

ANATOMIA DI UN'APPLICAZIONE JAVASCRIPT ISOMORFICA

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ARGOMENTI DEL GIORNO

- Cosa è un'app/lib isomorfica
- JS Framework & libs
- Demo: Minimal Boilerplate

COSA È UN'APP/LIB JS
ISOMORFICA/UNIVERSALE ?

ISOMORFICA

*In matematica, in particolare in algebra astratta, un isomorfismo (dal greco ἴσος, *isos*, che significa uguale, e μορφή, *morphé*, che significa forma) è un'applicazione biunivoca fra oggetti matematici tale che l'applicazione e la sua inversa siano omomorfismi. Wikipedia*

ISOMORFICA (PROGRAMMAZIONE)

.. "Isomorphic JavaScript." A term coined by Charlie Robbins at Nodejitsu and popularized by Spike Brehm of Airbnb, this has come to refer to JavaScript code that can run equally well on the client or on the server, meaning that you can write your JS once and run it anywhere.

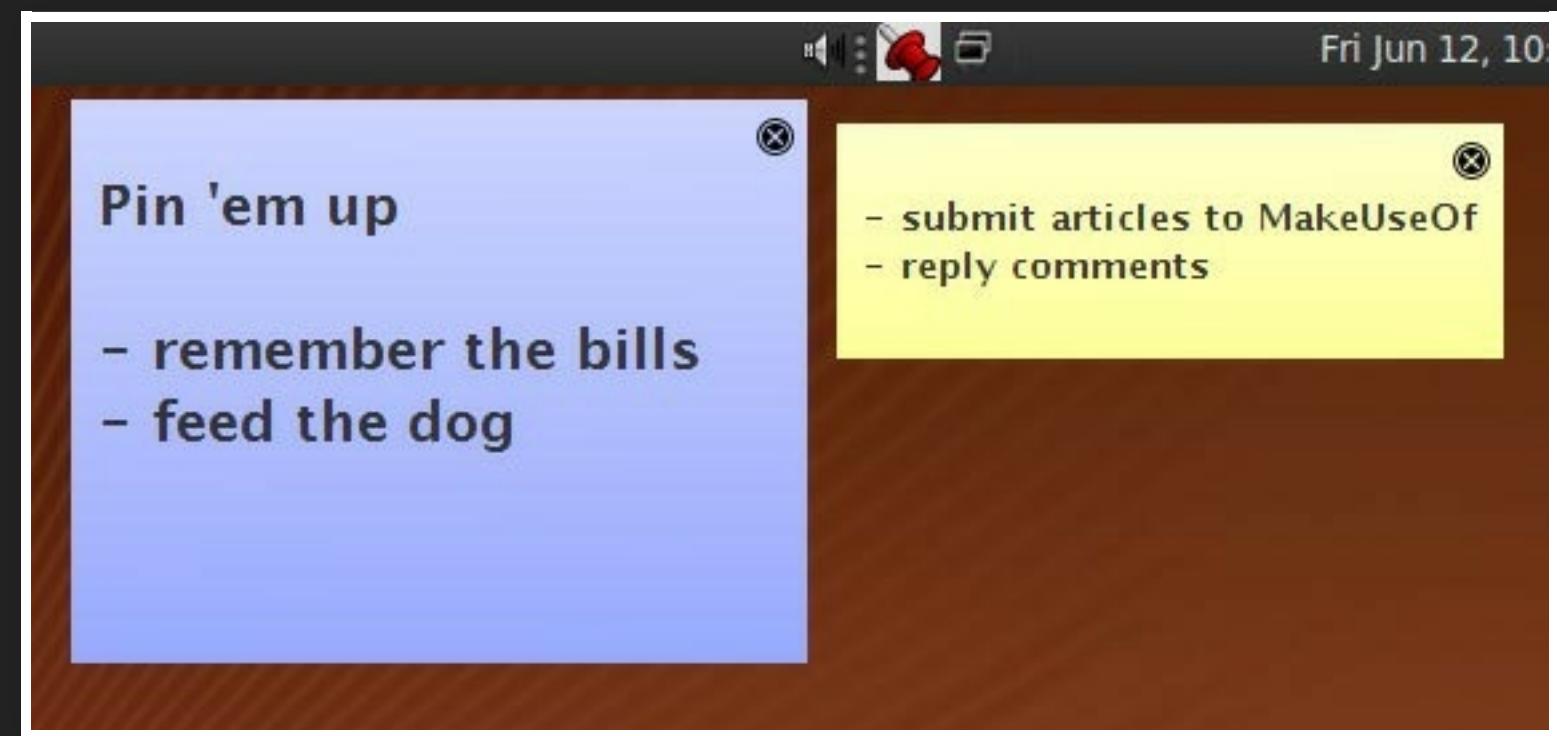
<http://info.meteor.com/blog/isobuild-why-meteor-created-a-new-package-system>

