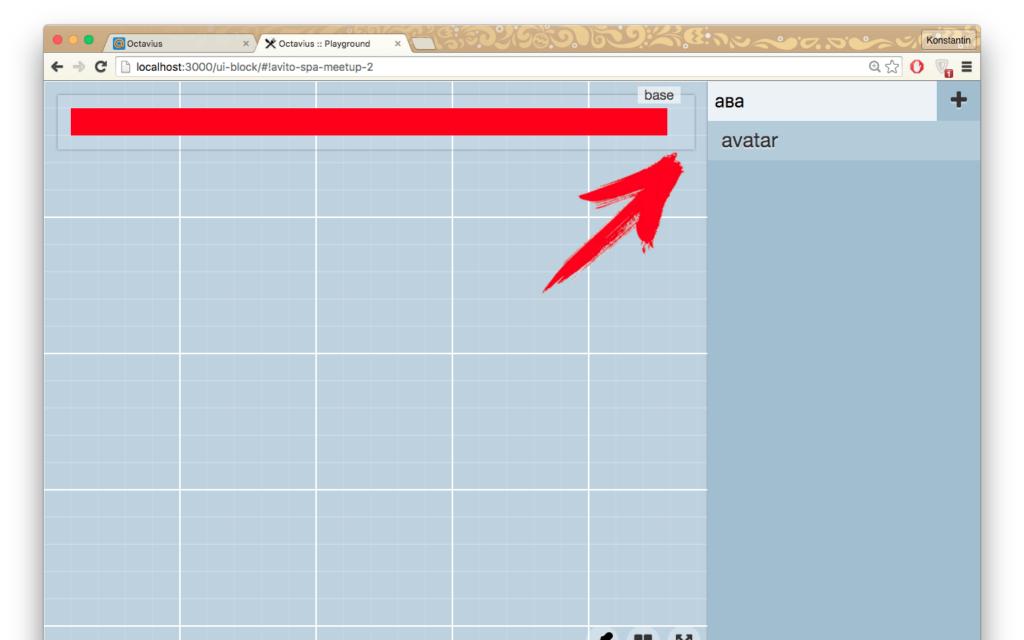


### Что произошло?

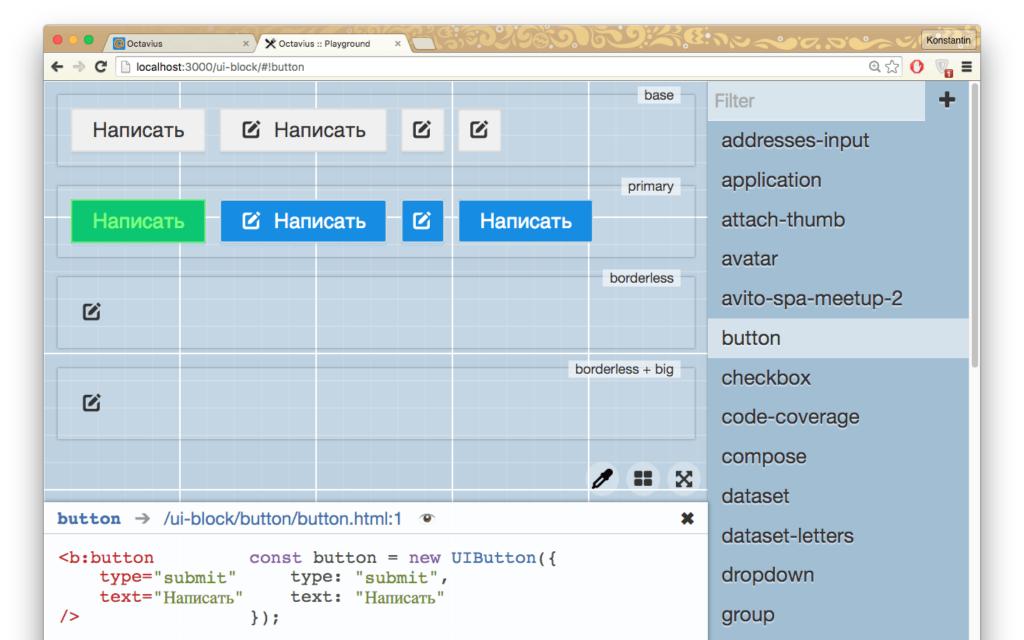
- spa-meetup-2.**html** шаблон блока
- spa-meetup-2.**scss** СТИЛИ
- spa-meetup-2.**js** описание поведения
- spa-meetup-2.**spec.js** спецификация, на основе которой строятся примеры использования

