



Introdução ao ReactJS

Instrutor: Marcelo Ramos Machado
e-Tic 2019



RESUMO DA OFICINA



- Apresentação da ferramenta
- Requisitos e instalação
- Extensões úteis do VS Code
- Componentes
- Tipos de componentes
- Props e states
- Dependências triviais





INSTRUTOR



CHEVROLET



BANCO DO BRASIL



BUNGE

VIA MARTE
GAROTAS DO BRASIL

DHB
COMPONENTES AUTOMOTIVOS

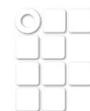


RENAULT

AREZZO



- Tecnólogo em Sistemas para Internet – IFC Camboriú
- Estudante de Bacharelado em Sistemas de Informação – IFC Camboriú
- Mestrando em Engenharia de Automação e Sistemas - UFSC
- Técnico em Informática e Administração de Empresas
- +15 anos em tecnologia (automação industrial e comercial)





ARQUIVOS

<https://github.com/mach3k/>

eTic2019ReactJS





REACTJS

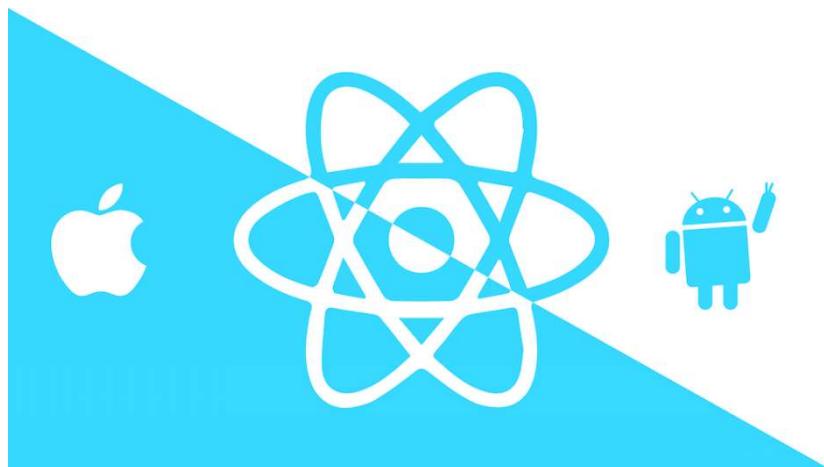


- Criado pelo Facebook
- Biblioteca (OpenSource) JavaScript para criação de interfaces
- Utilizado por Walmart, Netflix, Airbnb e Feedly
- Oferece websites com alto desempenho e escalabilidade
- Facilita o reutilização de código
- Otimiza o SEO da sua aplicação
- Embora o conceito ainda seja novo, está amadurecendo rapidamente e o Facebook planeja continuar investindo nele

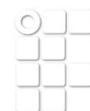




REACT NATIVE



- Novo módulo introduzido à biblioteca principal
- Fornece suporte ao desenvolvimento de aplicações móveis

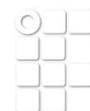




REQUISITOS



- Conexão com internet
- NodeJS v10+ (<https://nodejs.org/en/download/>)
- NPM v6+ (já vem no pacote do NodeJS)
(<https://www.npmjs.com/get-npm>)
- Yarn v1.17+ (<https://yarnpkg.com/en/docs/install>)
- IDE (VS Code v1.3+) (<https://code.visualstudio.com/>)





INSTALAÇÃO

```
fish /home/marcelo/Fontes/ReactJS/eTic2019
Arquivo Editar Ver Pesquisar Terminal Ajuda

marcelo@marcelo-VirtualBox ~/F/R/eTic2019> npx create-react-app meuapp
npx: instalou 91 em 45.294s

Creating a new React app in /home/marcelo/Fontes/ReactJS/eTic2019/meuapp.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts...

yarn add v1.19.1
[1/4] Resolving packages...
[2/4] Fetching packages...
info fsevents@1.2.9: The platform "linux" is incompatible with this module.
info "fsevents@1.2.9" is an optional dependency and failed compatibility check. Excluding it from installation.
info fsevents@2.0.7: The platform "linux" is incompatible with this module.
info "fsevents@2.0.7" is an optional dependency and failed compatibility check. Excluding it from installation.
[3/4] Linking dependencies...
warning "react-scripts > @typescript-eslint/eslint-plugin > tsutils@3.17.1" has unmet peer dependency "typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >= 3.6.0-beta || >= 3.7.0-dev || >= 3.7.0-beta".
[4/4] Building fresh packages...
success Saved lockfile.
success Saved 7 new dependencies.
info Direct dependencies
```

- Por linha de comando
- npm i create-react-app
- create-react-app meuapp
- npx create-react-app meuapp





