Mirek Szajowski

JavaScript – lubię to

Programista:

Agenda

- Język
- Modułowość
- Zależności/biblioteki zewnętrzne
- CSS
- Testy/ Linty
- Narzędzia do budowania
- Frameworks

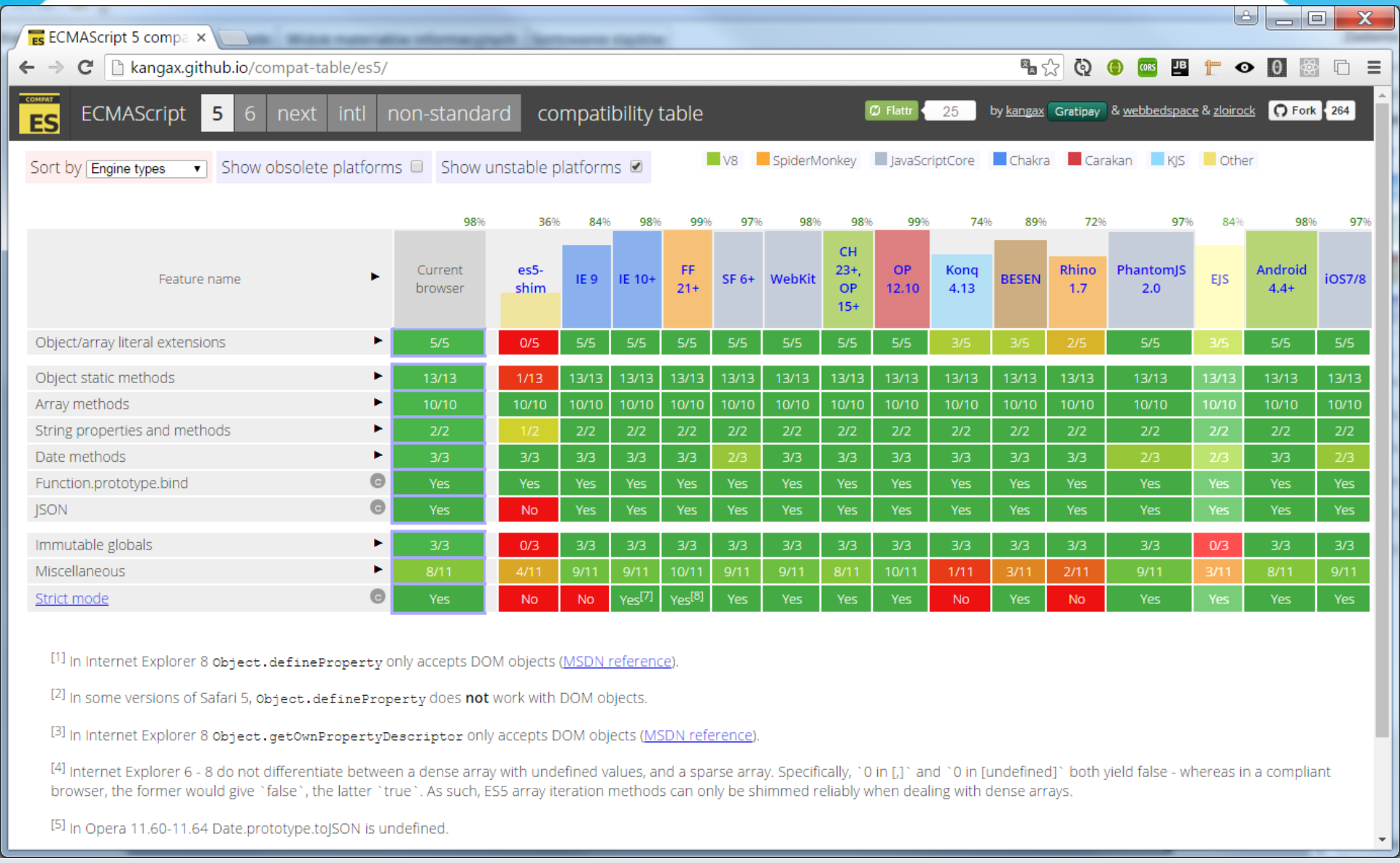
Język

Język -ECMAScript 5

```
function EventBus() {
    this.listeners = [];
}
EventBus.prototype.addListener = function (listener) {
    let index = this.listeners.indexOf(listener);
    if (index !== -1) {
        throw new Error('Listener already added');
    }
    this.listeners.push(listener);
};
EventBus.prototype.removeListener = function (listener) {
    let index = this.listeners.indexOf(listener);
    this.listeners.splice(index, 1);
};
EventBus.prototype.fire = function (eventName, eventData) {
    for (var i = 0; i < this.listeners.length; i++) {
        var listener = this.listeners[i];
        if (listener.eventName === eventName) {
            listener.handle(eventData);
        }
    }
};
```

```
var eb = new EventBus();

var listener = {
    eventName: 'RowSelected', handle: function (data) {
        console.log('RowSelected: ', data);
    }
};
eb.addListener(listener);

eb.fire('RowSelected', {id: 1});
eb.fire('RowSelected', {id: 2});
eb.removeListener(listener);
```

Język -ECMAScript 5



ECMAScript 5 compa

kangax.github.io/compat-table/es5/

ECMAScript 5 6 next intl non-standard compatibility table

Flattr 25 by kangax Gratipay & webbedspace & zloirock Fork 264

Sort by Engine types | Show obsolete platforms | Show unstable platforms

V8 SpiderMonkey JavaScriptCore Chakra Carakan KJS Other

Feature name	Current browser	es5-shim	IE 9	IE 10+	FF 21+	SF 6+	WebKit	CH 23+, OP 15+	OP 12.10	Konq 4.13	BESEN	Rhino 1.7	PhantomJS 2.0	EJS	Android 4.4+	iOS7/8
	98%	36%	84%	98%	99%	97%	98%	98%	99%	74%	89%	72%	97%	84%	98%	97%
Object/array literal extensions	5/5	0/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	3/5	3/5	2/5	5/5	3/5	5/5	5/5
Object static methods	13/13	1/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13
Array methods	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
String properties and methods	2/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
Date methods	3/3	3/3	3/3	3/3	3/3	2/3	3/3	3/3	3/3	3/3	3/3	3/3	2/3	2/3	3/3	2/3
Function.prototype.bind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
JSON	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Immutable globals	3/3	0/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	0/3	3/3	3/3
Miscellaneous	8/11	4/11	9/11	9/11	10/11	9/11	9/11	8/11	10/11	1/11	3/11	2/11	9/11	3/11	8/11	9/11
Strict mode	Yes	No	No	Yes[7]	Yes[8]	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

[1] In Internet Explorer 8 `Object.defineProperty` only accepts DOM objects (MSDN reference).

[2] In some versions of Safari 5, `Object.defineProperty` does **not** work with DOM objects.

[3] In Internet Explorer 8 `Object.getOwnPropertyDescriptor` only accepts DOM objects (MSDN reference).

[4] Internet Explorer 6 - 8 do not differentiate between a dense array with undefined values, and a sparse array. Specifically, `0 in [,]` and `0 in [undefined]` both yield false - whereas in a compliant browser, the former would give `false`, the latter `true`. As such, ES5 array iteration methods can only be shimmed reliably when dealing with dense arrays.

[5] In Opera 11.60-11.64 Date.prototype.toJSON is undefined.