- 01. ./node\_modules/feast/bin/assist create-block \
- 02. --path=path/to/ui-blocks/ \

```
01. <div> </div>
                               01. .spa-meetup-2 {
                               02. padding: 10px;
                               03. background: red;
                               04. }
01. import feast from "feast";
02. import template from "feast-tpl!./spa-meetup-2.html";
03. import styleSheet from "feast-css!./spa-meetup-2.css";
04.
05. export default feast.Block.extend({
06.
     name: "spa-meetup-2",
07.
    template,
08. styleSheet
09. });
```







### avito-spa-meetup-2.html

```
01. <div>
02. <div bem:elem="picture">
03. <b:avatar src="..."/>
04. </div>
05. <div bem:elem="details">
06. <div bem:elem="description"><!-- описание --></div>
07. <b:button remit:click="close" text="Done"/>
08. </div>
09. </div>
```

# Как это работает?

## 2012 / Fest

#### **Fest**

- XML -> (NODEJS) -> JSFUNC\_TPL -> STRING
- Вывод ошибок (файл + строка)
- Трансформация на сервере ~1ms
- Запуск «Главной» на Fest
- Интеграция в «Почту», запуск «Календаря»
- **Разработка внутреннего UI Toolkit** (библиотека блоков)
- Запуск новой версии «Почты» и «Облака» на базе Toolkit

Fest / Проблемы

### Возвращает строку

### Fe<u>a</u>st

- XHTML (CLIENT) -> JSFUNC\_TPL -> JSON -> CITOJS -> VDOM
- GUI для просмотра и редактирования блоков (Live coding HTML/CSS/JS)
- Инспектор блоков проекта
- Визуализация связей

### Live coding

- BrowserSync
- Webpack
- node-watch + socket.io

#### Server

```
01. "use strict":
02. const fs = require("fs");
03. const http = require("http");
04. const watch = require("node-watch");
05. const app = http.createServer((req, res) => {
      res.writeHead(200, {"Content-Type": "html/text"});
06.
07. res.end();
08. });
09. const socketI0 = require("socket.io")(app);
10. app.listen(2016, () => {
    watch( "path/to" , {recursive: true}, (file) => {
       fs.readFile(file, (err, content) => {
12.
          const ext = file.split(".").pop();
13.
           socketI0.emit(`file-changed:${ext}`, {file, content});
14.
15. });
16. });
17. });
```

### Client

```
01. <script src="//cdnjs/socket.io"></script>
02. <script>
03. const socket = io();
04. socket.on("file-changed:html", ({file, content}) => {
05. // ...
06. });
07. </script>
```

### **XML Parser**

```
01. <div class="btn">
                              01. {
02. Click me!
                               02. name: "div",
03. </div>
                               03. attrs: {class: "btn"},
                               04. file: "path/to/button.html",
                               05. line: 1,
                               06. children: [{
                              07. name: "#text",
                               08. value: "Click me!",
                               09. file: "path/to/button.html";
                               10. line: 2
                               11. }7
```

```
01. <fn:for data="attrs.items" as="key">...</fn:for>
02. "fn:for": {
03.
    scope: true,
04.
    required: ["data"],
05. expressions: ["data"],
06. prepare: (node, attrs) => ({
07. as: attrs.as || "$value",
% key: attrs.key || "$index",
09.
      data: attrs.data
10. }),
11. toCode: () => [
12.
        " each($data, @@.children, function (&as, &key) {", // начало
13.
14. "});" // конец
15. \;
16. }
17. }
```