INSTALAÇÃO

```
npx create-react-app meuapp
```





TÁCA-LE PAU, MARCO VÉIO...

cd meuapp

npm start





COMPONENTES

- Funções que recebem parâmetros (props)
- Retornam elementos do React que descrevem o que deve aparecer na tela
- Possibilita a reutilização do código
- Mantém o padrão na interface do App
- Regra básica: deve retornar apenas 1 tag na raiz
- Podem ser Stateless (simples) ou Statefull (com estados)





COMPONENTES

The screenshot shows a code editor interface with the following details:

- EXPLORER** panel on the left:

 - OPEN EDITORS**: 1 UNSAVED
 - JS App.js** (eTic2019/meuapp/src)
 - JS helloworld.js** (eTic2019/meuapp/s...)

- REACTJS** panel:
 - eTic2019
 - meuapp
 - node_modules
 - public
 - src
 - components
 - JS helloworld.js

- JS helloworld.js** tab is active.
- Code content:

```
eTic2019 > meuapp > src > components > JS helloworld.js > HelloWorld > render
1 import React from 'react';
2
3 class HelloWorld extends React.Component{
4   render(){
5     return(
6       <div>
7         | <h1>Hello World</h1>
8       </div>
9     );
10  }
11 }
12
13 export default HelloWorld;
```





COMPONENTES STATELESS

A screenshot of a code editor showing a React component named helloworld.js. The code defines a functional component named HelloWorld that returns a single-line JSX element containing the text "Hello World".

```
1 import React from 'react';
2
3 const HelloWorld = props => (
4   <div>
5     |   <h1>Hello World</h1>
6   </div>
7 );
8
9 export default HelloWorld;
10 |
```

- Extremamente simples
- É uma função que retorna um elemento do React





COMPONENTES STATELESS

A screenshot of a code editor showing a React component named "HelloWorld". The code is as follows:

```
1 import React from 'react';
2
3 const HelloWorld = props => (
4   <div>
5     |   <h1>Hello World</h1>
6   </div>
7 );
8
9 export default HelloWorld;
```

The code editor interface includes an Explorer sidebar on the left showing project files like App.js, helloworld.js, App.css, and App.js, and a list of REACTJS components including eTic2019 and meuapp.

- Crie uma pasta “componentes” dentro de “src”





COMPONENTES STATEFULL

```
git@Tic2019 > meuapp > src > components > JS Timer.js > ...
2
3  class Timer extends React.Component {
4      constructor(props) {
5          super(props);
6          this.state = { seconds: 0 };
7      }
8
9      tick() {
10         this.setState(state => ({
11             seconds: state.seconds + 1
12         }));
13     }
14
15     componentDidMount() {
16         this.interval = setInterval(() => this.tick(), 1000);
17     }
}
```

- Possui variáveis internas
- Renderiza novamente quando alguma variável interna é alterada



NOVO COMPONENTE: TIMER.JS

```
class Timer extends React.Component {
  constructor(props) {
    super(props);
    this.state = { seconds: 0 };
  }

  tick() {
    this.setState(state => ({
      seconds: state.seconds + 1
    }));
  }

  componentDidMount() {
    this.interval = setInterval(() => this.tick(), 1000);
  }

  componentWillUnmount() {
    clearInterval(this.interval);
  }

  render() {
    return (
      <div>
        | Segundos: {this.state.seconds}
      </div>
    );
  }
}

export default Timer;
```

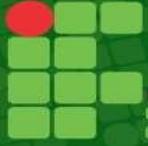


PROPS

```
function Welcome(props) {  
  return <h1>Hello, {props.name}</h1>;  
}
```

- Parâmetros que o componente recebe
- Permite reutilizar o componente
- São apenas leitura

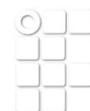


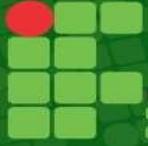


STATES

```
constructor(props) {  
  super(props);  
  this.state = {  
    posts: [],  
    comments: []  
  };  
}
```

- Área de memória que guarda as variáveis de estado do componente
- São leitura e escrita
- Leitura direto no atributo (this.state.posts)
- Escrita utiliza o método “setState”

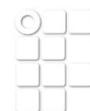




STATES

```
constructor(props) {  
  super(props);  
  this.state = {  
    posts: [],  
    comments: []  
  };  
}
```

- Área de memória que guarda as variáveis de estado do componente
- São leitura e escrita
- Leitura direto no atributo (this.state.posts)
- Escrita utiliza o método “setState”





NOVO COMPONENTE: PHOTO.JS

The screenshot shows a code editor interface with the following details:

- EXPLORER**: Shows the project structure:
 - OPEN EDITORS**: JS App.js, JS index.js
 - REACTJS**: eTic2019, meuapp, node_modules, public, src
 - components
 - photo
 - index.js** (highlighted)
 - helloworld.js
- JS index.js** (selected tab):

```
eTic2019 > meuapp > src > components > photo > JS index.js > ...
1 import React, { Component } from 'react';
2
3 class Photo extends Component {
4
5   render() {
6     return (
7       <div className="Photo"></div>
8     );
9   }
10 }
11 export default Photo;
```

Note que você pode
criar a pasta com o nome
do componente e um
arquivo index.js nela,
assim ele pode ter sua
própria folha de estilo





AJUSTE NO APP.JS

A screenshot of a code editor showing the contents of the file "App.js". The code is written in JavaScript and uses React syntax. It imports React, Photo component, and App.css. It defines a function App() which returns a div with a className of "App" containing a Photo component. The code is numbered from 1 to 13.

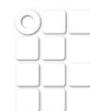
```
JS App.js    × JS index.js
eTic2019 > meuapp > src > JS App.js > ...
1  import React from 'react';
2  import Photo from './components/photo';
3  import './App.css';
4
5  function App() {
6
7      return (
8          <div className="App">
9              <Photo />
10         </div>
11     );
12 }
13 export default App;
```





AJUSTE NO PHOTO.JS

```
JS App.js          JS index.js  X
eTic2019 > meuapp > src > components > photo > JS index.js > ...
1   import React, { Component } from 'react';
2
3   class Photo extends Component {
4
5       render() {
6           return (
7               <div className="Photo">
8                   <img src={this.props.src} />
9               </div>
10      );
11  }
12 }
13 export default Photo;
```





AJUSTE NO APP.JS

```
JS App.js  X  JS index.js

eTic2019 > meuapp > src > JS App.js > ...
1 import React from 'react';
2 import Photo from './components/photo';
3 import './App.css';
4
5 function App() {
6   const imageUrl = "https://raw.githubusercontent.com/mach3k/eTic2019ReactJS/master/paisagem.jpg";
7
8   return (
9     <div className="App">
10    <Photo src={imageUrl}/>
11  </div>
12);
13}
14 export default App;
```

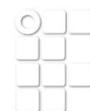




AJUSTE NO PHOTO.JS

```
pp.js          JS index.js  X
2019 > meuapp > src > components > photo > JS index.js > ...
      import React, { Component } from 'react';

      class Photo extends Component {
        render() {
          return (
            <div className="Photo">
              <div className="Profile">
                <div className="Profile-photo">
                  <canvas className="Profile-photo-canvas" />
                  <span className="Profile-photo-container">
                    <img src={this.props.user.profile_image} />
                  </span>
                </div>
                <div className="Profile-name">
                  <a href={this.props.user.link} target="_blank">
                    {this.props.user.name}
                  </a>
                </div>
              </div>
              <div className="Picture">
                <div className="Picture-Container">
                  <img src={this.props.src} />
                </div>
              </div>
            );
        }
      }
      export default Photo;
```





AJUSTE NO APP.JS

```
JS App.js  X  JS index.js
eTic2019 > meuapp > src > JS App.js > App > imageData
1 import React from 'react';
2 import Photo from './components/photo';
3 import './App.css';
4
5 function App() {
6   const imageData = {
7     src: "https://raw.githubusercontent.com/mach3k/eTic2019ReactJS/master/paisagem.jpg",
8     user: {
9       name: "Marcelo Ramos Machado",
10      profile_image: "https://avatars0.githubusercontent.com/u/8934055?s=460&v=4",
11      link: "https://github.com/mach3k"
12    }
13  }
14
15  return (
16    <div className="App">
17      <Photo {...imageData}/>
18    </div>
19  );
20}
21 export default App;
```





DEPENDÊNCIAS TRIVIAIS

- Axios (requisições ajax)
- Router-dom (roteamento de requisições)
- Prop-types (tipos de dados para atributos de props)
- Dot-env (configuração de variáveis de ambiente e constantes globais)





LINKS

- Github do instrutor: <https://github.com/mach3k>
- <https://pt-br.reactjs.org/>
- <https://reactjsexample.com/>
- <https://medium.com/reactbrasil/10-assuntos-que-todo-iniciante-em-react-deve-ficar-por-dentro-a990dd1b0461>
- <https://medium.com/@hugoodias/reactjs-para-iniciantes-criando-um-clone-do-instagram-b10bcef4bd59>
- <https://blog.rocketseat.com.br/react-do-zero-ciclo-de-vida-stateless-components-e-arquitetura-flux/>





Introdução ao ReactJS

Muito Obrigado!

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e-Tic 2019