WEST-PEOPLE

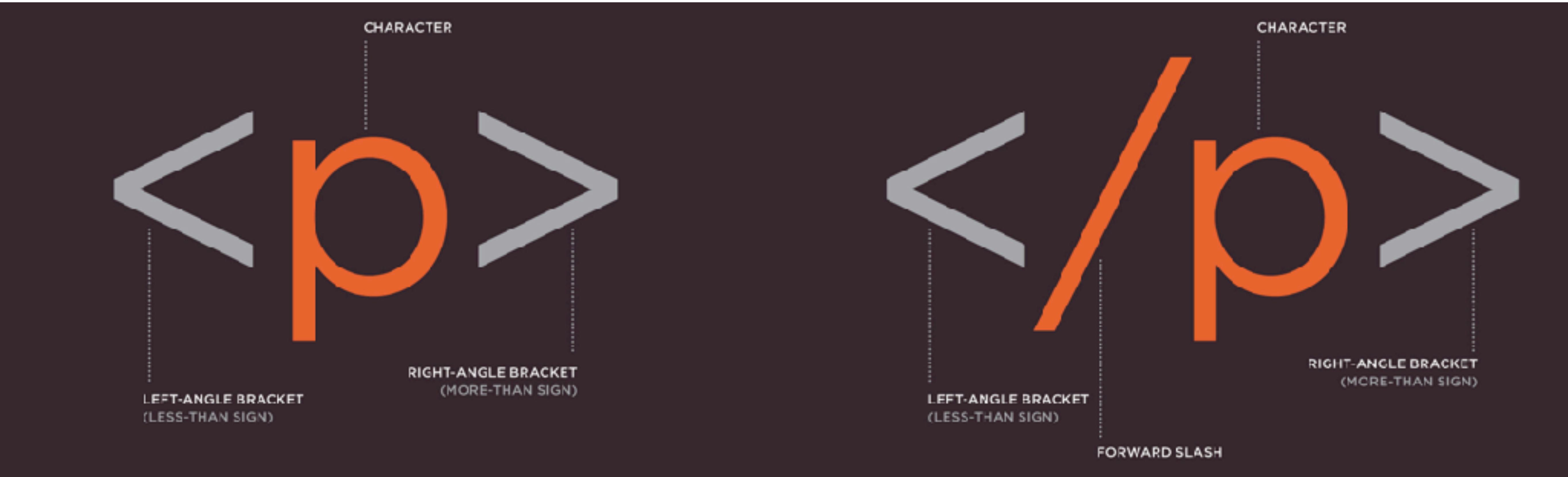
01. HTML,CSS,JS

2016-10-16
방동근 (lubang@lulab.net)

HTML

- HTML: Hypertext Markup Language
  - 웹 문서를 만들기 위한 기본적인 프로그래밍 언어. 하이퍼텍스트를 작성하기 위해 개발되었다.

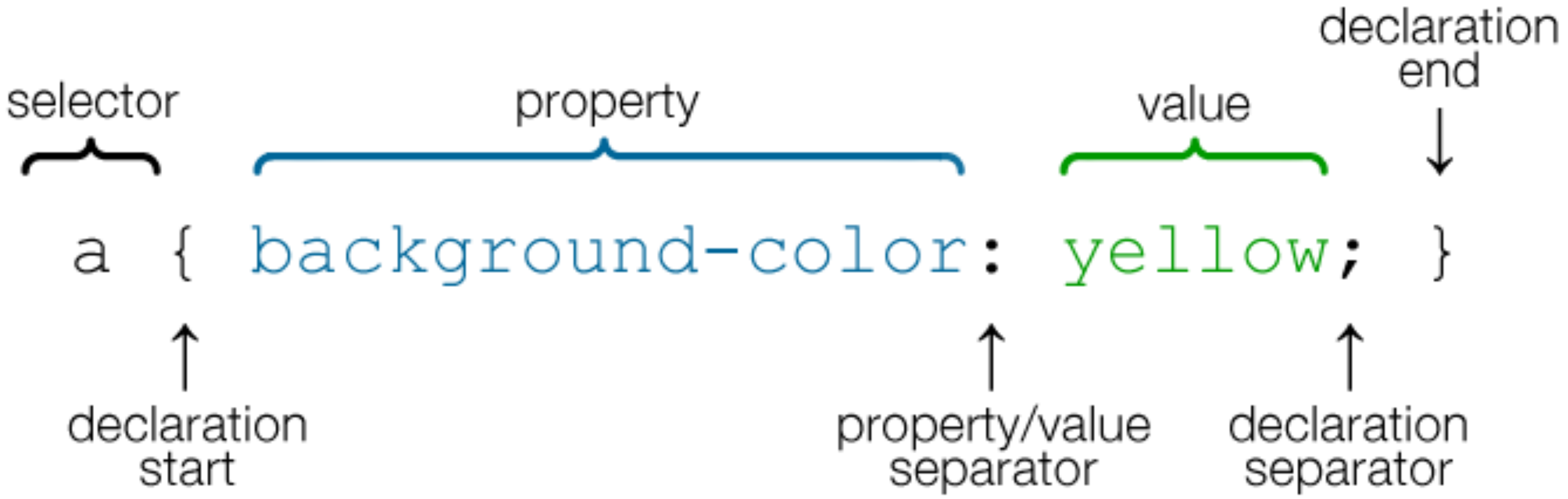
- Layout & Element 정의



CSS

- CSS: Cascading style sheets
  - 웹 문서의 전반적인 스타일을 미리 저장해 둔 스타일시트이다. 문서 전체의 일관성을 유지할 수 있고, 세세한 스타일 지정의 필요를 줄어들게 하였다.