#### Оновление шаблона

```
01. socket.on("file-changed:html", ({file, content}) => {
     feast.Block.all.forEach(Block => {
03.
       if (file === Block.prototype.template.file) {
04.
         const template = feast.parse(content, file);
05.
         Block.setTemplate(template);
06.
         Block.getInstances().forEach(block => block.render());
07. }
08. });
```

# CSS Modules

#### CSS Modules: PostCSS + React

```
01. import React from "react";
02. import styles from "./button.css";
03.
04. export default class Button extends React.Component {
05.
     render() {
       return (
06.
         <button className={styles.btn} >
07.
08.
           <span className={styles.icon}>
09.
             <Icon name={this.props.icon}/>
10.
          </span>
11.
           <span className={styles.text}>{this.props.value}</span>
         </button>
12.
13. );
14.
```

#### PostCSS + React + react-css-modules

```
01. import React from "react";
02. import CSSModules from "react-css-modules";
03. import styles from "./button.css";
04.
05. class Button extends React.Component {
     render () {
06.
07.
       return <button styleName="btn" >
08. <span styleName="icon">
09.
           <Icon name={this.props.icon}/>
10. </span>
         <span styleName="text">{this.props.value}</span>
11.
12. </button>;
13. }
14. }
15.
16. export default <a href="CSSModules(Button">CSSModules(Button</a>, styles);
```

#### @decorator

```
01. import React from "react";
02. import CSSModules from "react-css-modules";
03. import styles from "./button.css";
04.
05. <a href="mailto:aCSSModules(styles">aCSSModules(styles)</a>
06. export default class Button extends React.Component {
07.
     render () {
08.
       return <button styleName="btn">
         <span styleName="icon">
09.
10.
            <Icon name={this.props.icon}/>
11. </span>
12. <span styleName="text">{this.props.value}</span>
13. </button>;
14.
15. }
```

# Angular2

```
01. aComponent({
02. selector: "my-app",
03. template: `<div class="app">{{text}}</div>`,
04. styles: [`.app { ... }`] // .app[_ngcontent-mjn-1] { }
05. })
06. export class App {
07. // ...
08. }
```

#### **Feast**

```
01. import feast from "feast";
02. import template from "feast-tpl!./button.html";
03. import styleSheet from "feast-css!./button.css";
04.
05. export default feast.Block.extend({
    name: "button",
06.
07. template,
08. styleSheet
09. });
```

#### CSS Module «на коленке»

```
01. function toCSSModule(file, cssText) {
02.    const classes = {};
03.    cssText = cssText.replace(R_CSS_SELECTOR, (_, name) => {
04.        classes[name] = name + "-" + simpleHash(file + name);
05.        return "." + classes[name];
06.    });
07.    return {file, cssText, classes};
08. }
```

#### CSS Module «на коленке»

```
01. function simpleHash(str) {
02. let idx = str.length;
03. let hash = UNIO SEED;
04.
05. while (idx--) {
      hash = (hash * 33) ^ str.charCodeAt(idx);
06.
07. }
08.
     return (hash >>> 0).toString(36);
09.
10. }
```

#### CSS Module «на коленке»

```
01. {
02. file: "path/to/button.css"
03. cssText: "...",
04. classes: {
05. "button": "button-v9m8ae"
06. }
07. }
```

# JS/Hot Reload

#### JS / Hot Reload

```
01. class Foo {
02. constructor(value) {
03. this.value = value;
04. }
05. log() {
06. console.log(`Foo: ${this.value}`, this instanceof Foo);
07. }
08. }
```