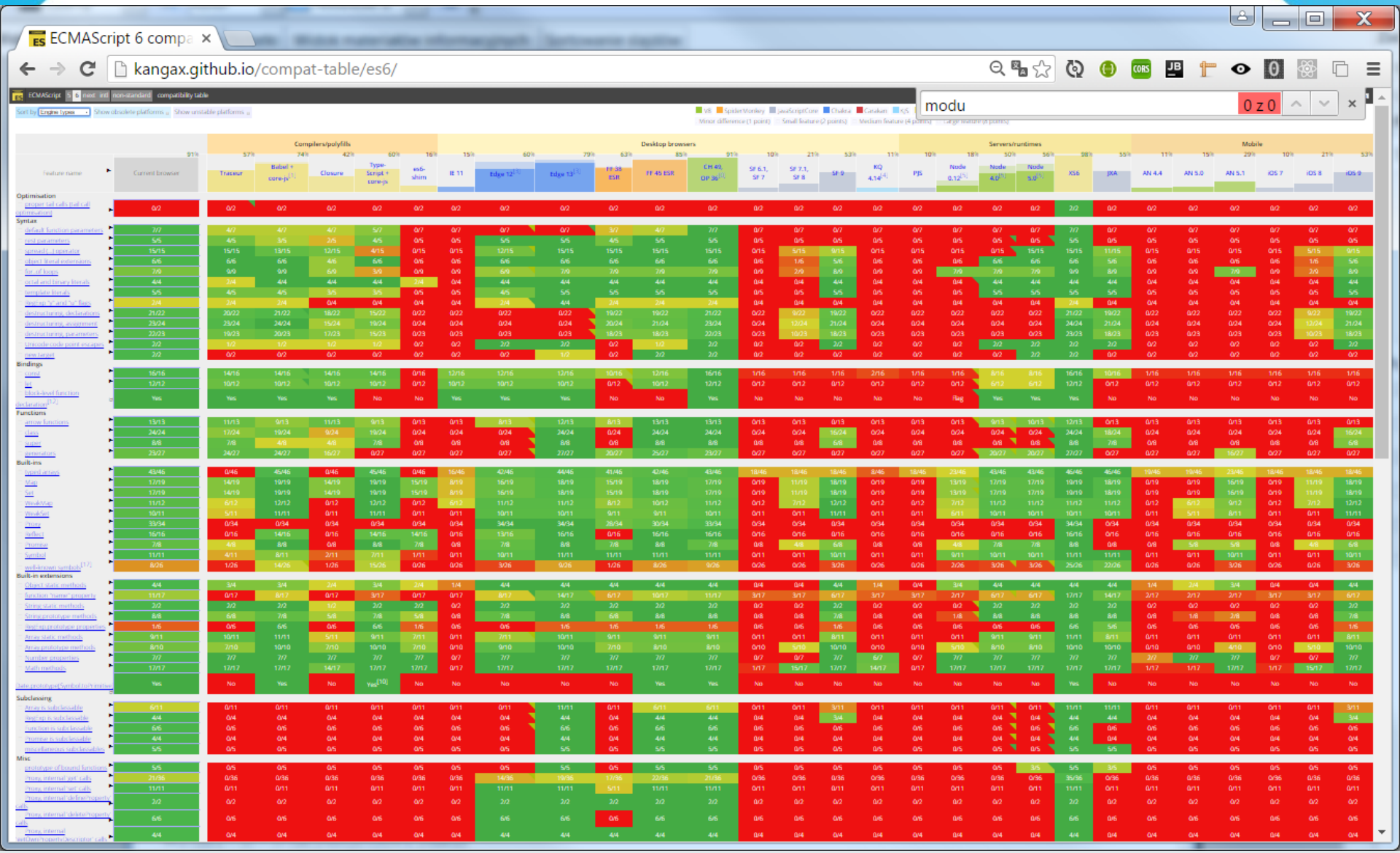
Język – ECMAScript 6/2015

ES6

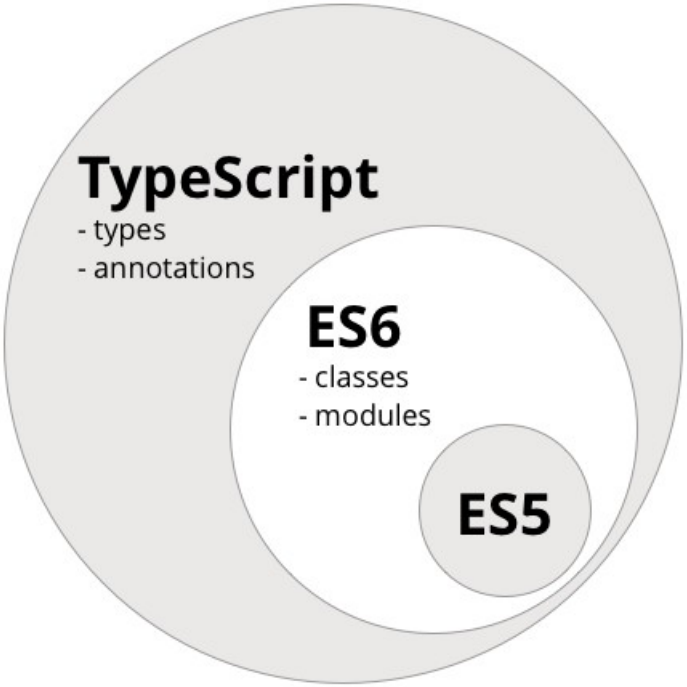
```
class EventBus {
    constructor() {
        this.listeners = new Set();
    }
    addListener(listener) {
        let contains = this.listeners.has(listener);
        if (contains) {
            throw new Error('Listener already added');
        }
        this.listeners.add(listener);
    }
    removeListener(listener) {
        this.listeners.delete(listener);
    }
    fire(eventName, eventData) {
        for (let listener of this.listeners) {
            if (listener.eventName === eventName) {
                listener.handle(eventData);
            }
        }
    }
}
```

```
var eb = new EventBus();

var listener = {
    eventName: 'RowSelected', handle: (data) => {
        console.log('RowSelected: ', data);
    }
};
eb.addListener(listener);

eb.fire('RowSelected', {id: 1});
eb.fire('RowSelected', {id: 2});
eb.removeListener(listener);
```

Język -ECMAScript 6



Język - Babel



BABEL

Stages

Język – ECMAScript 7

ES7

```
$.GET('/getLogin', (user) => {
     $.GET('/getAssignedModules',user, (assignedModules) => {
          $.GET('/getLasOpenedModule', assignedModules, (lastOpened) => {
               $.GET('/loadModuleData', lastOpened, (data) => {
                    open(data);
               }
          }
     }
})
```

Język – ECMAScript 7

ES7

```
var logged =$.GET('/isLogged')
logged.then((user) => {
     return $.GET('/getAssignedModules',user);
}).then((assignedModules) => {
     return $.GET('/getLasOpenedModule', assignedModules);
}).then((assignedModules) => {
     return $.GET('/loadModuleData', lastOpened)
}).then((data) => {
     open(data);
})
```

Język – ECMAScript 7

ES7

```
function async load(){
     var user = await $.GET('/isLogged')
     var assignedModules = await $.GET('/getAssignedModules',user)
     var lastOpened = await $.GET('/getLasOpenedModule',assignedModules)
     var data = await $.GET('/loadModuleData',lastOpened)
     open(data);
}
```

Język – ECMAScript 7

ES7

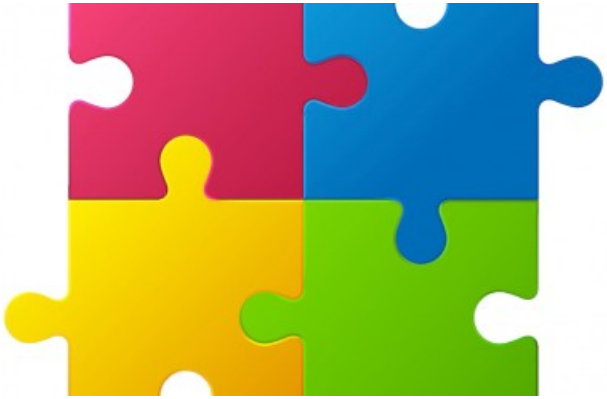
```
function async load(){
     try{
          var user = await $.GET('/isLogged')
          var assignedModules = await $.GET('/getAssignedModules',user)
          var lastOpened = await $.GET('/getLasOpenedModule',assignedModules)
          var data = await $.GET('/loadModuleData',lastOpened)
          open(data);
     }catch(e){

     }
}
```

Język - TypeScript


```
interface Listener {
    eventName:string;
    handle:(data:any) => void;
}
class EventBus<L extends Listener> {
    private listeners:Set<L> = new Set();


    addListener(listener:L) {
        let contains = this.listeners.has(listener);
        if (contains) {
            throw new Error('Listener already added');
        }
        this.listeners.add(listener);
    }

    removeListener(listener:L) {
        this.listeners.delete(listener);
    };

    fire(eventName, eventData) {
        for (var listener of this.listeners) {
            if (listener.eventName === eventName) {
                listener.handle(eventData);
            }
        }
    }
}
```

```
var eb = new EventBus();

var listener = {
    eventName: 'RowSelected', handle: (data) => {
        console.log('RowSelected: ', data);
    }
};
eb.addListener(listener);

eb.fire('RowSelected', {id: 1});
eb.fire('RowSelected', {id: 2});
eb.removeListener(listener);
```

Modułowość/Wieloplikowość



Modułowość

EventBus.js

```
class EventBus {
    constructor() {
        this.listeners = new Set();
    }
    addListener(listener) {
        let contains = this.listeners.has(listener);
        if (contains) {
            throw new Error('Listener already added');
        }
        this.listeners.add(listener);
    }
    removeListener(listener) {
        this.listeners.delete(listener);
    }
    fire(eventName, eventData) {
        for (var listener of this.listeners) {
            if (listener.eventName === eventName) {
                listener.handle(eventData);
            }
        }
    }
}
```

TableRowSelection.js

```
var eb = new EventBus();

var listener = {
    eventName: 'RowSelected', handle: (data) => {
        console.log('RowSelected: ', data);
    }
};
eb.addListener(listener);

eb.fire('RowSelected', {id: 1});
eb.fire('RowSelected', {id: 2});
eb.removeListener(listener);
```

Modułowość

```
<!DOCTYPE html>
<html>
    <head>
        <title>My Sample Project</title>
        <script  src="scripts/EventBus.js"></script>
        <script  src="scripts/TableRowSelection.js"></script>
    </head>
    <body>
        <h1>My Sample Project</h1>
    </body>
</html>
```

Modułowość

AMD & Require.js

```
<!DOCTYPE html>
<html>
    <head>
        <title>My Sample Project</title>
        <script data-main="scripts/bootstrap" src="scripts/require.js"></script>
    </head>
    <body>
        <h1>My Sample Project</h1>
    </body>
</html>
```

EventBus.js

```
define([] , function () {
// definicja klasy EventBus
    return new EventBus();
});
```

TableRowSelection.js

```
define(['./EventBus'] , function (eb) {
    var listener = {}

    eb.addListener(listener);

    eb.fire('RowSelected', {id: 1});
    eb.fire('RowSelected', {id: 2});
    eb.removeListener(listener);
});
```

Modułowość – CommonJS

webpack
MODULE BUNDLER

```
<!DOCTYPE html>
<html>
    <head>
        <title>My Sample Project</title>
        <script src="scripts/bundle.js"></script>
    </head>
    <body>
        <h1>My Sample Project</h1>
    </body>
</html>
```

EventBus.js

```
exports.eb = new EventBus();
```

TableRowSelection.js

```
var {eb} = require('./EventBus');

var listener = {};
eb.addListener(listener);

eb.fire('RowSelected', {id: 1});
eb.fire('RowSelected', {id: 2});
eb.removeListener(listener);
```