- 스타일 정의



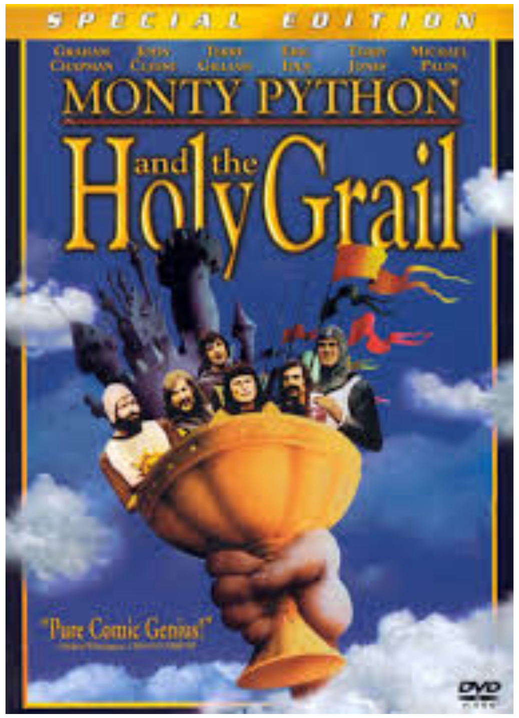
```
a { background-color: yellow; }
```

JS

- JS: Javascript
  - 크로스 플랫폼(cross platform), 객체지향 스크립트 언어로 웹페이지의 동작을 담당한다.
- 모든 처리를 정의

Python

- Python
  - 크로스 플랫폼(cross platform), 객체지향 스크립트 언어로 웹페이지의 동작을 담당한다.
- Backend (BIZ)기능 처리를 만들 것임



원래는

* HTML, CSS, JS 만으로도 충분히 웹 사이트 만들 수 있어요

* 근데, 사람들이 점점 '더 좋은 거'를 생각하다보니 늘어났네요. 그리고 특히 JS는 이제 너무나 많은 걸 알아야 요즘 사람들이 말하는 모던한 웹을 만들 수 있게 되었네요.

* 그래서 주요 내용은 JS입니다.

개발환경

- ATOM
  - Web 개발 시에는 이거 하나면 대부분 해결됩니다.
  - https://gomugom.github.io/etc/2016/10/08/atom-packages/
- PyCharm
  - Python은 그래도 전용 툴이 있어야 좋음좋음!
  - https://www.jetbrains.com/pycharm/

into JAVASCRIPT

좀 더 다양한 자바스크립트의 세상

참고: https://mockingbot.com/posts/244?page=1

Javascript

* 모든 언어의 스펙은 변경되죠.

* 그래서 지금 딱 쓸만한 레벨 ES2015

* 근데, 브라우저에서 지원을 안 한데요.

* 그래서 **BABEL** 이라는 JS 라이브러리를 이용해서 ES2015를 사용해요!

* 읽어보기: https://medium.com/@pitzcarraldo/javascript는-잘못이-없다-정말로-fb9b8e033b10#.htn8mgcqp

ES2015 (es6)

* Promise: Async 처리를 제공

* Arrow Function: () => 이런 문법이 가능

* Rest Parameters: …args 이거 제공

* Template Literals: `Hello ${name}` 오…!

* Class: 기본적인 상속 & 생성자 제공

* 참고: http://blog.jeonghwan.net/2016/04/28/es6.html

ES2015 (es6)

- 참고: https://github.com/lukehoban/es6features

```
// Expression bodies
var odds = evens.map(v => v + 1);

// String interpolation
var name = "Bob", time = "today";
`Hello ${name}, how are you ${time}?`

function f() {
  {
    let x;
    {
      // okay, block scoped name
      const x = "sneaky";
      // error, const
      x = "foo";
    }
    // error, already declared in block
    let x = "inner";
  }
}

for (var n of fibonacci) {
  // truncate the sequence at 1000
  if (n > 1000)
    break;
  console.log(n);
}
```

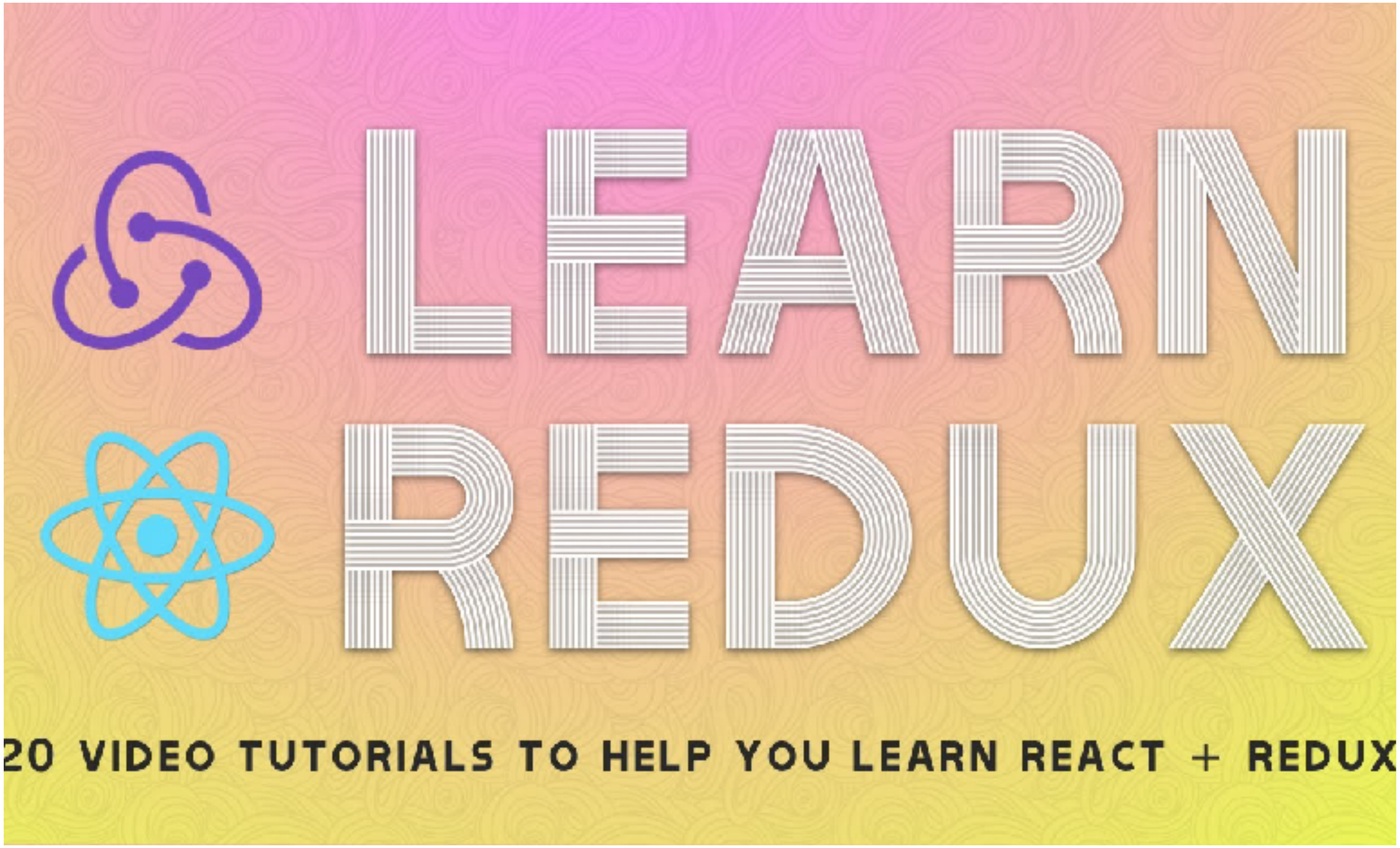
```
class SkinnedMesh extends THREE.Mesh {
  constructor(geometry, materials) {
    super(geometry, materials);

    this.idMatrix = SkinnedMesh.defaultMatrix();
    this.bones = [];
    this.boneMatrices = [];
    //...
  }
  update(camera) {
    //...
    super.update();
  }
  get boneCount() {
    return this.bones.length;
  }
  set matrixType(matrixType) {
    this.idMatrix = SkinnedMesh[matrixType]();
  }
  static defaultMatrix() {
    return new THREE.Matrix4();
  }
}
```

