Introduzione a React.js + ES6

DevDay Napoli 16 novembre 2015 - Davide Cerbo

Davide

Davide Cerbo

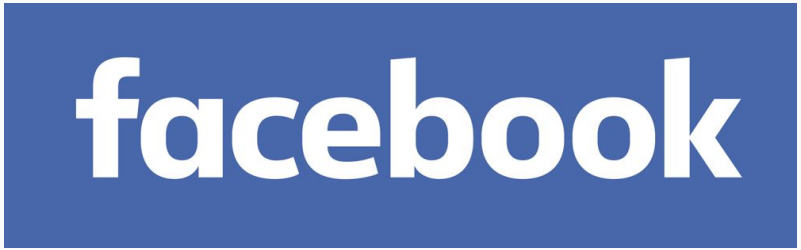
10+ anni di esperienza

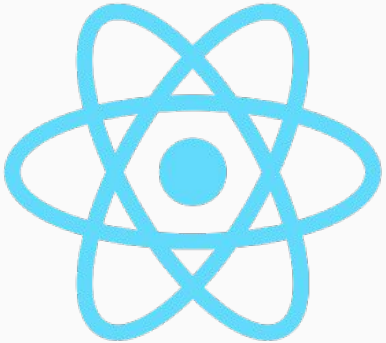
Full stack (o quasi)

Cosa è React?

React è una libreria per la UI,
in MVC è la **V**

+





React

Ryan Florence
@ryanflorence

Following

My favorite part of React is what I loved about MooTools: to use it effectively you learn JavaScript, not a DSL: useful your whole career.

RETWEETS 66 LIKES 89

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Disclaimer

Questa presentazione non contiene tutto lo scibile su REACT e ES6, ma solo quello che ritengo sia utile per iniziare.

Ancora meglio!

Introduzione a ES6

- Arrows
- Classes
- Modules

Arrows

- var f = (a,b) => a + b; // f(1,2) = 3
- [“a”, ”b”, “c”].map(v => v.toUpperCase()); // [“A”, “B”, “C”]
- Lexical this

Classes

```
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();
  }
}
```

Modules

```
// lib/math.js
export function sum(x, y) {
  return x + y;
}
export var pi = 3.141593;
```

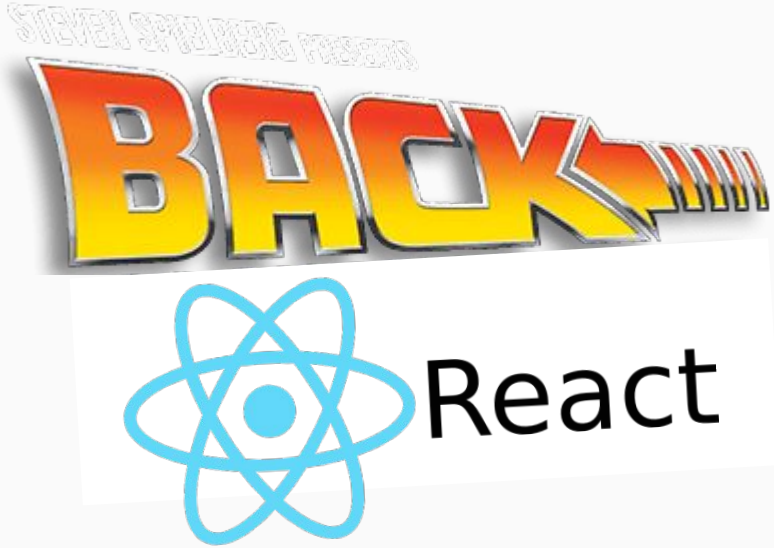
```
// app.js
import * as math from "lib/math";
alert("2π = " + math.sum(math.pi, math.pi));
```

```
// otherApp.js
import {sum, pi} from "lib/math";
alert("2π = " + sum(pi, pi));
```

Ed ancora...

- Promises
- Text template
- Destructuring
- etc…

https://github.com/lukehoban/es6features


BACK
React

Sbam!

```
import React from 'react';

export default class HelloExample extends React.Component {
  constructor(props) {
    super(props);
    this.state = {
      name: '??? '
    };
  }

  handleChange(e){
    this.setState({ name:e.target.value });
  }

  render() {
    return (
      <div>
        <input type="text" onChange={e => this.handleChange(e)} />
        <div>Hello {this.state.name}!</div>
      </div>
    );
  }
}
```

Components + JSX

State & props

Lo **stato** rappresenta la situazione attuale dell'oggeto ed è **mutabile**.