Modułowość – ES6 Modules

webpack
MODULE BUNDLER

```
<!DOCTYPE html>
<html>
    <head>
        <title>My Sample Project</title>
        <script src="scripts/bundle.js"></script>
    </head>
    <body>
        <h1>My Sample Project</h1>
    </body>
</html>
```

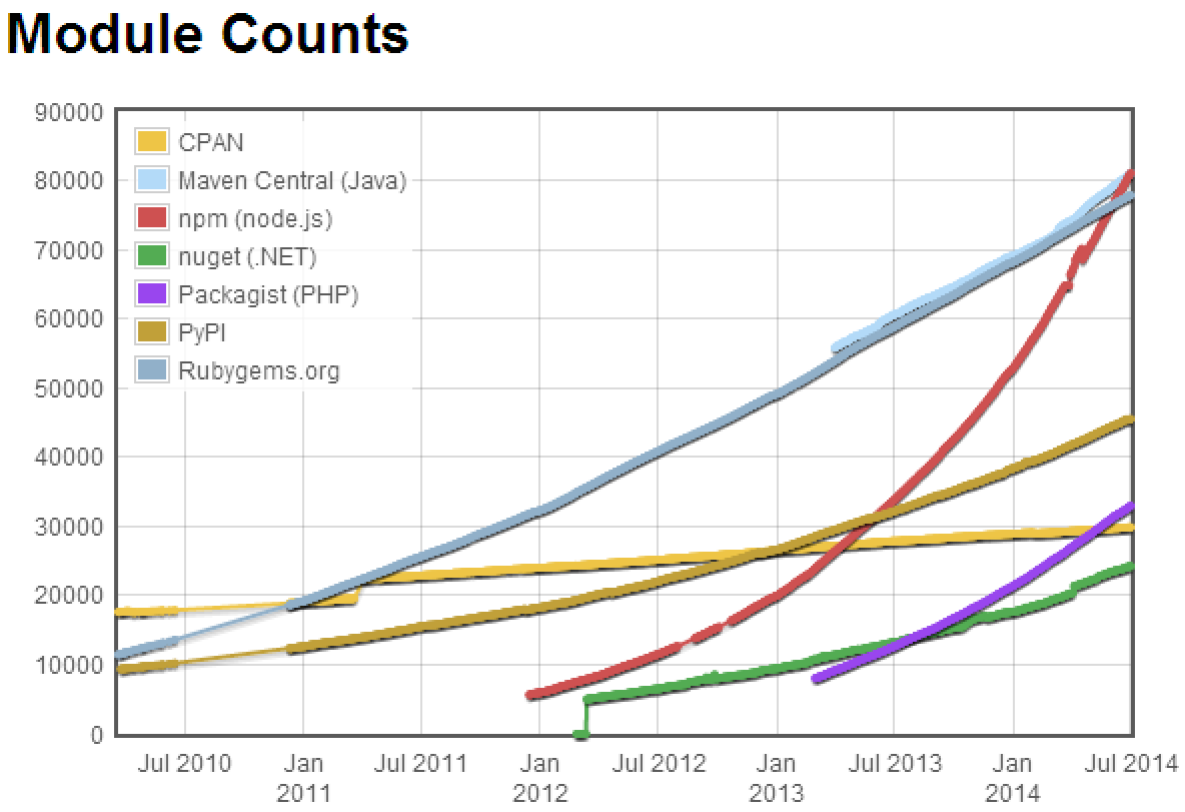
EventBus.js

```
var eventBus = new EventBus();
export eventBus;
```

TableRowSelection.js

```
import {eventBus as eb} from '../../EventBus';

var listener = {};
eb.addListener(listener);

eb.fire('RowSelected', {id: 1});
eb.fire('RowSelected', {id: 2});
eb.removeListener(listener);
```

Biblioteki zewnętrzne



Biblioteki zewnętrzne

npm install lodash --save

npm install jquery --save

npm install webpack --save-dev

```
import $ from 'jquery';

import _ from 'lodash';
```

package.js

```
{
  "name": "sample-project",
  "version": "1.0.0",
  "dependencies": {
    "lodash": "^4.0.5",
    "jquery": "^2.0.0"
   },
   "devDependencies": {
    "webpack": "^1.2.5"
   }
}
```

Css

Css – Less/Saas

```
@import "from-colors";

.class1 {
    background-color: @color-base;
    .class2 {
        background-color: #fff;
        color: lighten(@color-base, 10);
    }
}
```

```
.class1 {
    background-color: #2d5e8b;
}
.class1 .class2 {
    background-color: #fff;
    color: #1d4e7b;
}
```

CssModules - Webpack

TableComponent.less

```
@import "../common";

.important tr td {
  &:extend(.optimistic);
  font-weight: bold;
}

:global {
  .fancy {
    background-color: lightcyan;
  }
}
```

TableComponent.es6

```
"use strict";
import template from './template.hbs';
import styles from './TableCoponent.less';
/**
 * Created by Mirek on 2016-02-16.
 */
class TableComponent {

    renderTo(target) {
        this.target = target;
        target.html(template({styles}));
    }
```

TableComponent.hbs

```
<div class="panel panel-default">
    <div class="panel-body">
        <table class="table table-striped {{styles.important}} fancy table-hover">
            <tr>
```

```
<div class="panel-body">
        <table class="table table-striped TableCoponent__important___2NlR_ fancy table-hover">
```

Css -autoprefixer

```css
.example {
    display: flex;
    transition: all .5s;
    user-select: none;
    background: linear-gradient(to bottom, white, black);
}
```

```css
.example {
    display: -webkit-box;
    display: -webkit-flex;
    display: -ms-flexbox;
    display: flex;
    -webkit-transition: all .5s;
    transition: all .5s;
    -webkit-user-select: none;
       -moz-user-select: none;
        -ms-user-select: none;
            user-select: none;
    background: -webkit-linear-gradient(top, white, black);
    background: linear-gradient(to bottom, white, black);
}
```

Testy


How to test Javascript?
mocha
chai
Sinon.JS
Protractor
end to end testing for AngularJS
Jasmine
messagesystems 7

Testy – mocha + chai

```
import {eb} from '../EventBusES6';

describe('Component interactions Tests...',  () => {
    describe('EventBus Tests...',  () => {

        afterEach(() => {
            eb.listeners.clear();
        });

        it('should add listener', () => {
            //given
            var currentSize = eb.listeners.size;

            //when
            eb.addListener(listener);

            //then
            expect(eb.listeners.size).to.be.eq(currentSize + 1);
        });
```

Testy – mocha + chai + sinon + sinon-chai

```
describe('Component interactions Tests...',  () => {
    describe('EventBus Tests...',  () => {

        var sandbox;
        beforeEach(function () {
            sandbox = sinon.sandbox.create();
        });

        afterEach(function () {
            sandbox.restore();
        });

        it('should invoke listener handler', function () {
            //given
            var stub = sandbox.stub(listener, 'handle');
            eb.addListener(listener);
            let eventData = {id: 1};

            //when
            eb.fire('RowSelected', eventData);


            //then
            expect(stub).to.have.been.calledOnce;

        });
```

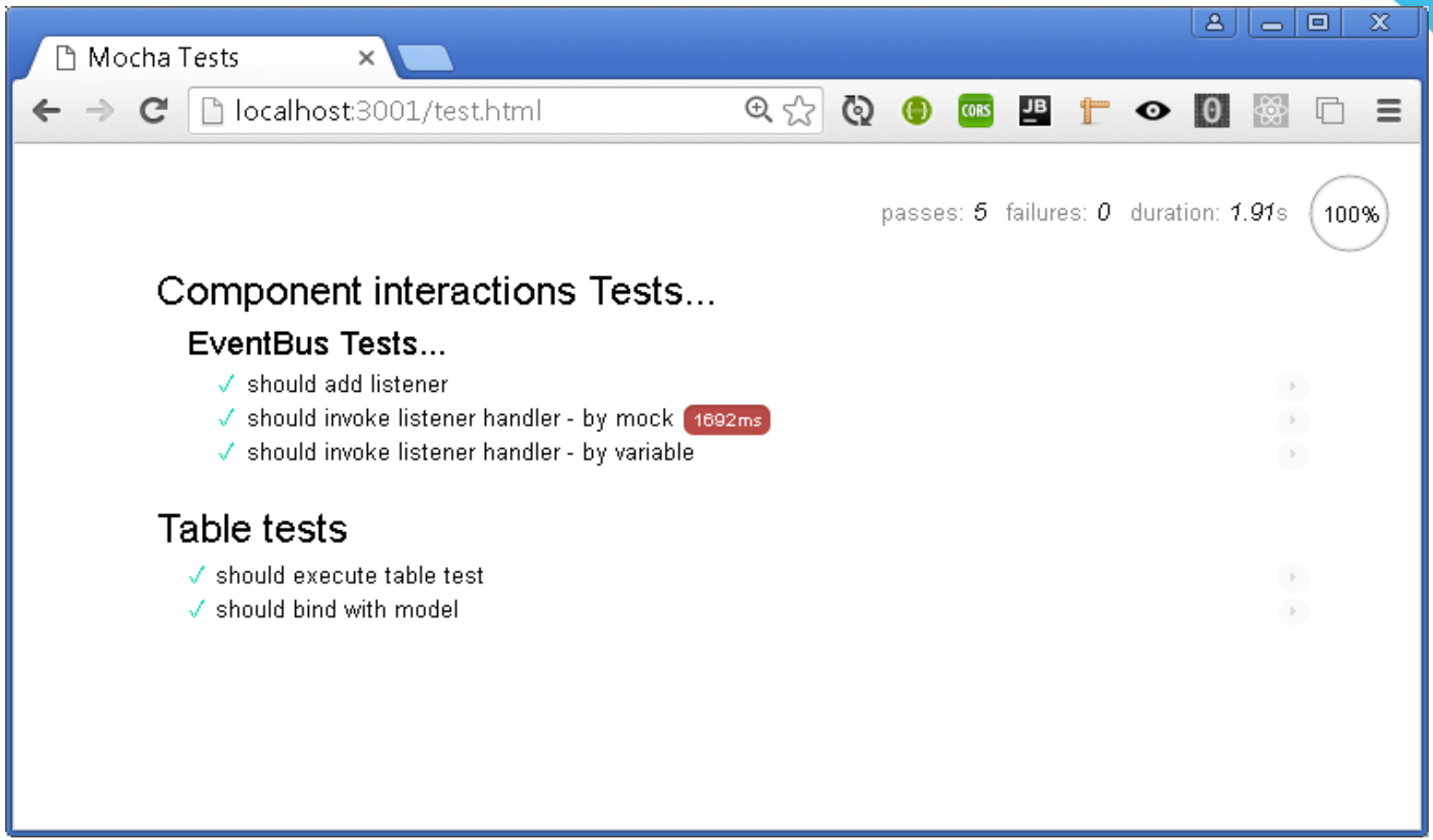
Testy – mocha + chai + sinon + sinon-chai

```
describe('Component interactions Tests...',  () => {
    describe('EventBus Tests...',  () => {

        it('should invoke listener handler', function (done) {
            //given
            var stub = sandbox.stub(listener, 'handle');
            eb.addListener(listener);
            let eventData = {id: 1};

            //when
            var promise= eb.fire('RowSelected', eventData);


            //then
            promise.then(()=> {
                expect(stub).to.have.been.calledOnce;
            }.then(done, done);

        });
```