ES2015 (es6)

- 참고: https://github.com/lukehoban/es6features

```
function timeout(duration = 0) {
    return new Promise((resolve, reject) => {
        setTimeout(resolve, duration);
    })
}

var p = timeout(1000).then(() => {
    return timeout(2000);
}).then(() => {
    throw new Error("hmm");
}).catch(err => {
    return Promise.all([timeout(100), timeout(200)]);
})
```

```
// lib/math.js
export function sum(x, y) {
  return x + y;
}
export var pi = 3.141593;
// app.js
import * as math from "lib/math";
alert("2π = " + math.sum(math.pi, math.pi));
```



into REACT + REDUX

UI를 좀 더 간지나고 구조적으로 만들어보기

참고: http://cyberspaceandtime.com/Learn_Redux_4_—_Setting_up_React_Router/iNzMloBNnNU.video

REACT

- React.js는 Facebook이 만들고 있는 이른바 MVC 프레임워크에서의 뷰 부분을 컴포넌트로 만들기 위한 라이브러리

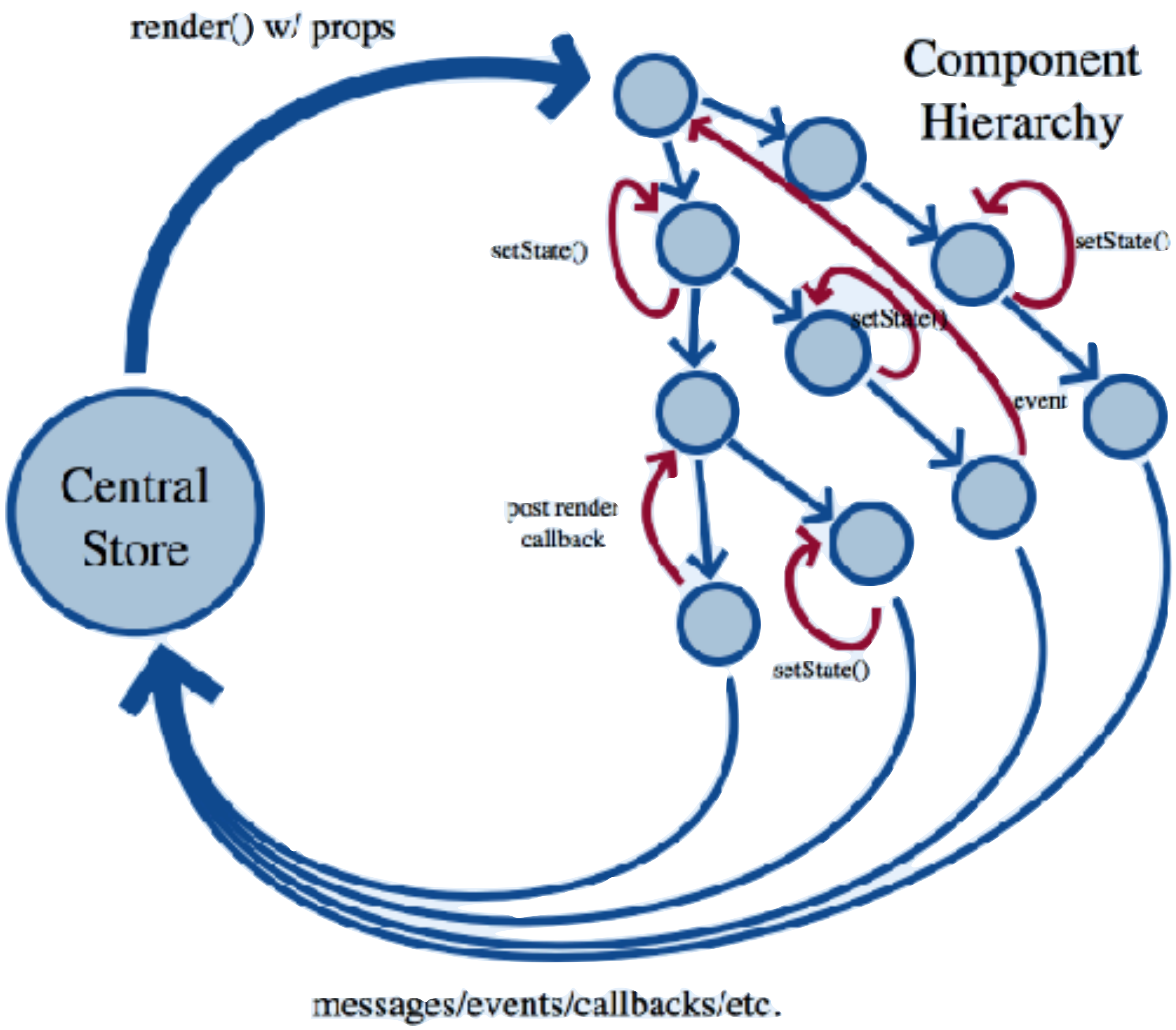
- JUST THE UI

- VIRTUAL DOM

- DATA FLOW

REACT PROP, STATE

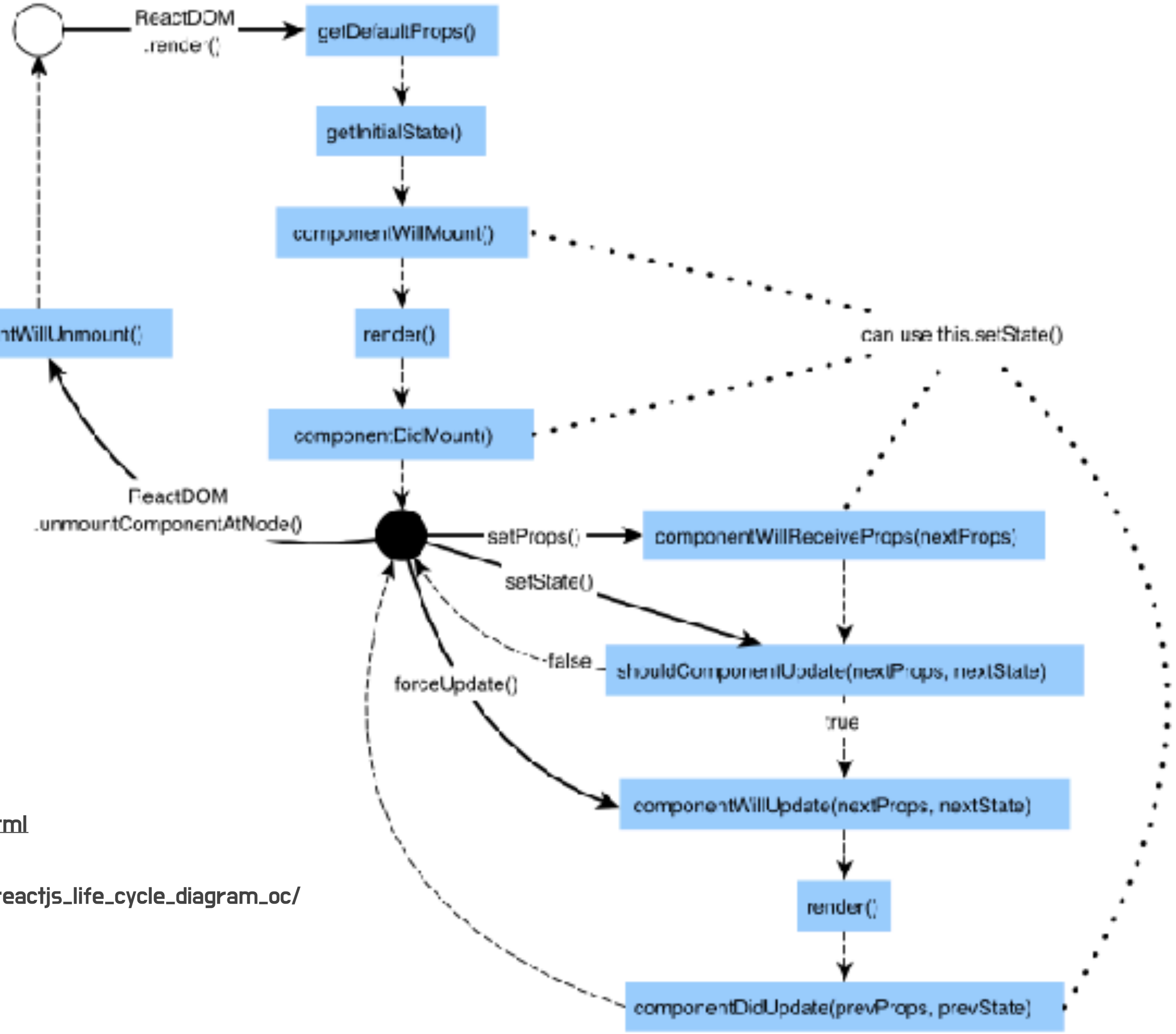
- PROP: Readonly value
- STATE: Change value



