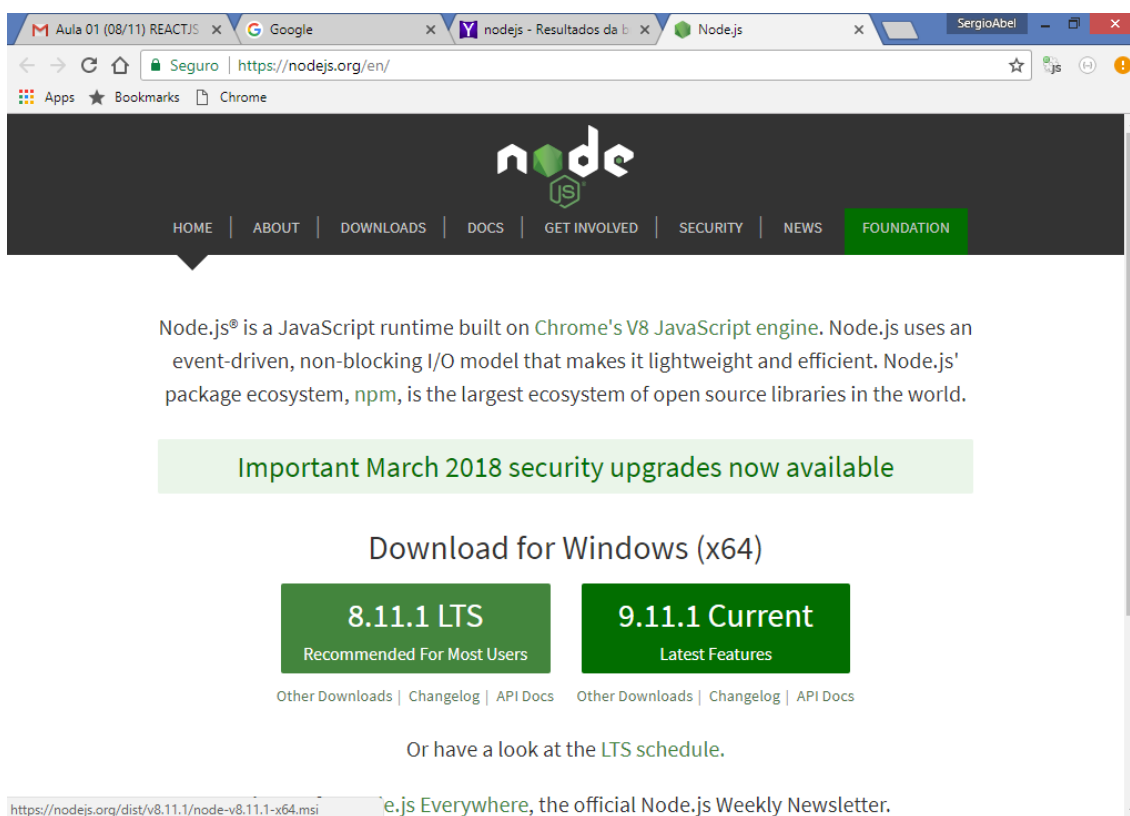


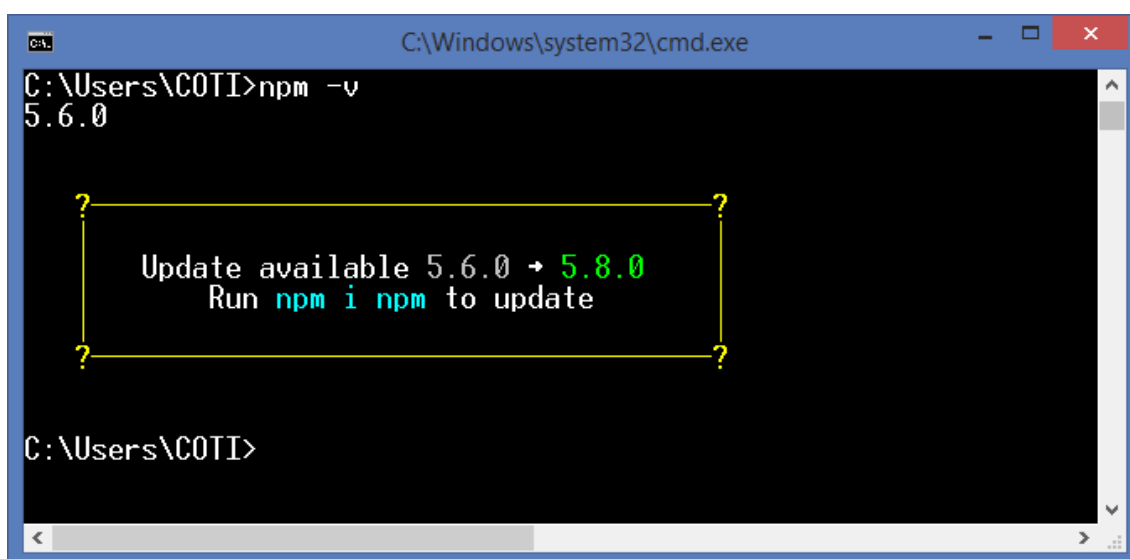
Parte 1) Preparando o ambiente para execução do ReactJS