Le **proprietà** sono opzioni del componente che vengono passate dal padre al figlio e sono **immutabili**

```
handleChange(e){
  this.setState({ name:e.target.value });
}

render() {
  return (
    <div>
      <input type="text" onChange={e => this.handleChange(e)} />
      <div>Hello {this.state.name}!</div>
    </div>
  );
}
}
```

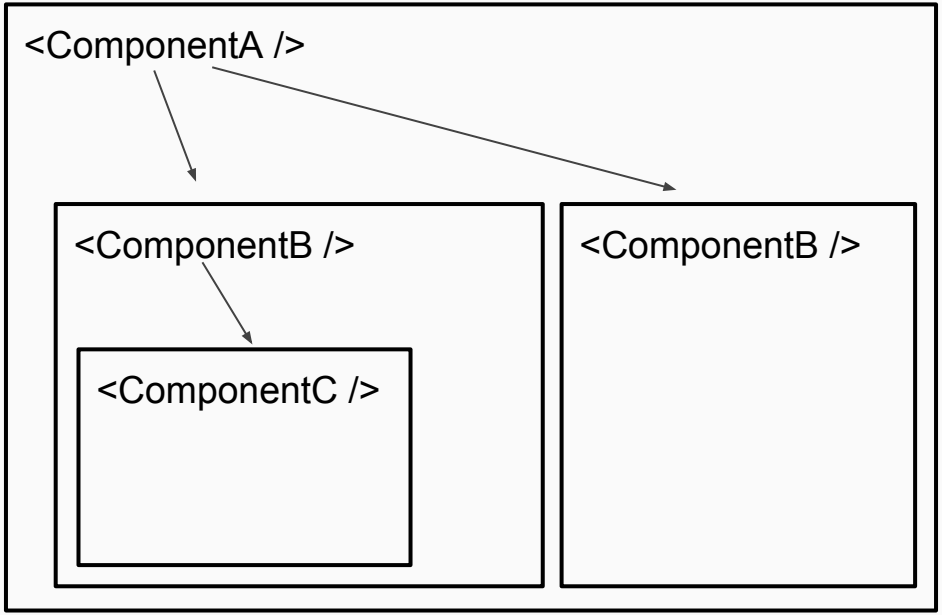
```
render() {
  return (
    <div>
      <input type="text" onChange={e => this.handleChange(e)} />
      <Hello name={this.state.name} />
    </div>
  );
}
```

```
render() {
  return (
    <div>Hello <span style={{color:"red"}}>{this.props.name}</span>!</div>
  );
}
```

Virtual DOM

- React utilizza una rappresentazione virtuale del DOM
- Usa un algoritmo di differenza tra alberi ed una euristica O(n^3) => O(n)
- Questo garantisce elevate prestazioni

One-way data binding



Hello Component!

```
import React from 'react';

export default class Hello extends React.Component {
  constructor(props) {
    super(props);
  }

  componentWillMount(){
    console.log("Will mount...");
  }

  componentDidMount(){
   console.log("Did mount!");
  }

  render() {
    return (
          <div>Hello <span style={{color:"red"}}>{this.props.name}</span>!</div>
    );
  }
}
```

Demo

Demo

https://github.com/gesposito/bare-webpack

unzip bare-webpack-master.zip

cd bare-webpack-master

npm install

npm run dev

http://localhost:3000

Hello Component! (+ sorpresa)

```
import React from 'react';
import HelloSurprise from './HelloSurprise'

export default class HelloComponentExample extends React.Component {
  constructor(props) {
    super(props);
    this.state = {
      name: 'Valentina'
    };
  }

  handleChange(e){
    this.setState({name:e.target.value});
  }

  render() {
    return (
      <div>
        <input type="text" onChange={e => this.handleChange(e)} />
        <HelloSurprise name={this.state.name} />
      </div>
    );
  }
}
```