- 참고: http://aeflash.com/2015-02/react-tips-and-best-practices.html

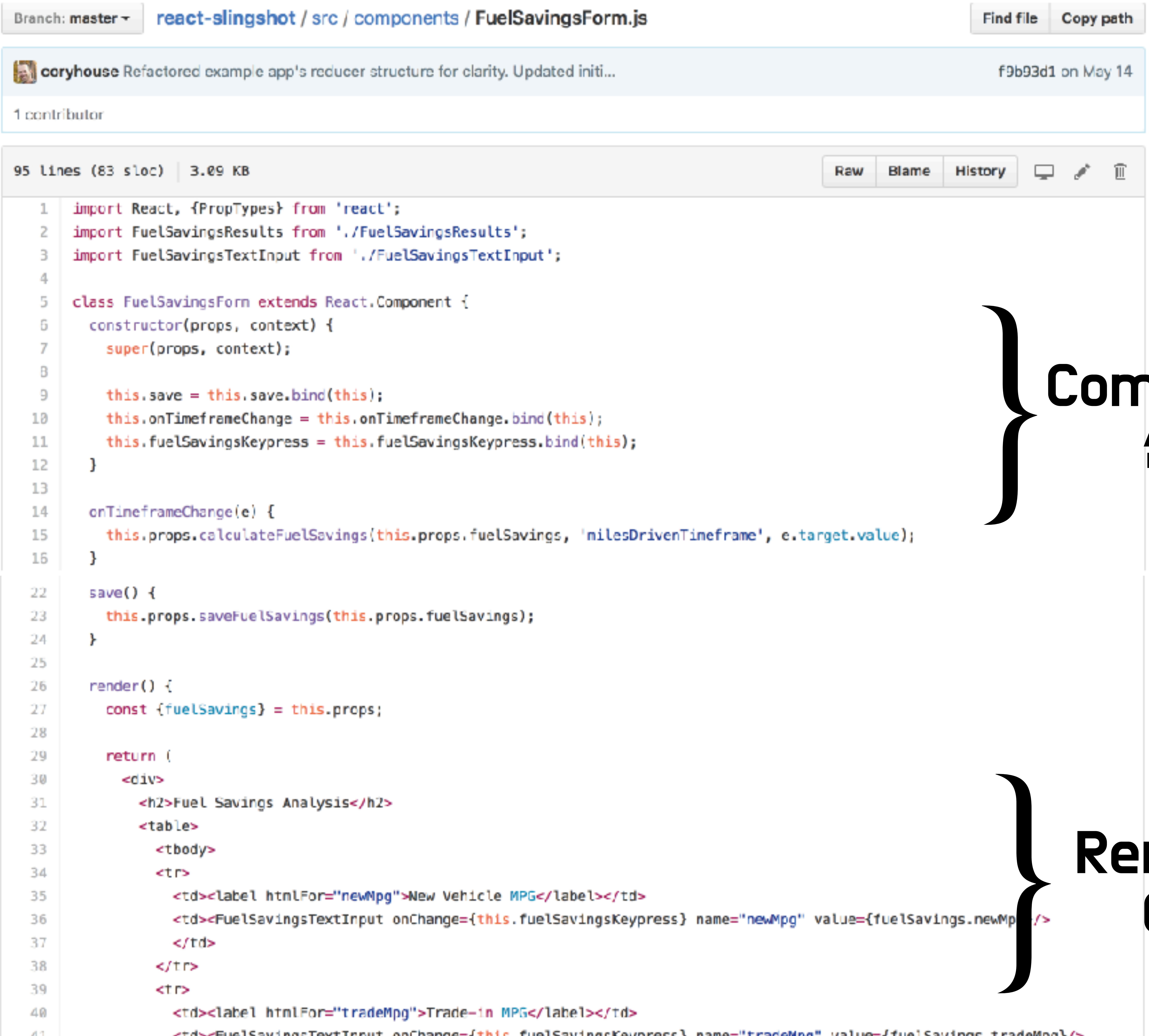
REACT LIFECYCLE

- LifeCycle
  - 다음 함수들은 컴포넌트를 구성할 때마다 고민하니 이해가 필요!


ReactDOM .render()
getDefaultProps()
getInitialState()
componentWillMount()
render()
componentDidMount()
componentWillUnmount()
can use this.setState()
ReactDOM .unmountComponentAtNode()
setProps()
componentWillReceiveProps(nextProps)
setState()
false
shouldComponentUpdate(nextProps, nextState)
forceUpdate()
true
componentWillUpdate(nextProps, nextState)
render()
componentDidUpdate(prevProps, prevState)

- 참고: https://facebook.github.io/react/docs/component-specs.html
- 그림: https://www.reddit.com/r/javascript/comments/45khex/reactjs_life_cycle_diagram_oc/

DONGGEUN,BANG
PROGRAMMER



react-slingshot / src / components / FuelSavingsForm.js

coryhouse Refactored example app's reducer structure for clarity. Updated initi... f9b93d1 on May 14