- Instalar o **NodeJS**

Servidor que irá executar as bibliotecas do React

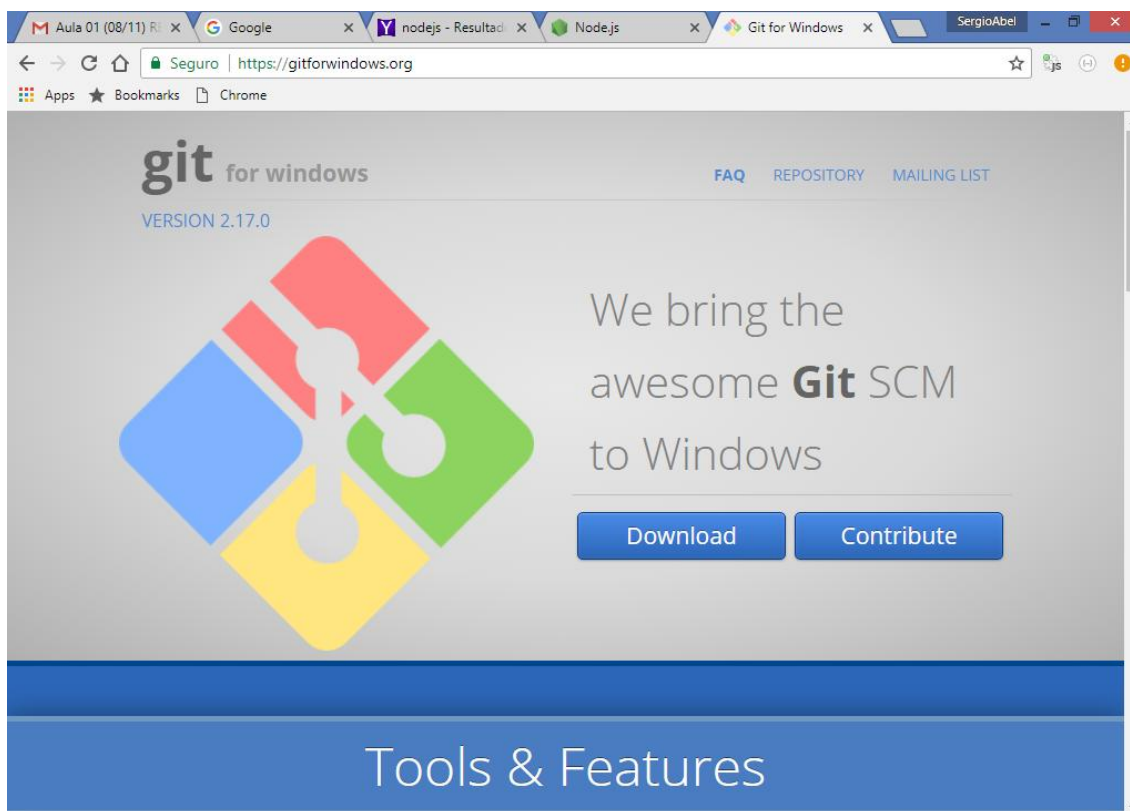


C:\Users\COTI>**npm -v**



Git Bash (<https://gitforwindows.org/>)

Terminal de linhas de comando



Criando a pasta do projeto e instalando o react

```
COTI@COTI308MAQ16 MINGW64 /c
$ cd c:
```

```
COTI@COTI308MAQ16 MINGW64 /c
$ mkdir aula01noite_react
```

```
COTI@COTI308MAQ16 MINGW64 /c
$ cd aula01noite_react
```