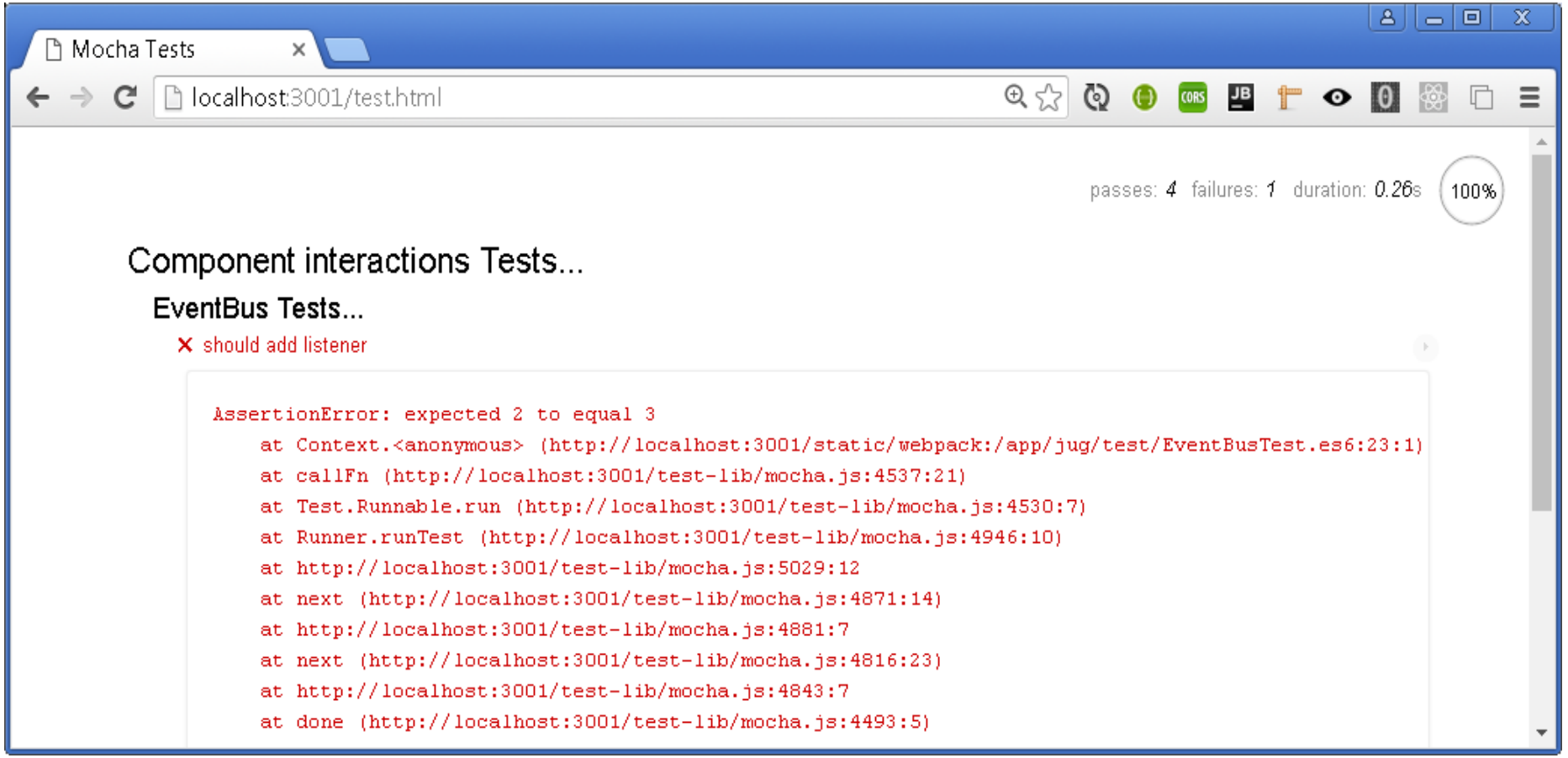
Testy – mocha + chai + sinon + sinon-chai

```
describe('Component interactions Tests...',  () => {
    describe('EventBus Tests...',  () => {

        ita('should invoke listener handler', async () {
            //given
            var spy = sandbox.stub(listener, 'handle');
            eb.addListener(listener);
            let eventData = {id: 1};

            //when
            await eb.fire('RowSelected', eventData);


            //then
            expect(spy).to.have.been.calledOnce;


        });
```

Testy


Mocha Tests
localhost:3001/test.html
passes: 5 failures: 0 duration: 1.91s
100%
Component interactions Tests...
EventBus Tests...
✓ should add listener
✓ should invoke listener handler - by mock 1692ms
✓ should invoke listener handler - by variable
Table tests
✓ should execute table test
✓ should bind with model

Testy


Mocha Tests
localhost:3001/test.html
passes: 4 failures: 1 duration: 0.26s
100%
Component interactions Tests...
EventBus Tests...
✕ should add listener
AssertionError: expected 2 to equal 3
at Context.<anonymous> (http://localhost:3001/static/webpack:/app/jug/test/EventBusTest.es6:23:1)
at callFn (http://localhost:3001/test-lib/mocha.js:4537:21)
at Test.Runnable.run (http://localhost:3001/test-lib/mocha.js:4530:7)
at Runner.runTest (http://localhost:3001/test-lib/mocha.js:4946:10)
at http://localhost:3001/test-lib/mocha.js:5029:12
at next (http://localhost:3001/test-lib/mocha.js:4871:14)
at http://localhost:3001/test-lib/mocha.js:4881:7
at next (http://localhost:3001/test-lib/mocha.js:4816:23)
at http://localhost:3001/test-lib/mocha.js:4843:7
at done (http://localhost:3001/test-lib/mocha.js:4493:5)

Testy – Karma/PhantomJS

```
module.exports = function (config) {
    config.set({
        files: [
            'test/**/*.js'
        ],

        frameworks: ['mocha', 'chai'],
        browsers: ['Chrome', 'PhantomJS'],
        plugins: [
            'karma-chrome-launcher',
            'karma-mocha',
            'karma-chai'
        ],
        junitReporter: {
            outputFile: 'test_out/unit.xml',
            suite: 'unit'
        }
    });
};
```

Testy

Testy


```
casper.
     start(url).
     then(function(){
          casper.click('button#open-dialog');

          phantomcss.screenshot('#the-dialog',
                                'Dialog screenshot');
});
casper.then(function now_check_the_screenshots() {
     phantomcss.compareAll();
});
```

Baseline

This is my teaser title

MICAH GODBOLT
OCTOBER 31ST, 2014

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.

New

THIS IS MY TEASER TITLE

MICAH GODBOLT
OCTOBER 31ST, 2014

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Diff

MICAH GODBOLT
OCTOBER 31ST, 2014

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.