1 contributor

95 lines (83 sloc) 3.09 KB

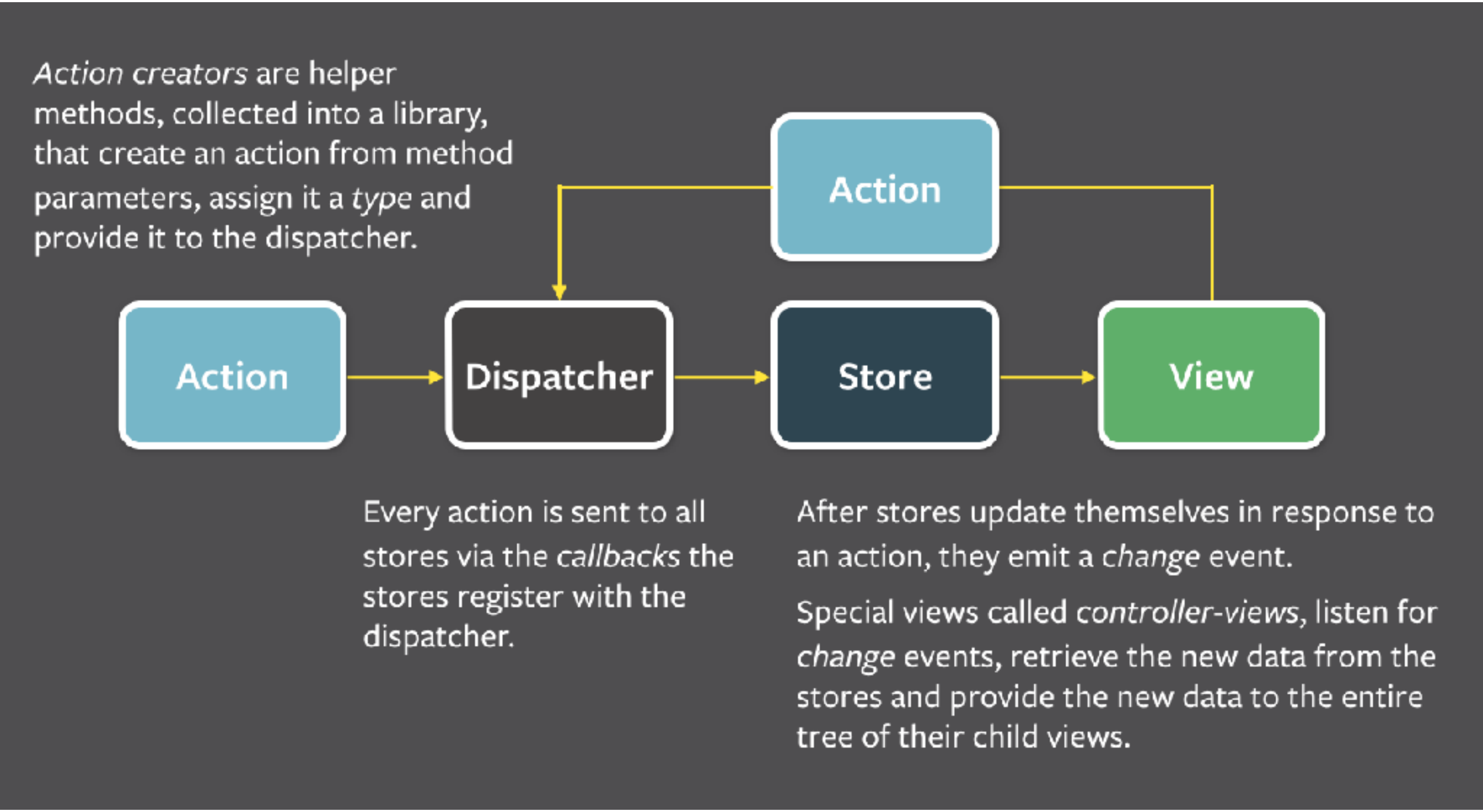
```
import React, {PropTypes} from 'react';
import FuelSavingsResults from './FuelSavingsResults';
import FuelSavingsTextInput from './FuelSavingsTextInput';

class FuelSavingsForm extends React.Component {
  constructor(props, context) {
    super(props, context);

    this.save = this.save.bind(this);
    this.onTimeframeChange = this.onTimeframeChange.bind(this);
    this.fuelSavingsKeypress = this.fuelSavingsKeypress.bind(this);
  }

  onTimeframeChange(e) {
    this.props.calculateFuelSavings(this.props.fuelSavings, 'milesDrivenTimeframe', e.target.value);
  }
```

```
  save() {
    this.props.saveFuelSavings(this.props.fuelSavings);
  }

  render() {
    const {fuelSavings} = this.props;