## JS / Hot Reload

```
01. var foo = new Foo(123);
02. foo.log(); // "Foo: 123", true
03.
04. replaceClass(Foo, class NewFoo {
    constructor(value) {
06. this.value = value;
07. }
08. log() {
       console.log(`NewFoo: ${this.value}`, this instanceof NewFoo);
10.
11. });
12.
13. foo.log(); // "NewFoo: 123", true
14. foo instanceof Foo; // true
```

## JS / Hot Reload

```
01. function replaceClass(OldClass, NewClass) {
     const newProto = NewClass.prototype;
03.
     OldClass.prototype. proto = newProto;
04.
05.
    // Static
     Object.keys(NewClass).forEach(name => {
06.
       OldClass[name] = NewClass[name];
07.
08.
     });
09.
10.
    // Prototype
     Object.getOwnPropertyNames(newProto).forEach(name => {
11.
       OldClass.prototype[name] = newProto[name];
12.
13.
     });
14. }
```

#### JS / Hot Reload / Проблема

```
01. replaceClass(Foo, class NewFoo {
02.  /* ... */
03. });
04.
05. foo.constructor === Foo; // false
```

## JS / Hot Reload / Проблема / Решение

- **Webpack** оборачивает создание класса в специальный фраппер
- Использовать обвязку для создания классов, например createClass('MyClassName', {...});

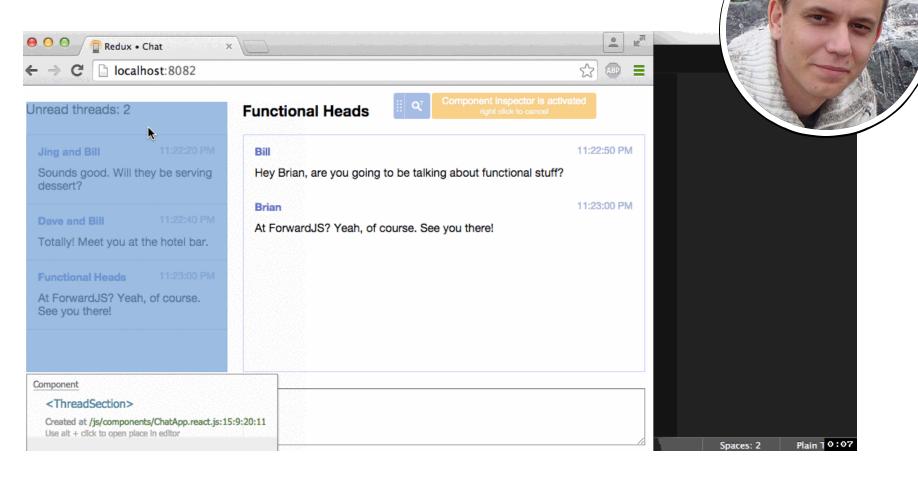
# **Live Coding**

- React Webpack/React Hot loader/Redux
- Angular2 mgechev/angular2-hot-loader (экспериментально)
- Так же Hot Relaod есть для Ember, Vue, RiotJS и т.п.