Linty

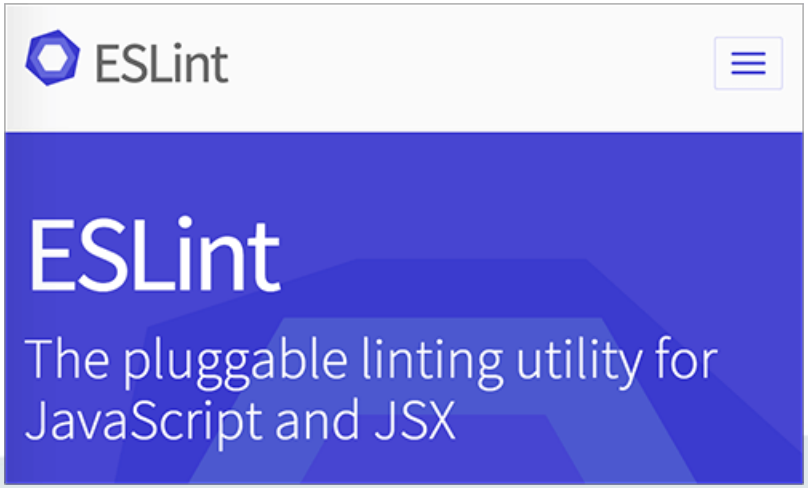
{jstanbul}

JSLint
The JavaScript Code Quality Tool

Isparta

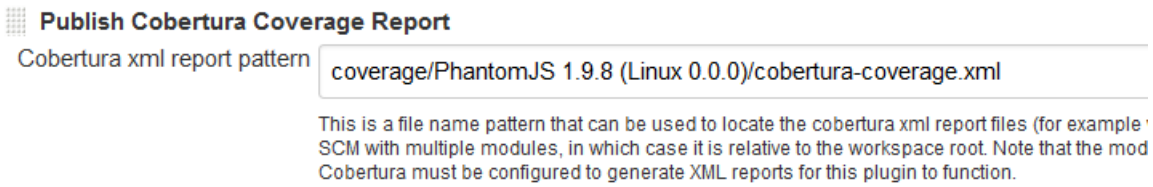
JS Hint

NYC



Linty

```
reporters: [ 'progress', 'coverage' ],
    coverageReporter: {
    type: 'cobertura',
        dir: 'coverage/'
},
...
webpack: {
    module: {
        preLoaders: [ // << add subject as webpack's preloader
            {
                test: /(\.jsx)|(\.js)$/,
                // exclude this dirs from coverage
                exclude: /node_modules/,
                loader: 'isparta-instrumenter-loader'
            },
        ],
    },
}
});
```



Linty

Execute shell

Command

```
eslint -f checkstyle -c .eslintrc app/**/*/*.es6  >eslint.xml || echo "ESLing failed"
```

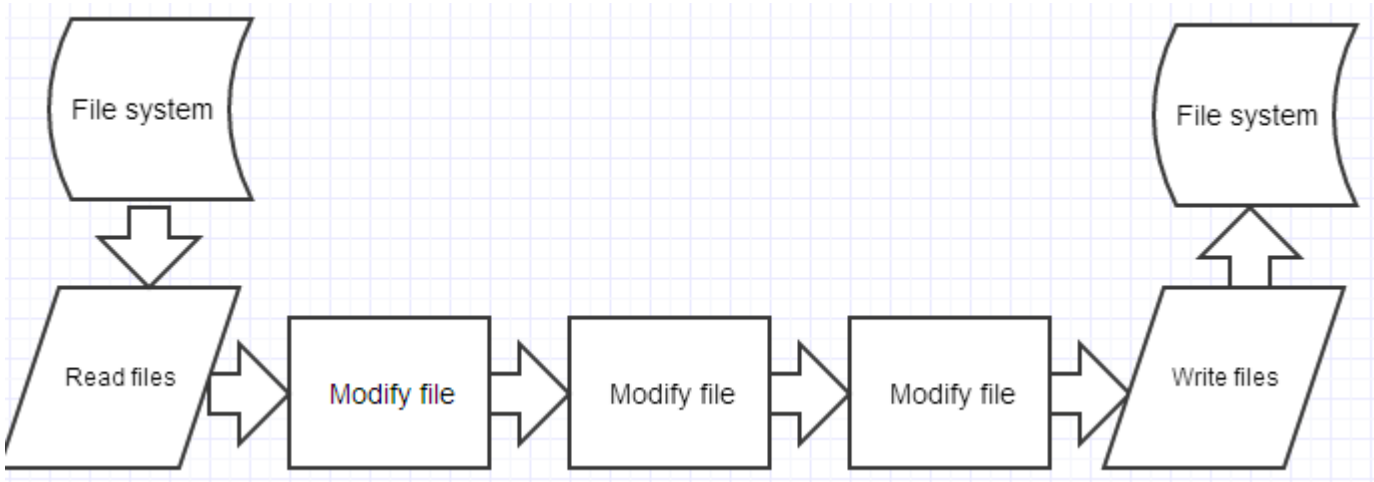
See the list of available environment variables

Publish Checkstyle analysis results

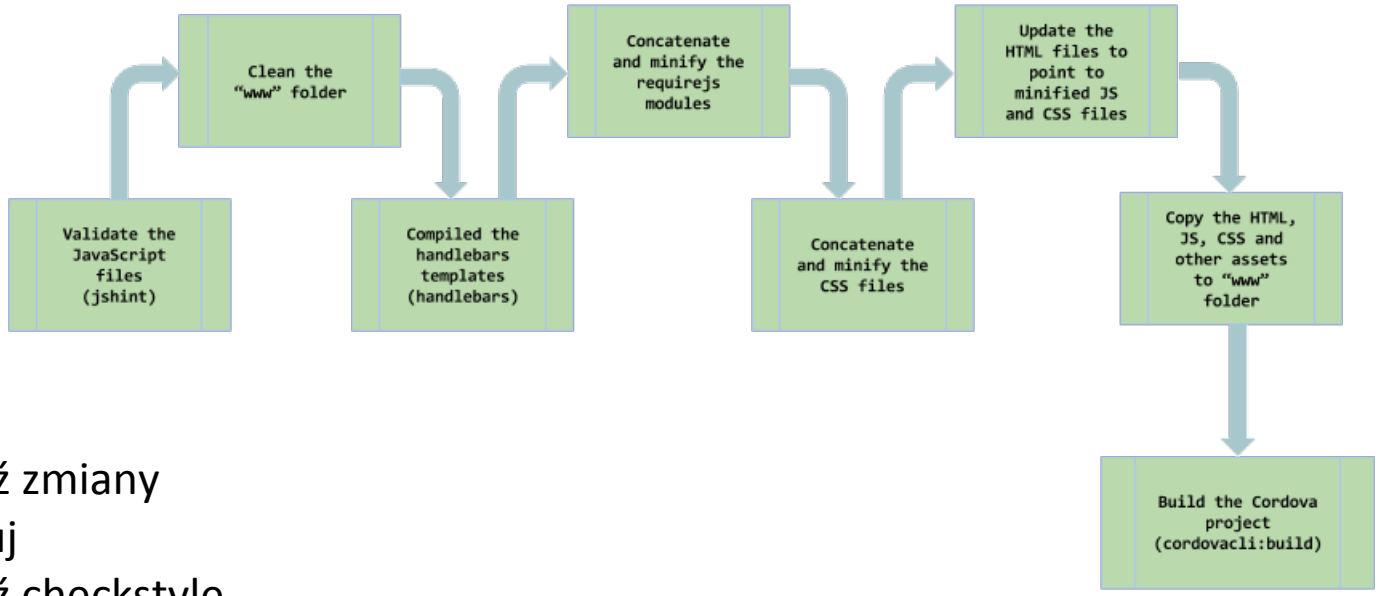
Checkstyle results: eslint.xml

Fileset includes setting that specifies the generated raw CheckStyle XML report files, such as **/checkstyle-result.xml. Basedir sure not to include any non-report files into this pattern.

Narzędzia do budowania – Task Runners



Narzędzia do budowania – Task Runners

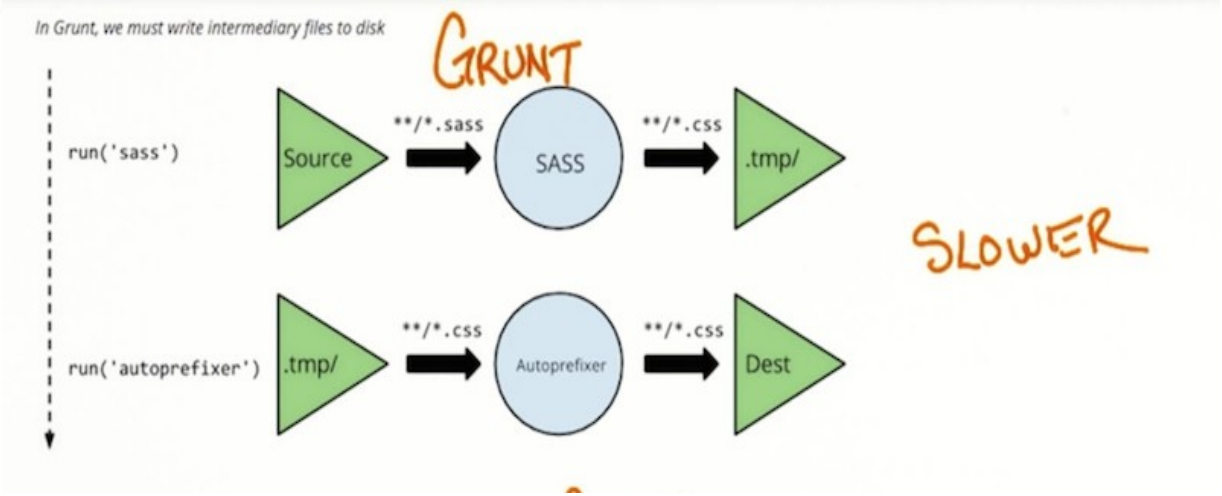


1. Sprawdź zmiany
2. Kompiluj
3. Sprawdź checkstyle
4. Sprawdź findbug
5. Puść testy

5.1 Jak są błędy to pokaż dymek

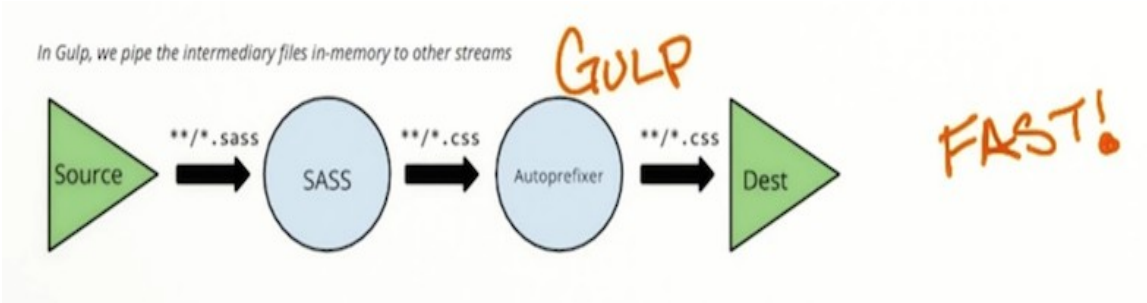
6. Odśwież przeglądarkę
7. ...