REFS

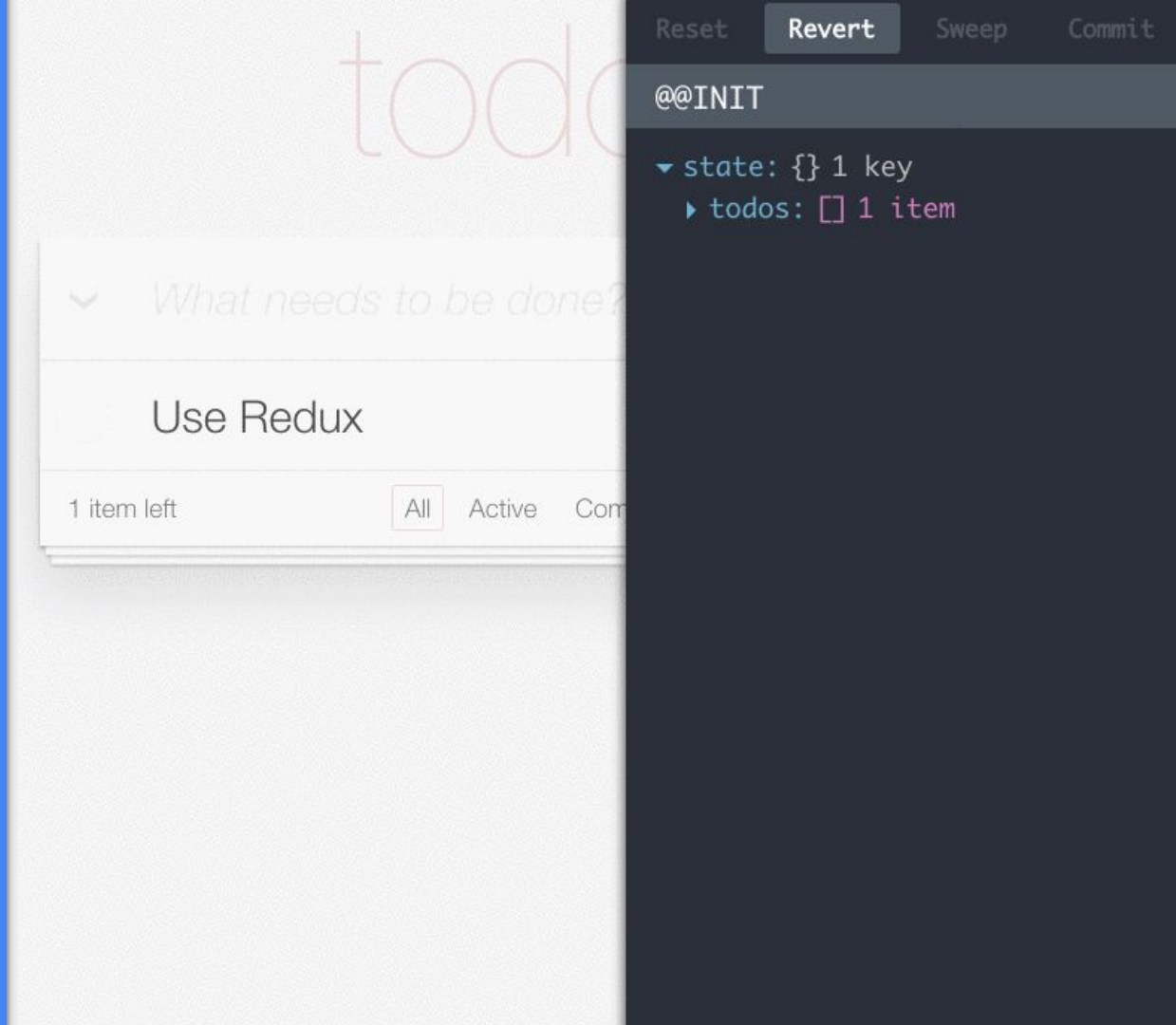
```
var input = this.refs.myInput;
var inputValue = input.value;
```

```
render() {
  return (
    <div>
      <input ref="myInput" type="text"  />
    </div>
  );
}
}
```

Non è tutto

Time travel

https://github.com/gaearon/redux-devtools



Link e risorse

- https://egghead.io/series/react-flux-architecture
- https://facebook.github.io/react/
- https://www.youtube.com/watch?v=bEI06xF_xxE (Video in italiano)
- https://www.youtube.com/watch?v=-A90OnLeWfA (Video in italiano)
- https://www.youtube.com/watch?v=ET0KWjoRMao (Video in italiano)
- https://code-cartoons.com/a-cartoon-intro-to-redux-3afb775501a6
- https://code-cartoons.com/a-cartoon-guide-to-flux-6157355ab207

Grazie a tutti

@davide_cerbo

davidecerbo@gmail.com

https://github.com/nutcore/reactjs-es6-example