# Что ещё?

# Extentions / Dev Tools

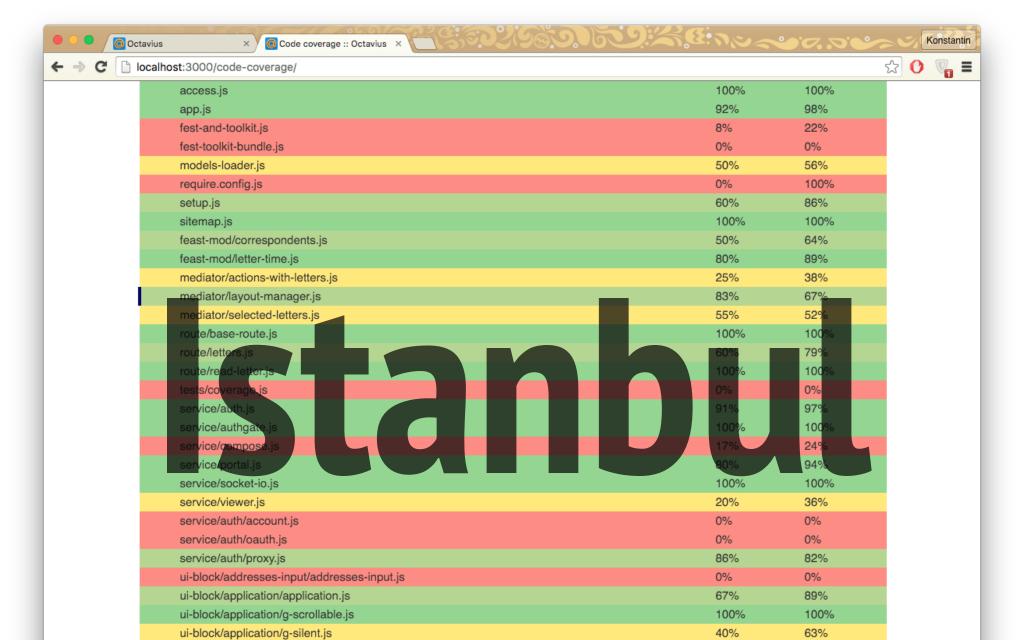
# lahmatiy/component-inspector

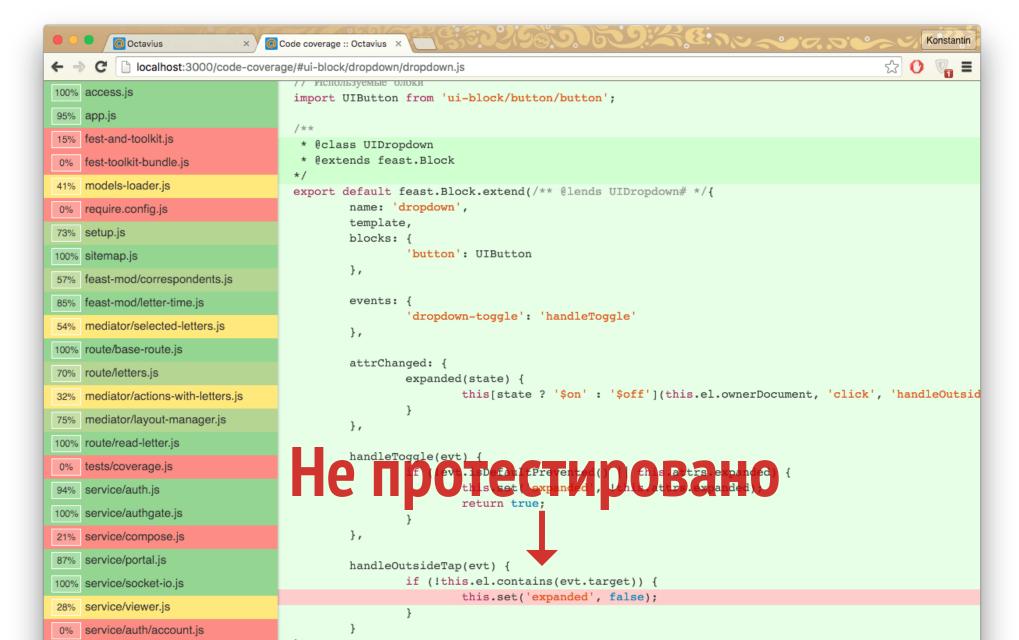


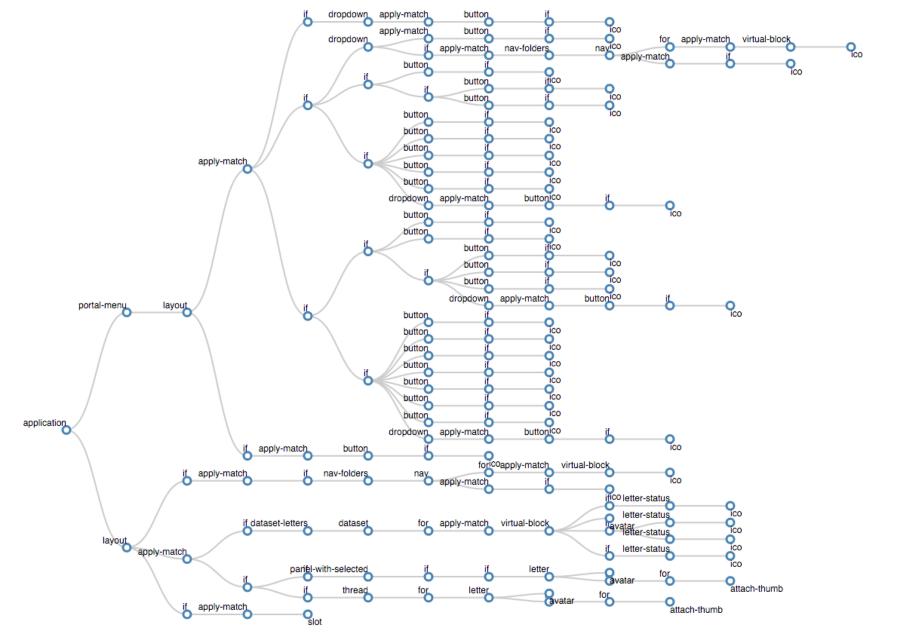
## Пакеты: npm/bower/jam

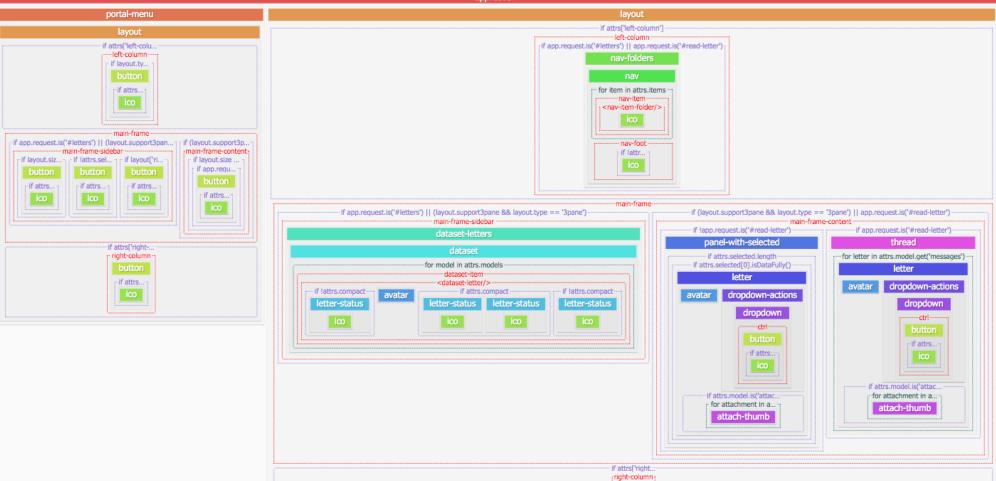
```
01. jam install suggests --save
02. jam install push-manager --save
01. // app/packages/require.config.js 01. // app/some-controller.js
02. var packages = [{
                                        02. import suggests from "suggests";
                                        03. import PushManager from "push-manager"
03. name: "suggests",
04. location: "packages/suggests"
                                        04.
                                        05. // ...
05. }, {
06. name: "push-manager",
07. location: "packages/push-manager"
08. }7;
09. require.config({packages: packages});
```

```
Elements Network Sources Profiles Console Timeline Resources Security Audits
   T top
                                    ▼ □ Preserve log
▼ [00:00:03.484] app.nav:init
    [details] Object {href: "http://localhost:3000/inbox/"}
  ▼ [00:00:03.503] [[user/short]]
                 ▶ Object {url: "/api/v1/user/short", data: Object, type: "POST", headers: Object}