(PARENTESI X GRAMMAR NAZI)

1. Si dice: isomorfa!
2. Dopo #petaloso e #educazione (al posto di istruzione..)
3. Se potete twittare a @AccademiaCrusca #isomorfica
4. Come isomorfa (ma più f**a)

ISOMORFICA?

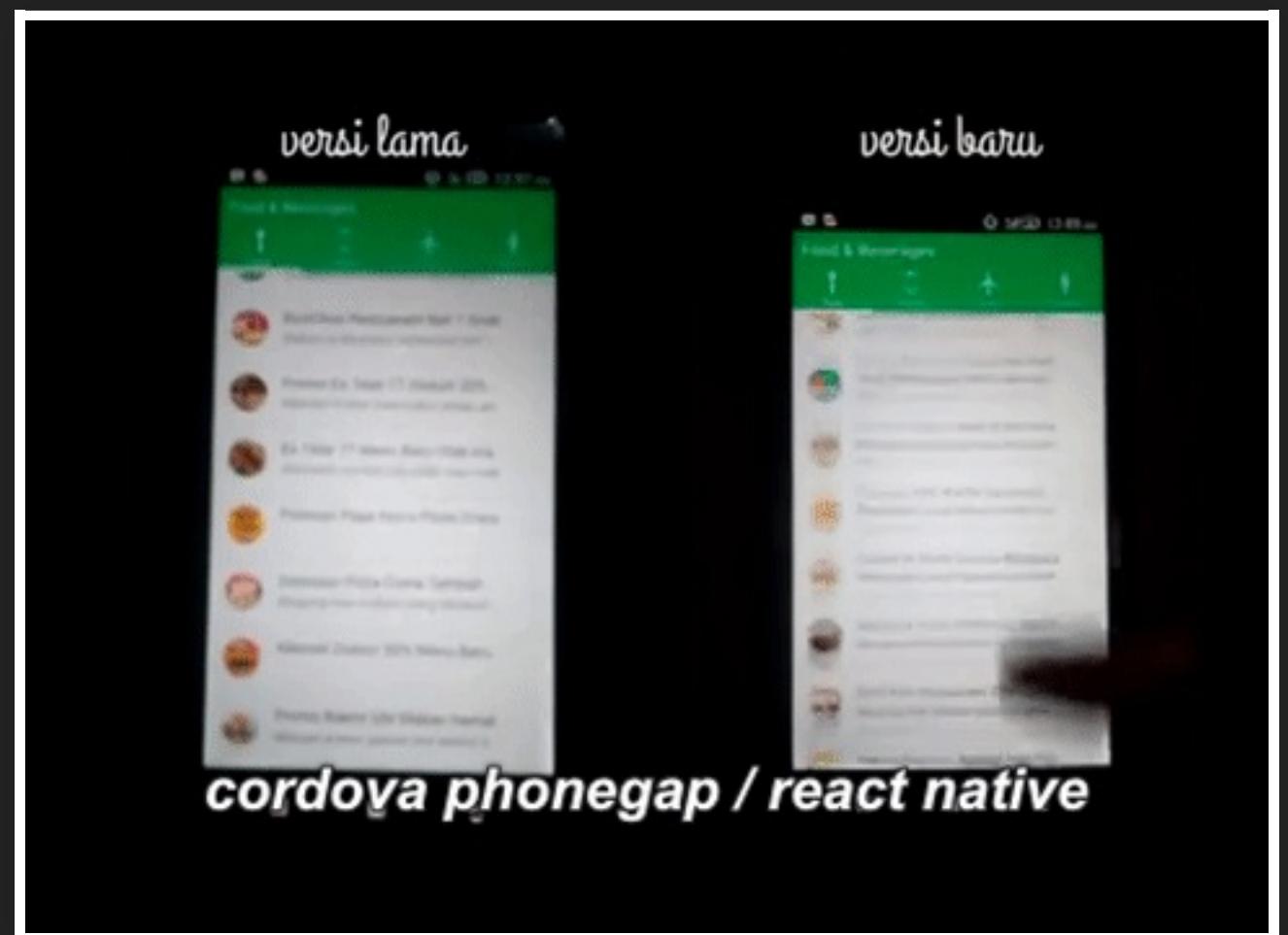
Assomiglia a Java .. "Write once run everywhere"