Narzędzia do budowania




```
watch: {
    css: {
        files: ['src/css/*.scss'],
            tasks: ['sass:dev']
    },
    js: {
        files: ['src/js/*.js'],
            tasks: ['uglify:dev']
    }
}
```

Narzędzia do budowania

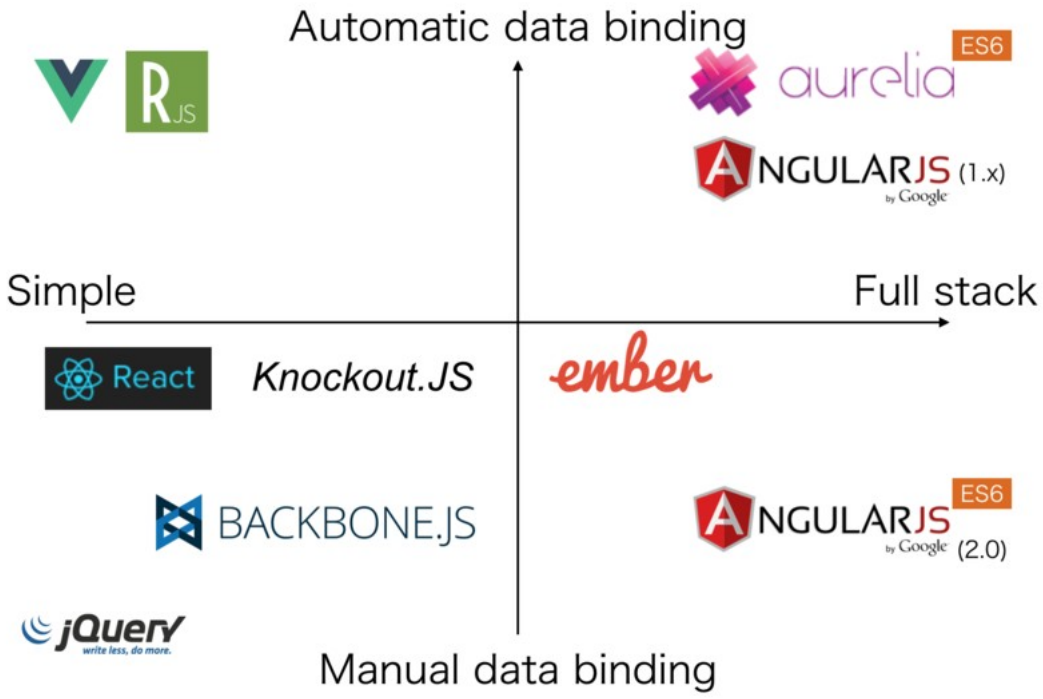



```
gulp.watch('client/templates/*.jade')
    .pipe(jade())
    .pipe(minify())
.pipe(gulp.dest('build/minified_templates'));
```

Narzędzia do budowania

Frameworks

TodoMVC



Frameworks

2007

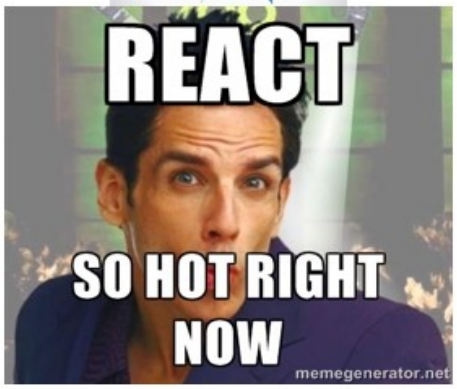
2009

2012

2013

2014

2015



Frameworks

Grails

Java web development as it stands today is dramatically more complicated than it needs to be. Most modern web frameworks in the Java space are over complicated and don't embrace the Don't Repeat Yourself (DRY) principles. Dynamic frameworks like Rails, Django and TurboGears helped pave the way to a more modern way of thinking about web applications. Grails builds on these conc...

web framework | rad | java | groovy | mvc

Statistics
Used by **51** users
Rated by **25** users
Last release **2.1.0**

Overall rating
9.4
9.2 | 9.0 | 9.2 | 9.2

Last release: 1 month ago

PrimeFaces

PrimeFaces is an open source JSF component suite with various extensions. • Rich set of components (HtmlEditor, Dialog, AutoComplete, Charts and many more). • Built-in Ajax based on standard JSF 2.0 Ajax APIs. • Lightweight, one jar, zero-configuration and no required dependencies. • Ajax Push support via websockets. • Mobile UI kit to create mobil...

web framework | jsf | java | component

Statistics
Used by **33** users
Rated by **20** users
Last release **3.3.1**

Overall rating
9.1
8.9 | 8.6 | 8.6 | 8.6

Last release: 2 months ago

RichFaces

The RichFaces project is an advanced UI component framework for easily integrating Ajax capabilities into business applications using JSF. RichFaces 4 builds upon the pioneering Ajax support that began with RichFaces 3 and is standardized in JSF 2. In addition to extending these ajax capabilities, RichFaces also improves other areas of JSF 2, including usability, performance tuning,...

web framework | jsf | java | component

Statistics
Used by **16** users
Rated by **9** users
Last release **4.2.2**

Overall rating
8.9
8.6 | 8.3 | 8.4 | 8.6

Last release: 3 months ago

Tapestry

Apache Tapestry is an open-source framework for creating dynamic, robust, highly scalable web applications in Java or other JVM languages. Tapestry complements and builds upon the standard Java Servlet API, and so it works in any servlet container or application server. Tapestry is released under the Apache Software License 2.0. Tapestry has a long history, with the oldest code...

web framework | java | mvc

Statistics
Used by **17** users
Rated by **8** users
Last release **5.3.4**

Overall rating
8.9
8.4 | 8.6 | 7.6 | 8.6

Last release: 1 month ago

Play

Play 2.0 is a high-productivity Java and Scala web application framework that integrates the components and APIs you need for modern web application development. Play is based on a lightweight, stateless, web-friendly architecture and features predictable and minimal resource consumption (CPU, memory, threads) for highly-scalable applications thanks to its reactive model, based on Ite...

web framework | java | scala | mvc

Statistics
Used by **40** users
Rated by **19** users
Last release **2.0.2**

Overall rating
8.2
8.2 | 8.0 | 7.4 | 7.7

Last release: 2 months ago

Wicket

Designing and implementing any framework for use in the real world inevitably involves compromises and some degree of complexity, and Wicket is no exception. However, I believe you will find that Wicket is quite compact, focused and powerful as a framework. If Wicket has these characteristics, it is because it was designed to solve one very specific problem well:enabling component-oriented, progra...

web framework | java | component

Statistics
Used by **20** users
Rated by **8** users
Last release **1.5.4**

Overall rating
7.8
7.4 | 6.8 | 6.8 | 7.2

Last release: 7 months ago

Vaadin

Vaadin is a web application framework for Rich Internet Applications (RIA). In contrast to Javascript libraries and browser-plugin based solutions, it features a robust server-side architecture. This means that the largest part of the application logic runs securely on the server. Google Web Toolkit (GWT) is used on the browser side to ensure a rich and fluent user experience.Vaadin is a large col...

web framework | java | ui | ajax

Statistics
Used by **25** users
Rated by **10** users
Last release **6.7.4**

Overall rating
8.1
7.6 | 7.4 | 8.1 | 7.8

Last release: 7 months ago

Struts

The Apache Struts web framework is a free open-source solution for creating Java web applications. Web applications differ from conventional websites in that web applications can create a dynamic response. Many websites deliver only static pages. A web application can interact with databases and business logic engines to customize a response. Web applications ...

web framework | java | mvc

Statistics
Used by **24** users
Rated by **6** users
Last release **2.3.3**

Overall rating
6.8
7.0 | 6.7 | 6.8 | 7.3

MyFaces

Apache MyFaces is a project of the Apache Software Foundation, and hosts several sub-projects relating to the JavaServer™ technology. If you want to know more about how JavaServer™ Faces works, take a look at the MyFaces introduction to JSF The Apache MyFaces project provides: a JavaServer™ Faces implementation (MyFaces Core, providing api/impl a...

web framework | jsf | java | component

Statistics

Overall rating

GWT

Google Web Toolkit (GWT) is a development toolkit for building and optimizing complex browser-based applications. Its goal is to enable productive development of high-performance web applications without the developer having to be an expert in browser quirks, XMLHttpRequest, and JavaScript. GWT is used by many products at Google, including Google Wave and the new version of AdWords. It's open sour...