      [00:00:03.503] [[user/short:done]]
      ▶ Object {url: "/api/v1/user/short", data: Object, type: "POST", headers: Object, startTime: 3505.9700000000003...}
    [00:00:06.715] [[threads/status]]
  [00:00:06.983] timings
  Object {all: 6793.12000000001, html: 260.63, init_app: 3015.865, data:
   3382,93000000000007...}
▼ [00:00:08.241] app.nav:click
    [details] Object {href: "http://localhost:3000/inbox/1:9460689a3cead289:0/"}
  [00:00:08.248] [[threads/status]]
▼ [00:00:08.334] [[Action:mail.MarkAs]]
    [details]
              ▶ Object {flag: "unread", state: false, models: Array[1]}
  ▼ [00:00:08.335] mail.MarkAs.prepare
      [00:00:08.336] prepare ▶ Object {models: Object, counters: Object}
  ▼ [00:00:08.348] mail.MarkAs.operation
    ▼ [00:00:08.354] [[messages/marks]]
                   ▶ Object {url: "/api/v1/messages/marks", data: Object, type: "POST", headers: Object}
        [00:00:08.354] [[messages/marks:done]]
        Object {url: "/api/v1/messages/marks", data: Object, type: "POST", headers: Object, startTime:
         8356.4350000000001...}
      [00:00:08.411] [[threads/status]]
    [00:00:08.403] operation:done undefined
```