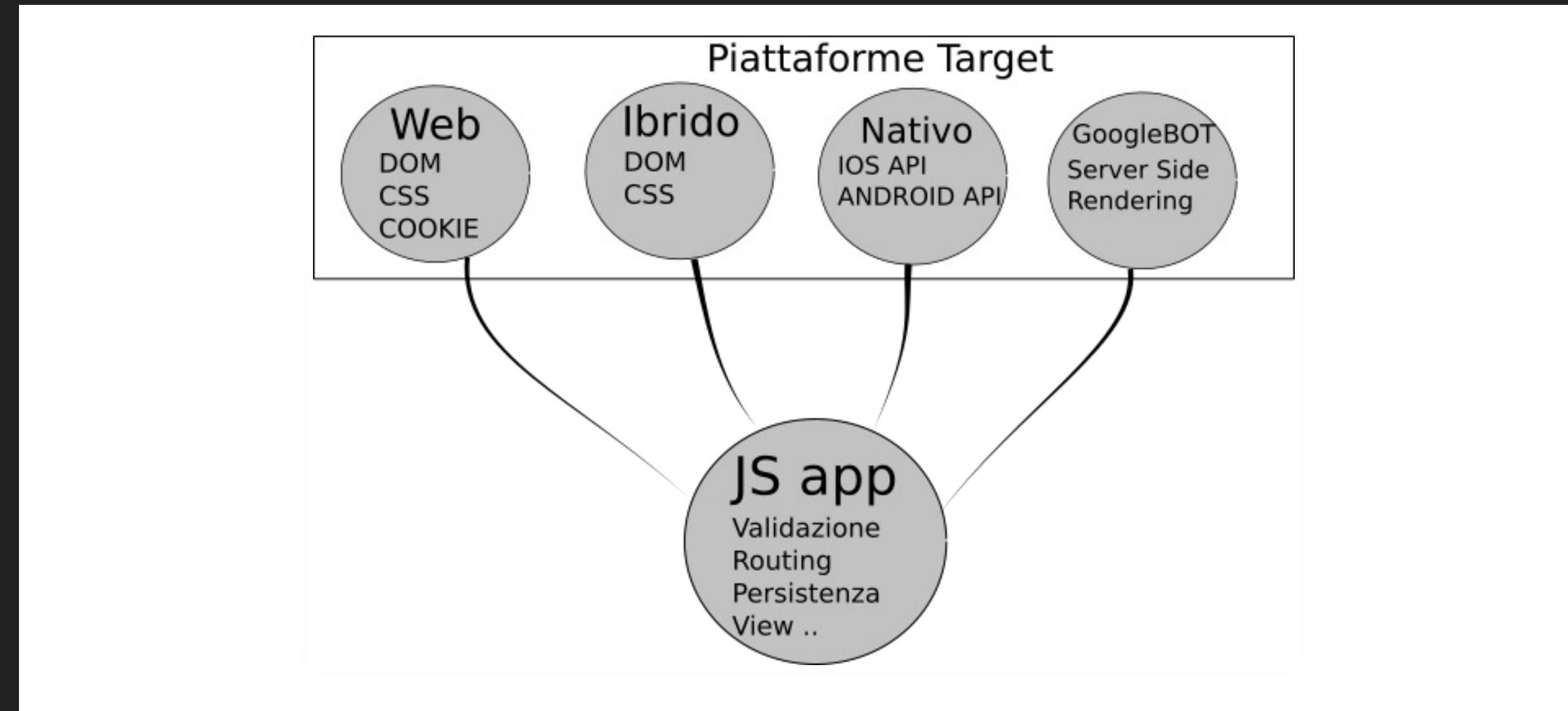
No, l'approccio "JavaScript isomorfico" è diverso!