    return (
      <div>
        <h2>Fuel Savings Analysis</h2>
        <table>
          <tbody>
          <tr>
            <td><label htmlFor="newMpg">New Vehicle MPG</label></td>
            <td><FuelSavingsTextInput onChange={this.fuelSavingsKeypress} name="newMpg" value={fuelSavings.newMp /></td>
            </td>
          </tr>
          <tr>
            <td><label htmlFor="tradeMpg">Trade-in MPG</label></td>
            <td><FuelSavingsTextInput onChange={this.fuelSavingsKeypress} name="tradeMpg" value={fuelSavings.tradeMpg}/>
```

Component 선언

Rendering Code

FLUX



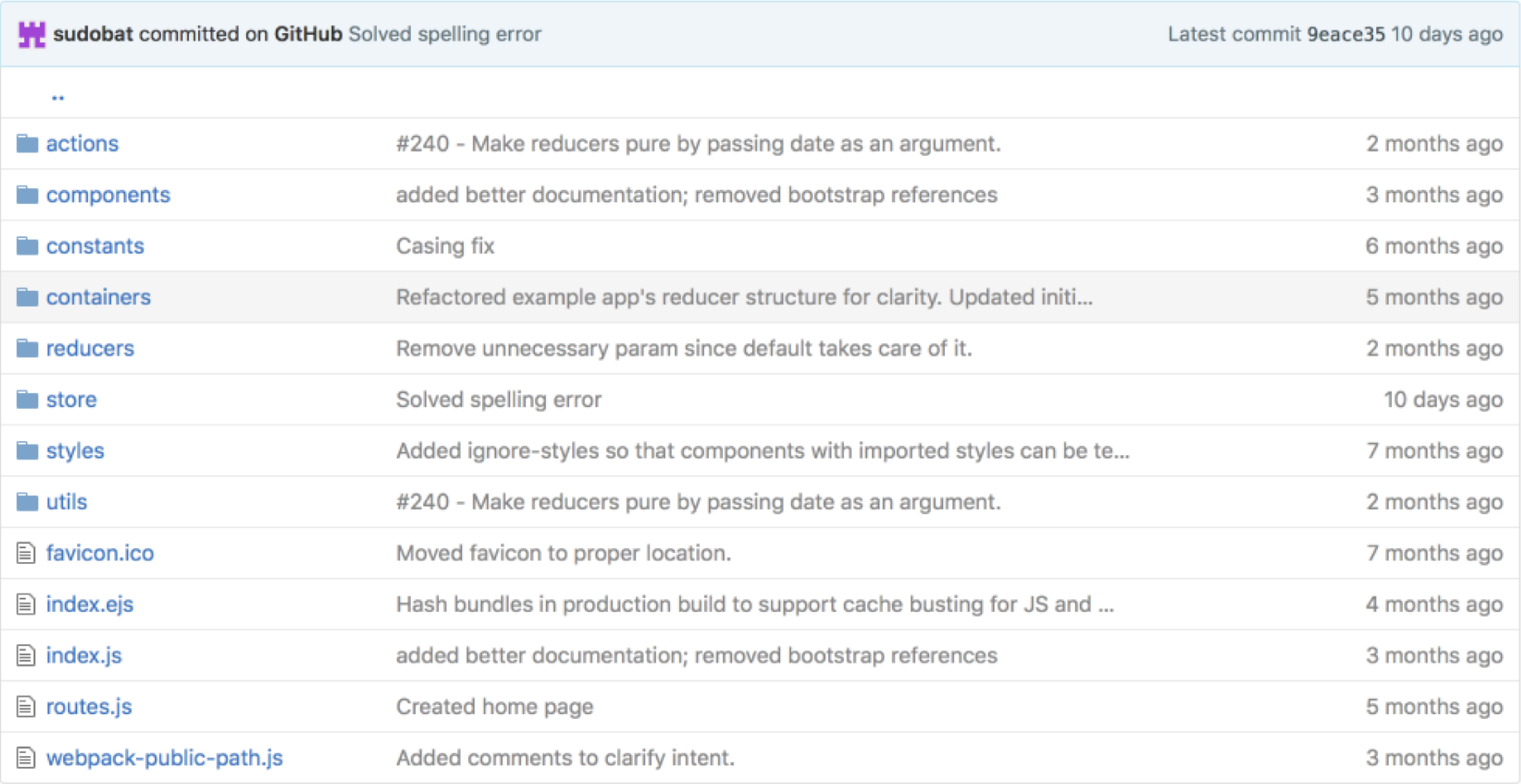
Action creators are helper methods, collected into a library, that create an action from method parameters, assign it a *type* and provide it to the dispatcher.