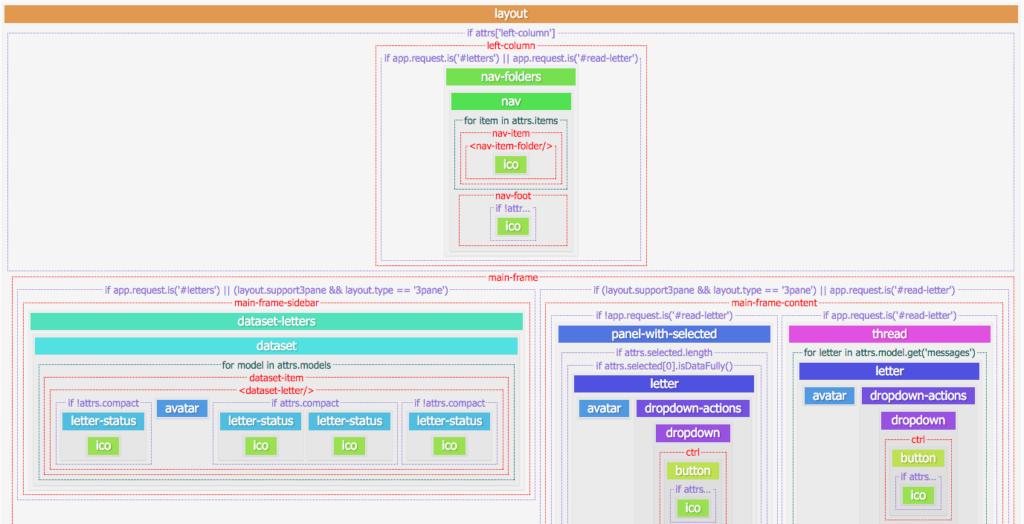








slot



if attrs.model.is('attac...

for attachment in a...

attach-thumb

if attrs.model.is('attac..

for attachment in a...

attach-thumb

#### Заключение

- Документируйте процессы
- Ищите инструменты и создавайте их сами
- Не описывайте «шаги», пишите утилиты, которые их выполнят
- Старайтесь писать универсальные компоненты, неотягощенные сложной логикой

#### The End

github.com/RubaXa

@ibnRubaXa