1. "Learn once write everywhere": condividere quanto più codice e pattern possibili (ma anche poter sfruttare le specificità della piattaforma sottostante)
2. UI native: WebView oppure UI native

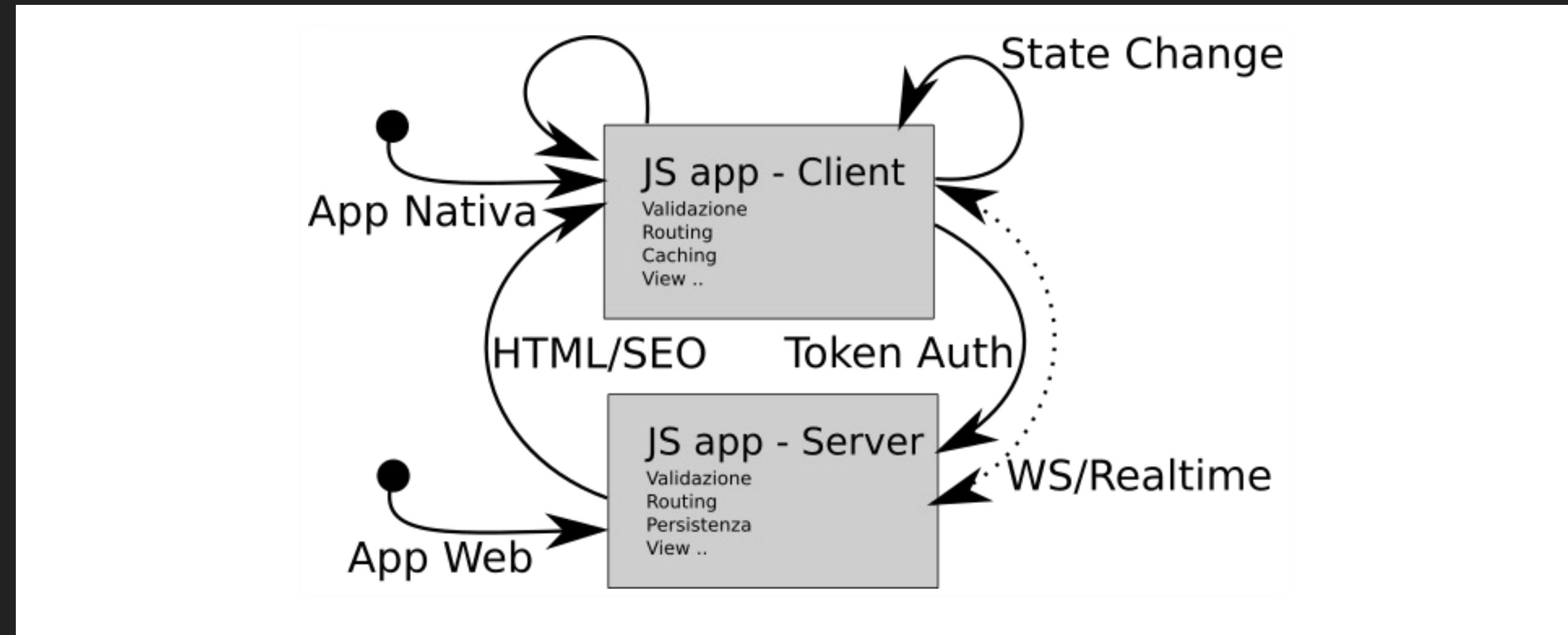
PUÒ CAPITARE ^_^(ツ)_/^-



JAVASCRIPT È OVUNQUE



COSA POTREBBE FARE UN'APP JS



ESEMPIO DI CODICE ISOMORFICO

```
// js agostico (MyApp JS)

class Main extends React.Component {
  state = {counter:0};
  increment() {
    const {counter} = this.state;
    this.setState({counter: counter + 1 });
  }
  render() {
    return (
      <div>
        Main component, {this.state.counter} <button onClick={this.increment}>+</button>