web framework | java | ajax

Statistics
Used by **50** users
Rated by **19** users

Overall rating
7.1

Frameworks

```
var LayoutView = Marionette.LayoutView.extend({
  template: require('./templates/layout'),
  regions: {
    main: '#app-hook'
  },
  onShowBlogList: function() {
    this.showChildView('main', new BlogListView());
  },
});

var Controller = Marionette.Object.extend({
  initialize: function() {
    var layout = new LayoutView();
    layout.render();
    this.options.layout = layout;
  },

  blogList: function() {
    var layout = this.getOption('layout');
    layout.triggerMethod('show:blog:list');
  }
})

var Router = Marionette.AppRouter.extend({
  controller: new Controller(),
  appRoutes: {
    'blog/': 'blogList',
    'blog/:entry': 'blogEntry',
    'blog/:entry/comments/:comment': 'blogComment'
  }
});
```

Frameworks

```
booksModule.config(function($routeProvider) {
     $routeProvider.when('/books', {
          templateUrl : 'books/book-list.html',
          controllerAs : 'BookListController',
     }).when('/books/:id', {
          templateUrl : 'books/book.html',
          controllerAs : 'BookController',
     });
});

booksModule.factory('BookService', [ '$resource', function($resource) {
     return $resource('backend/rest/books/:id', {id:'@id'});
} ]);

booksModule.controller("BookListController", function($scope, BookService) {
     this.list = BookService.query();

     this.searchBy = (query) => {
          this.list = BookService.query({query});
     }
})
```

Frameworks

Isolated scope

Transclude

$digest already in progress

CompileFunction/LinkFunction

Frameworks

```
import {Component} from 'angular2/core';

import {RouteParams,RouteData} from 'angular2/router';
import {ROUTER_DIRECTIVES} from 'angular2/router';
```

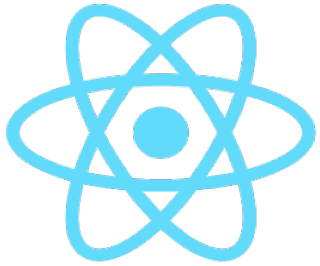
```
@Component({
    selector: 'about',
    directives:[ROUTER_DIRECTIVES],
    templateUrl: './components/about/about.html'
})
export class About {
    id: string;
    constructor(params: RouteParams, data: RouteData){
        this.id = params.get('id');
        console.log(data.get('project'));
    }
}
```

Frameworks

```
<script type="text/x-handlebars">
   <h2>Array Elements:</h2>
   {{#each user in controllers.users}}
      <li>{{user}}</li>
   {{/each}}
</script>

<script type="text/javascript">
   App = Ember.Application.create();

   App.ApplicationController = Ember.Controller.extend({
      needs: ['users']
   });

   App.UsersController = Ember.ArrayController.extend({
      content: ['Mack', 'Mona', 'Manu']
   });
</script>
```

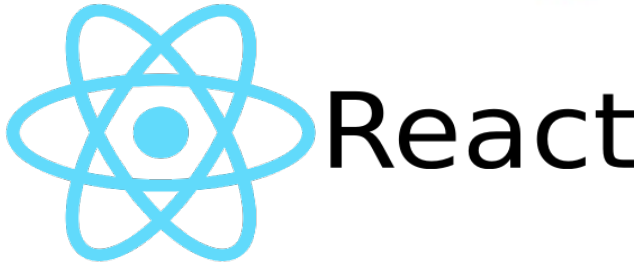
React

```
import React, {Component, PropTypes} from 'react';

export default class Counter extends Component {
    constructor(props) {
        super(props);
        this.state = {counter: 0};
    }

    inc() {
        this.setState({counter: ++this.state.counter})
    }

    dec() {
        this.setState({counter: --this.state.counter})
    }

    render() {
        return (
            <div>
                <button onClick={::this.inc}>+</button>
                {this.state.counter}
                <button onClick={::this.dec}>-</button>
            </div>
        )
    }
}
```



React

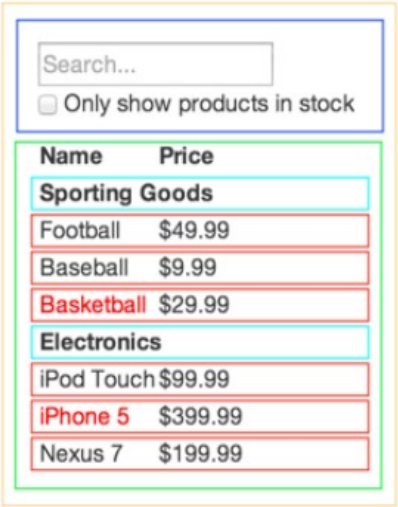
```
import React, {Component, PropTypes} from 'react';

export default class Counter extends Component {


render() {
    return React.createElement(
        'div',
        null,
        React.createElement(
            'button',
            { onClick: this.inc.bind(this) },
            '+'
        ),
        this.state.counter,
        React.createElement(
            'button',
            { onClick: this.dec.bind(this) },
            '-'
        )
      );
    }
}
```

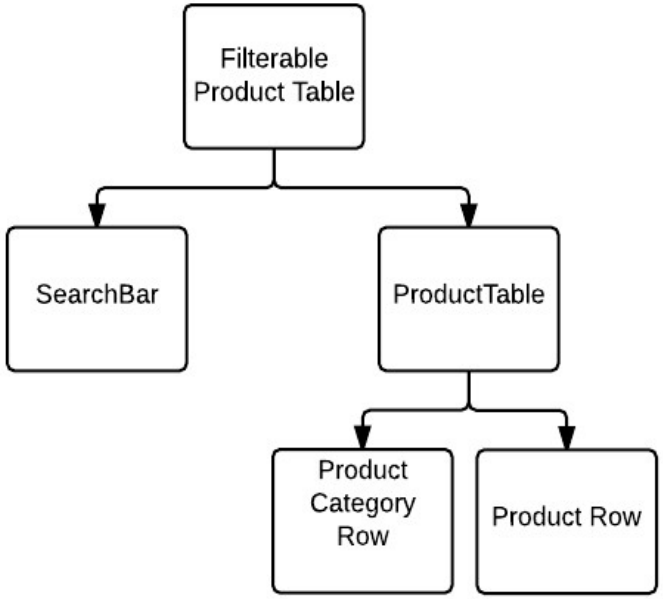


React

React

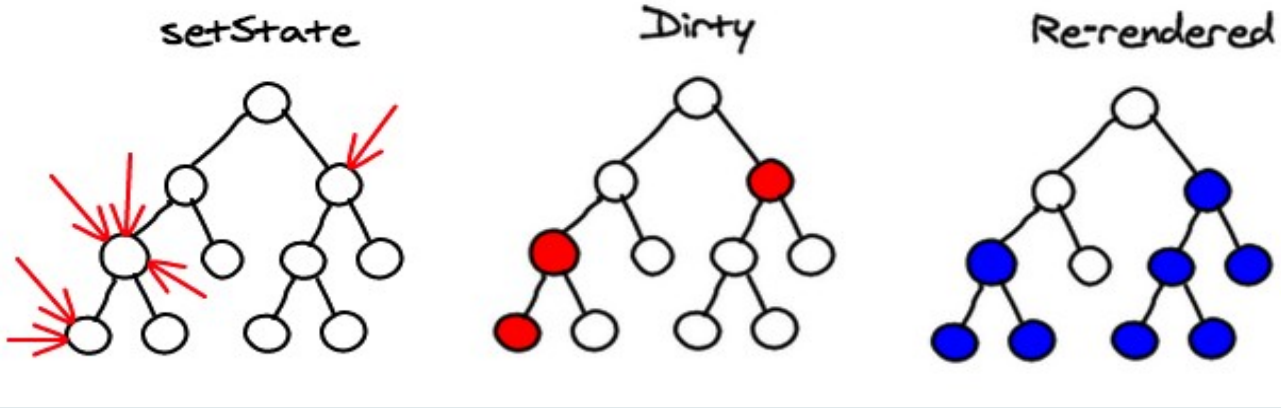
HierarchicalState





ISO, MDA

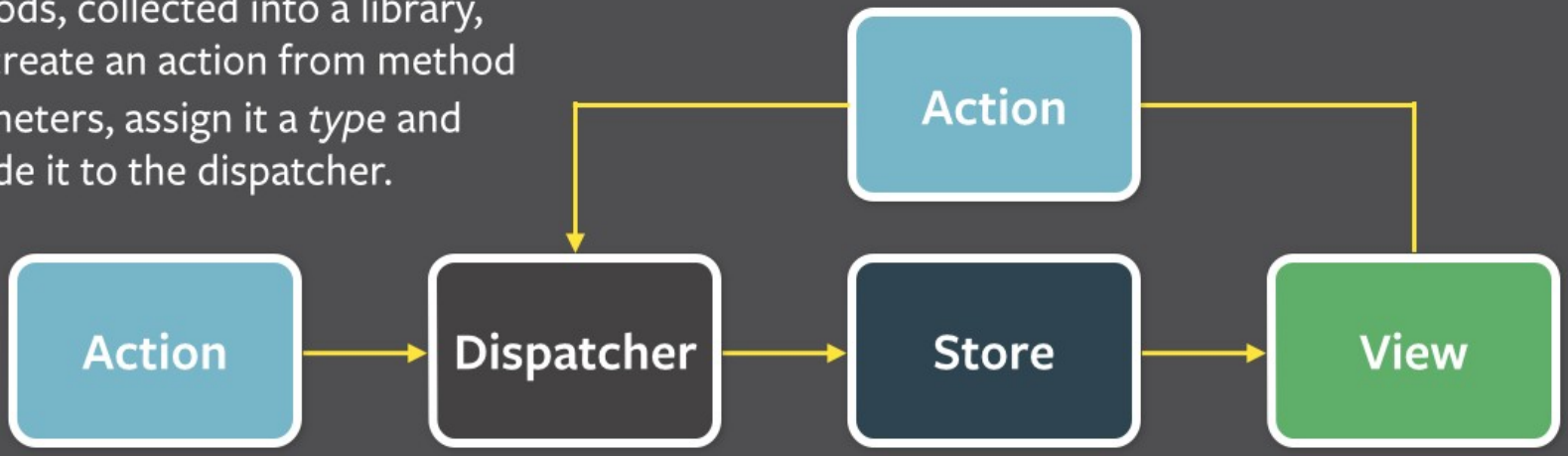
VirtualDOM



FLUX

React

Action creators are helper methods, collected into a library, that create an action from method parameters, assign it a *type* and provide it to the dispatcher.