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.

FLUX



sudobat committed on **GitHub** Solved spelling error — Latest commit **9eace35** 10 days ago

..

actions	#240 - Make reducers pure by passing date as an argument.	2 months ago
components	added better documentation; removed bootstrap references	3 months ago
constants	Casing fix	6 months ago
containers	Refactored example app's reducer structure for clarity. Updated initi…	5 months ago
reducers	Remove unnecessary param since default takes care of it.	2 months ago
store	Solved spelling error	10 days ago
styles	Added ignore-styles so that components with imported styles can be te…	7 months ago
utils	#240 - Make reducers pure by passing date as an argument.	2 months ago
favicon.ico	Moved favicon to proper location.	7 months ago
index.ejs	Hash bundles in production build to support cache busting for JS and …	4 months ago
index.js	added better documentation; removed bootstrap references	3 months ago
routes.js	Created home page	5 months ago
webpack-public-path.js	Added comments to clarify intent.	3 months ago

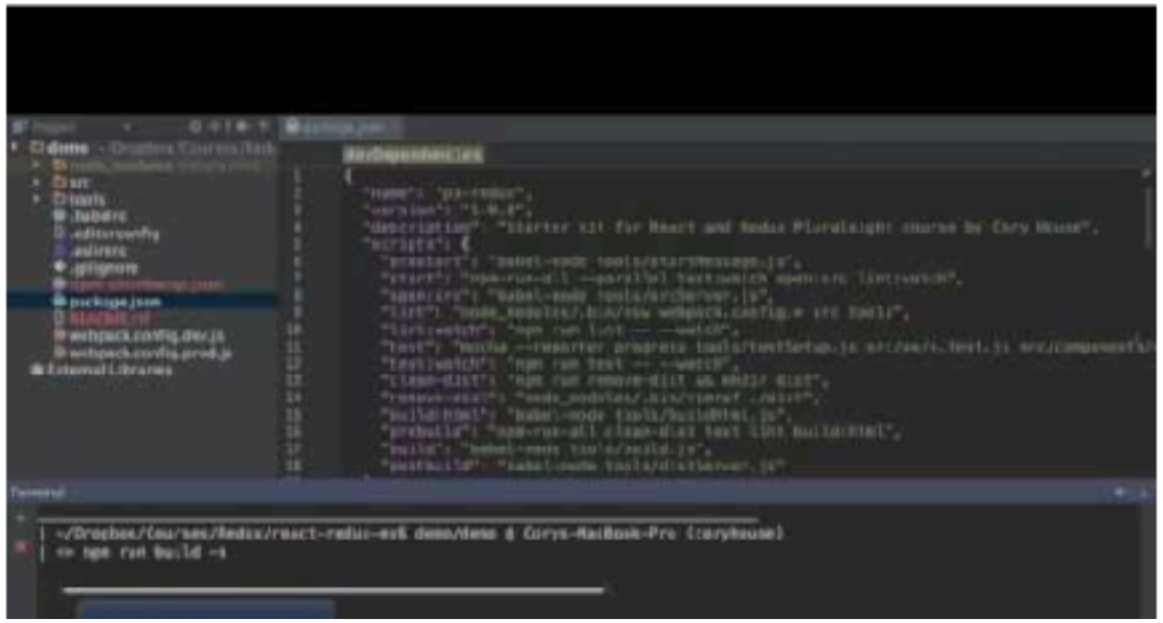
https://github.com/coryhouse/react-slingshot
코드로 이해해봅시다

REACT
REDUX
SLINGSHOT

React Slingshot is a comprehensive starter kit for rapid application development using React.

Why Slingshot?

1. **One command to get started** - Type `npm start` to start development in your default browser.
2. **Rapid feedback** - Each time you hit save, changes hot reload and linting and automated tests run.
3. **One command line to check** - All feedback is displayed on a single command line.
4. **No more JavaScript fatigue** - Slingshot uses the most popular and powerful libraries for working with React.
5. **Working example app** - The included example app shows how this all works together.
6. **Automated production build** - Type `npm run build` to do all this:



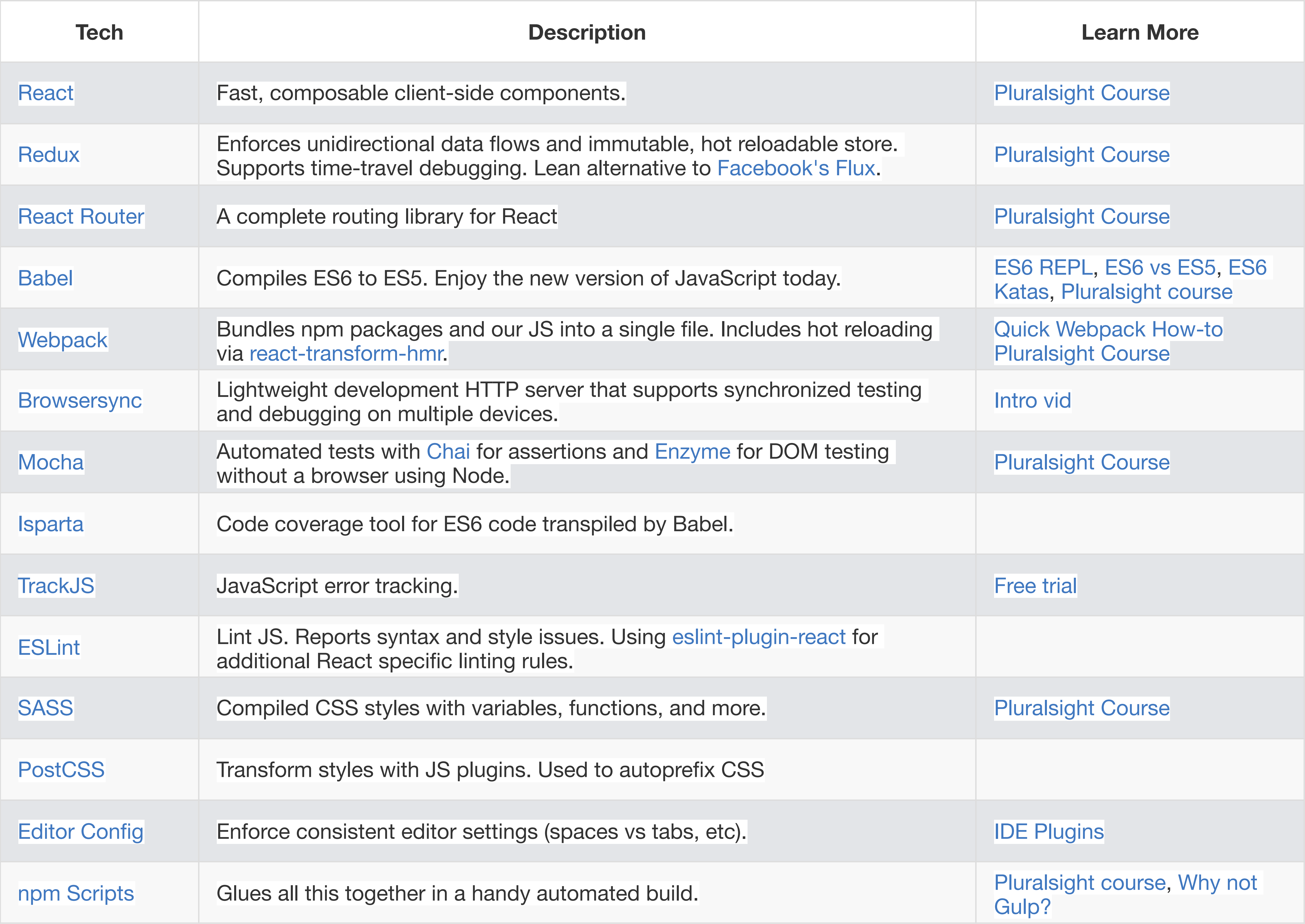
```
{
  "name": "ps-redux",
  "version": "1.0.0",
  "description": "Starter kit for React and Redux Pluralsight course by Cory House",
  "scripts": {
    "prestart": "babel-node tools/startMessage.js",
    "start": "npm-run-all --parallel test:watch open:src lint:watch",
    "open:src": "babel-node tools/srcServer.js",
    "lint": "node_modules/.bin/esw webpack.config.* src tools",
    "lint:watch": "npm run lint -- --watch",
    "test": "mocha --reporter progress tools/testSetup.js src/**/*.test.js src/components/
    "test:watch": "npm run test -- --watch",
    "clean-dist": "npm run remove-dist && mkdir dist",
    "remove-dist": "node_modules/.bin/rimraf ./dist",
    "build:html": "babel-node tools/buildHtml.js",
    "prebuild": "npm-run-all clean-dist test lint build:html",
    "build": "babel-node tools/build.js",
    "postbuild": "babel-node tools/distServer.js"
```

```
| ~/Dropbox/Courses/Redux/react-redux-es6 demo/demo @ Corys-MacBook-Pro (coryhouse)
| => npm run build -s
```

React Slingshot

좀 더 깊게 이해해보기!

참고: https://github.com/coryhouse/react-slingshot



Tech	Description	Learn More
React	Fast, composable client-side components.	Pluralsight Course
Redux	Enforces unidirectional data flows and immutable, hot reloadable store. Supports time-travel debugging. Lean alternative to Facebook's Flux.	Pluralsight Course
React Router	A complete routing library for React	Pluralsight Course
Babel	Compiles ES6 to ES5. Enjoy the new version of JavaScript today.	ES6 REPL, ES6 vs ES5, ES6 Katas, Pluralsight course
Webpack	Bundles npm packages and our JS into a single file. Includes hot reloading via react-transform-hmr.	Quick Webpack How-to Pluralsight Course
Browsersync	Lightweight development HTTP server that supports synchronized testing and debugging on multiple devices.	Intro vid
Mocha	Automated tests with Chai for assertions and Enzyme for DOM testing without a browser using Node.	Pluralsight Course
Isparta	Code coverage tool for ES6 code transpiled by Babel.	
TrackJS	JavaScript error tracking.	Free trial
ESLint	Lint JS. Reports syntax and style issues. Using eslint-plugin-react for additional React specific linting rules.	
SASS	Compiled CSS styles with variables, functions, and more.	Pluralsight Course
PostCSS	Transform styles with JS plugins. Used to autoprefix CSS	
Editor Config	Enforce consistent editor settings (spaces vs tabs, etc).	IDE Plugins
npm Scripts	Glues all this together in a handy automated build.	Pluralsight course, Why not Gulp?

== 다음 주 하는 것 ==

* FLASK 기초

* 아.. Python은 이건 저도 책보고 하는 거라 기초만!