      </div>
    );
  }
}
```

```
// js server / SSR

import React from "react";
import ReactDOM from "react-dom/server";
import Main from "containers/Main";

// da scrivere nella risposta HTTP
const MainHtml = ReactDOM.renderToString(<Main />);
...
```

```
// js client / Web DOM specific

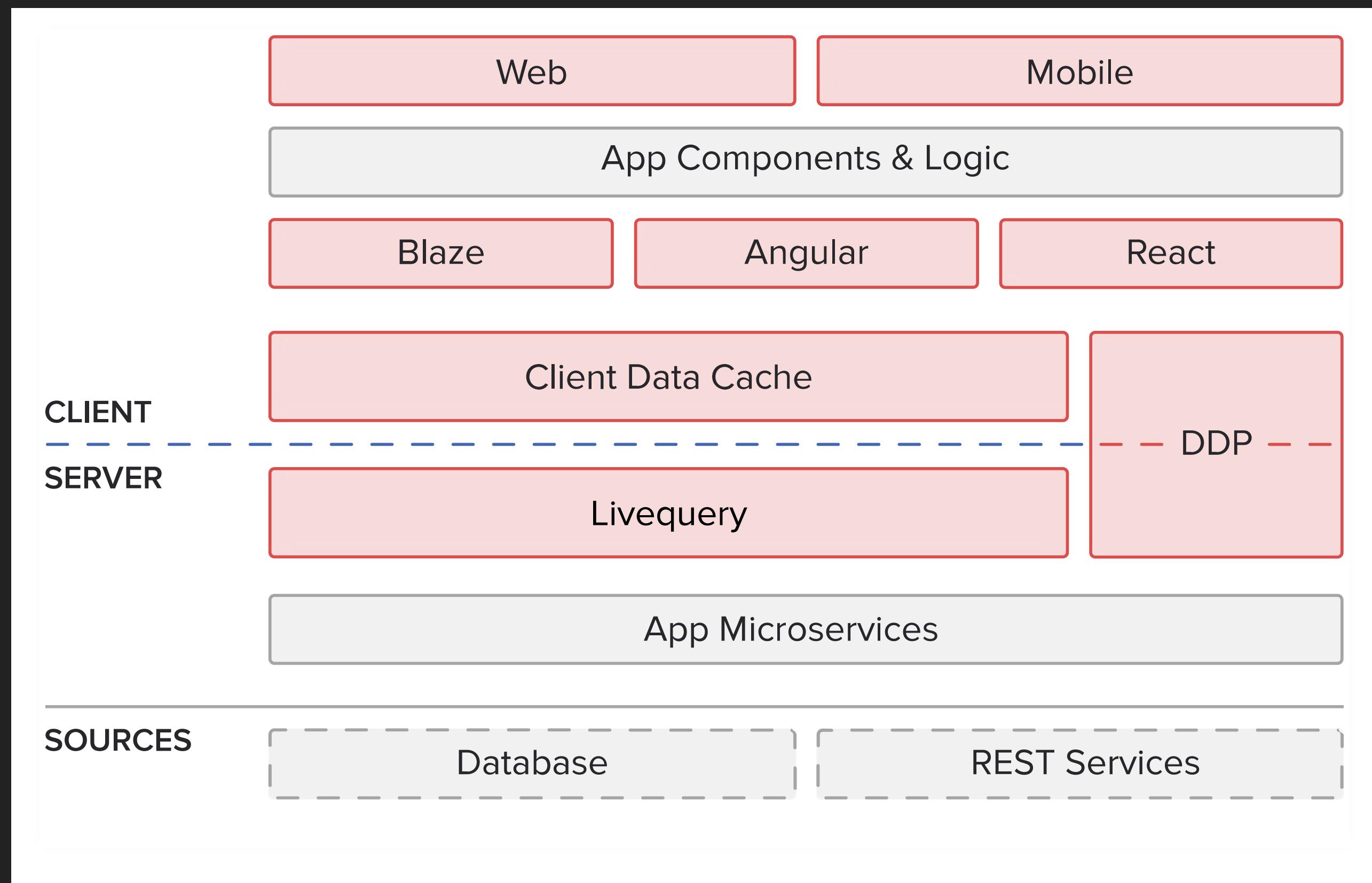
import React from "react";
import ReactDOM from "react-dom";
import Main from "containers/Main";

const reactRoot = document.getElementById("react-root");
ReactDOM.render(<Main />, reactRoot);
```

Bello JavaScript isomorfico da dove si parte?