Every action is sent to all stores via the *callbacks* the stores register with the dispatcher.

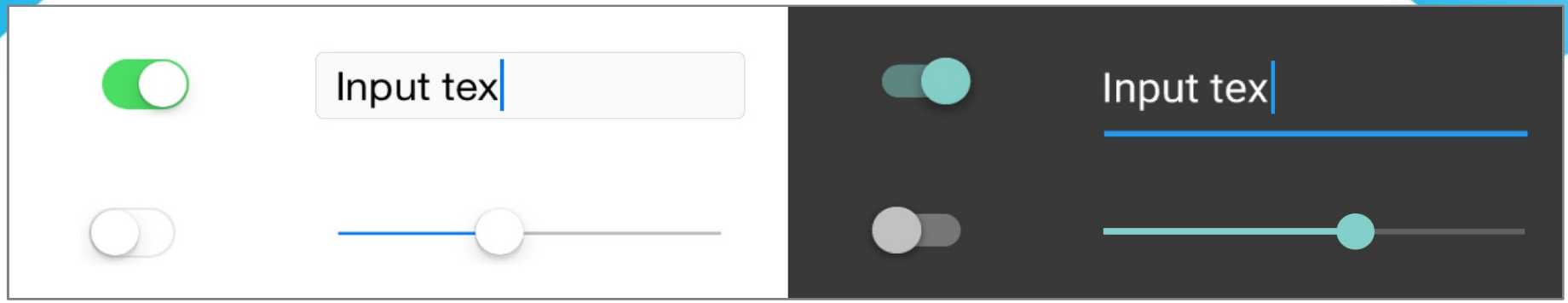
After stores update themselves in response to an action, they emit a *change* event.

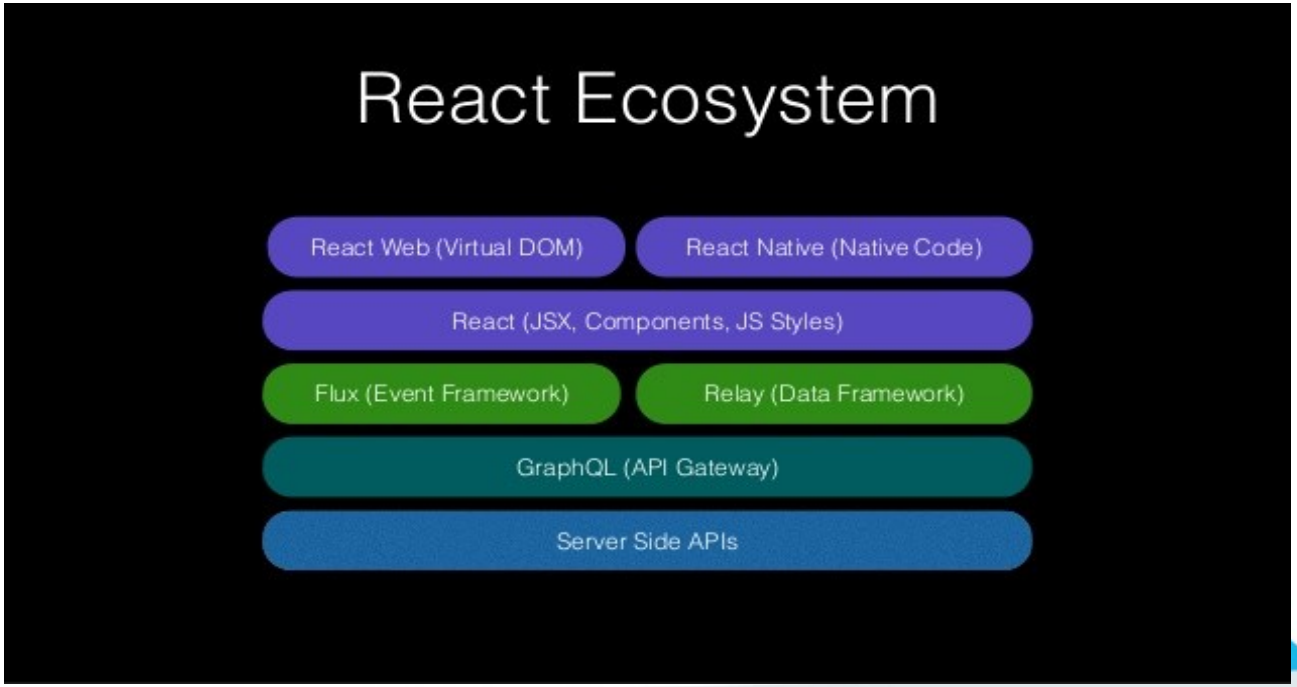
Special views called *controller-views*, listen for *change* events, retrieve the new data from the stores and provide the new data to the entire tree of their child views.

ReactNative

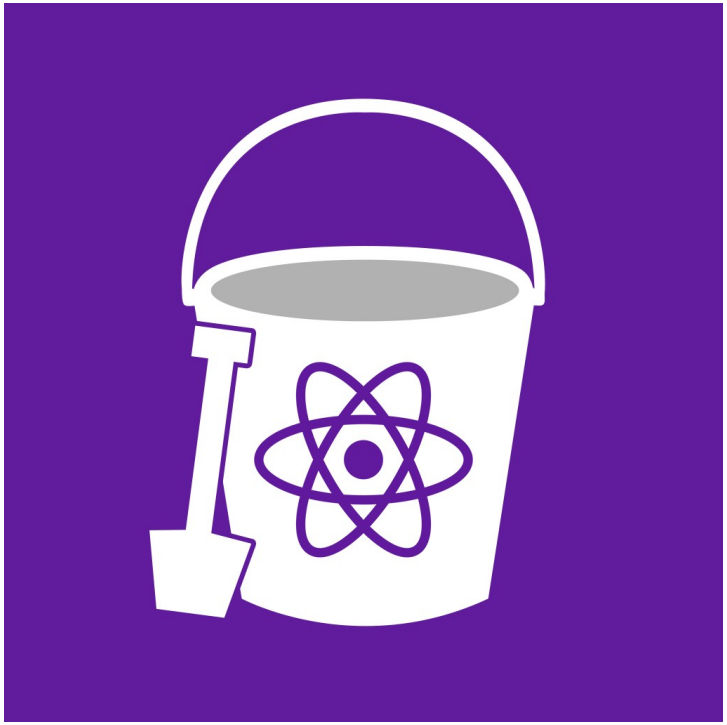
```
var React = require('react-native');
var {
    AppRegistry,
    StyleSheet,
    Text,
    View,
} = React;

var SampleApp = React.createClass({
    render: function() {
        return (
            <View style={styles.container}>
                <Text style={styles.welcome}>
                    Hello World
                </Text>
                <TouchableHighlight
                    onPress={this._onPressButton}>
                    <Image style={styles.button}
                           source={require('image!myButton')} />
                </TouchableHighlight>
            </View>
        );
    }
});
```

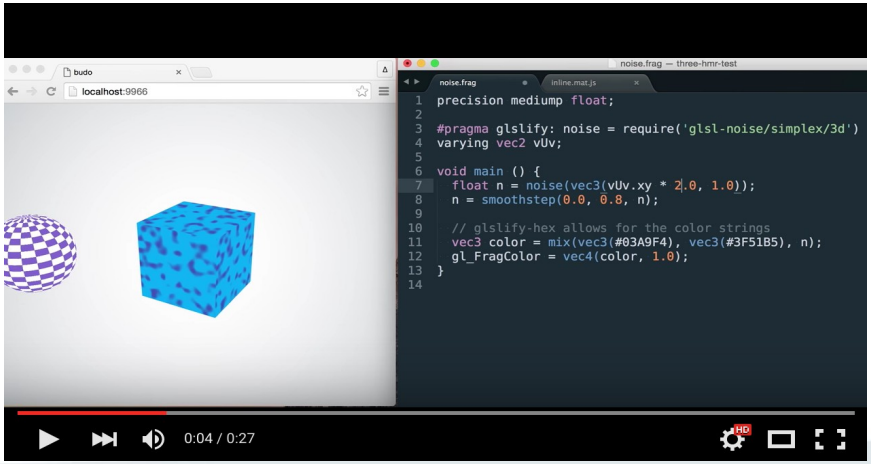
ReactNative





React




budo
localhost:9966
noise.frag — three-hmr-test
noise.frag
inline.mat.js
precision mediump float;
#pragma glslify: noise = require('glsl-noise/simplex/3d')
varying vec2 vUv;
void main () {
float n = noise(vec3(vUv.xy * 2.0, 1.0));
n = smoothstep(0.0, 0.8, n);
// glslify-hex allows for the color strings
vec3 color = mix(vec3(#03A9F4), vec3(#3F51B5), n);
gl_FragColor = vec4(color, 1.0);
}
0:04 / 0:27

Zatrudniamy

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Dzięki za uwagę

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