OPZIONE 1: METEOR

La piattaforma js isomorfica più conosciuta, comprende un set di librerie che gestiscono diversi aspetti isomorfici e client / server.



Meteor :)

- It just works today (2012 \$11.2M)
- Semplice (se si rimane sul tracciato)
- Documentato
- Realtime build-in
- Autenticazione

Meteor :(

- Embed dipendenze obsolete
- Molte cose cambieranno. Inevitabilmente verso NodeJS/NPM (1.3beta16)
- Meteor è tanto ma non è tutto
- Praticamente solo MongoDB

OPZIONE 2: DIY IL TUO JAVASCRIPT ISOMORFICO

Meatier, Mantra, Apollo (by Meteor + GraphQL) ... oppure
componiti il tuo Meteor con quello che ti serve: react,
webpack, babel,..

REACT STARTER PROJECT

Find a React Starter Project...

with:

without:

Separate search terms with commas.
Examples: Try redux and HMR, no gulp or minimal react native or vanilla JavaScript.

68 matches Most stars ▾

Project	Tags	Stars	Forks
kriasoft/react-starter-kit	Babel 6, ES6, HMR, linter, universal	7121	79
React Starter Kit — isomorphic web app boilerplate (Node.js/Express, GraphQL, React.js, Babel 6, PostCSS, Webpack, BrowserSync)			
erikras/react-redux-universal-hot-example	Babel 6, ES6, HMR, inline style, linter, live reload, react-router, Redux, tests, universal	4405	95
A starter boilerplate for a universal webapp using express, react, redux, webpack, and react-transform			
mxstbr/react-boilerplate	Babel 6, ES6, HMR, linter, react-router, Redux, tests	3243	46
:fire: Quick setup for performance orientated, offline-first React.js applications featuring Redux, hot-reloading, PostCSS, react-router, ServiceWorker, AppCache, FontFaceObserver and Mocha.			
davezuko/react-redux-starter-kit	Babel 6, ES6, HMR, linter, react-router, Redux, tests	2862	83
Get started with React, Redux, and React-Router!			
coryhouse/react-slingshot	Babel 6, ES6, HMR, linter, react-router, Redux, tests	2663	41
React + Redux starter kit with Babel, hot reloading, testing, linting and a working example app, all built in			
este/este	Babel 6, ES6, HMR, linter, react native, react-router, Redux, universal	2652	101
Dev stack and starter kit for functional and universal (browser, server, mobile) React apps			

MEATIER

Problem	Meteor's solution	My solution	Result
Database	MongoDB	RethinkDB	Built in reactivity, but you can use any DB you like
Database schema	Simple Schema	GraphQL	Can't have a hipster webapp without GraphQL!
Client validation	Simple Schema	Joi	Clean API for client validation, although the package is HUGE
Database hooks	Collections2	GraphQL	GraphQL is overkill for small apps (then again, so is meatier)
Forms	AutoForm	redux-form	state tracking awesomeness that works beautifully with react
Client-side cache	Minimongo	redux	Bonus logging, time traveling, and undo functionality
Socket server	DDP-server	socketcluster	super easy scaling, pubsub, auth, middleware
Authentication	Meteor accounts	JWTs	JWTs can also serve to authorize actions, too
Auth-transport	DDP	GraphQL (via HTTP)	Don't use sockets until you need to

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DIY PRO

- includi solo quello che ti serve
- mainstream NPM packages
- incrementale

DIY CONTRO

- è tua responsabilità incollare tanti piccoli pezzettini

DEMO

<https://github.com/corso-javascript/react-isomorphic-minimal>

<https://github.com/corso-javascript/docker-compose-nginx-nodejs>

QUINDI..



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CONCLUSIONE

- Preparati a nuovo mondo JavaScript centrico
- Non c'è un pattern che va bene per tutti, e sempre un compromesso tra il controllo che vuoi avere sull'app e quello che deleghi al framework lib.
- Non ottimizzare i non problemi



toddletale

GRAZIE!

Codice sconto TOJS119

corso-javascript.it/?coupon_code=TOJS119