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$
```

Instalando o ReactJS:

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save react react-dom
```

Pacotes do react instalados:

```
MINGW64/c:/aula01noite_react
$ mkdir aula01noite_react

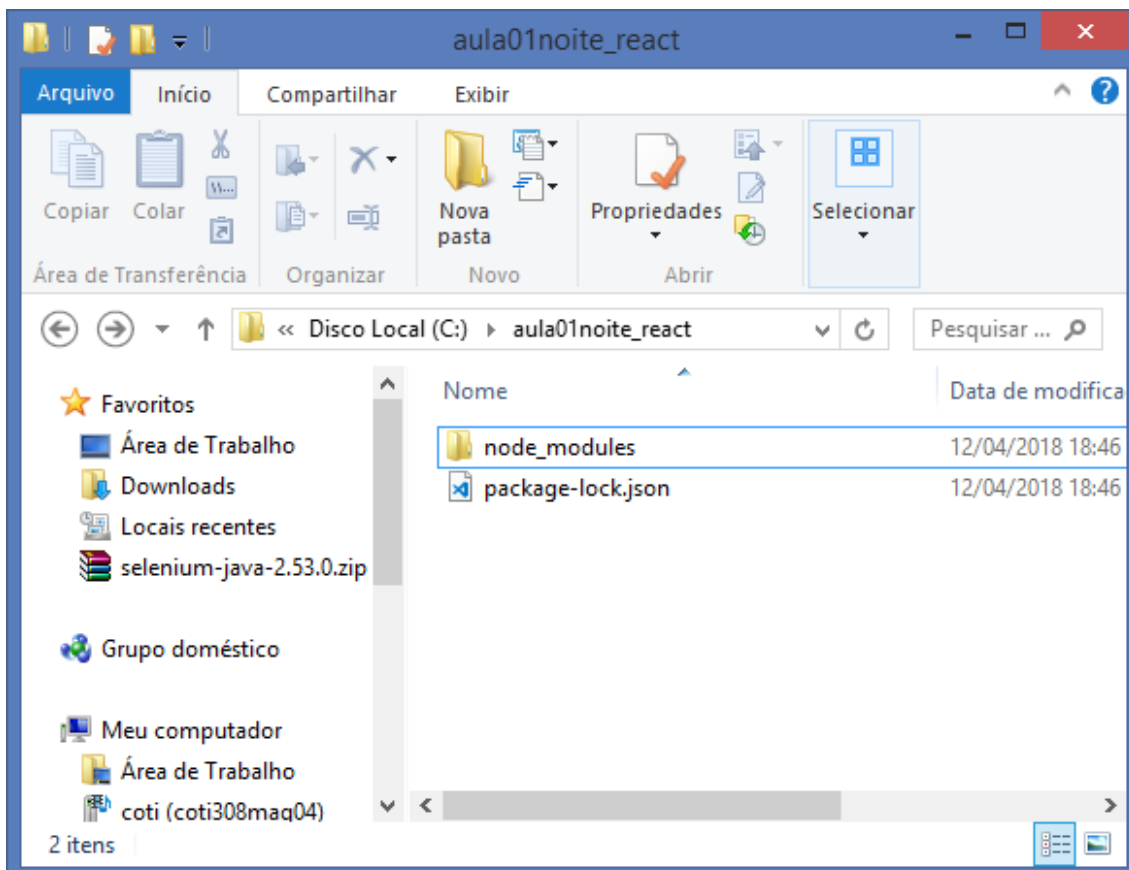
COTI@COTI308MAQ16 MINGW64 /c
$ cd aula01noite_react

COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save react react-dom
npm WARN saveError ENOENT: no such file or directory, open 'c:\aula01noite_react\package.json'
npm notice created a lockfile as package-lock.json. You should commit this file
npm WARN enoent ENOENT: no such file or directory, open 'c:\aula01noite_react\package.json'
npm WARN aula01noite_react No description
npm WARN aula01noite_react No repository field.
npm WARN aula01noite_react No README data
npm WARN aula01noite_react No license field.

+ react@16.3.1
+ react-dom@16.3.1
added 19 packages in 23.009s

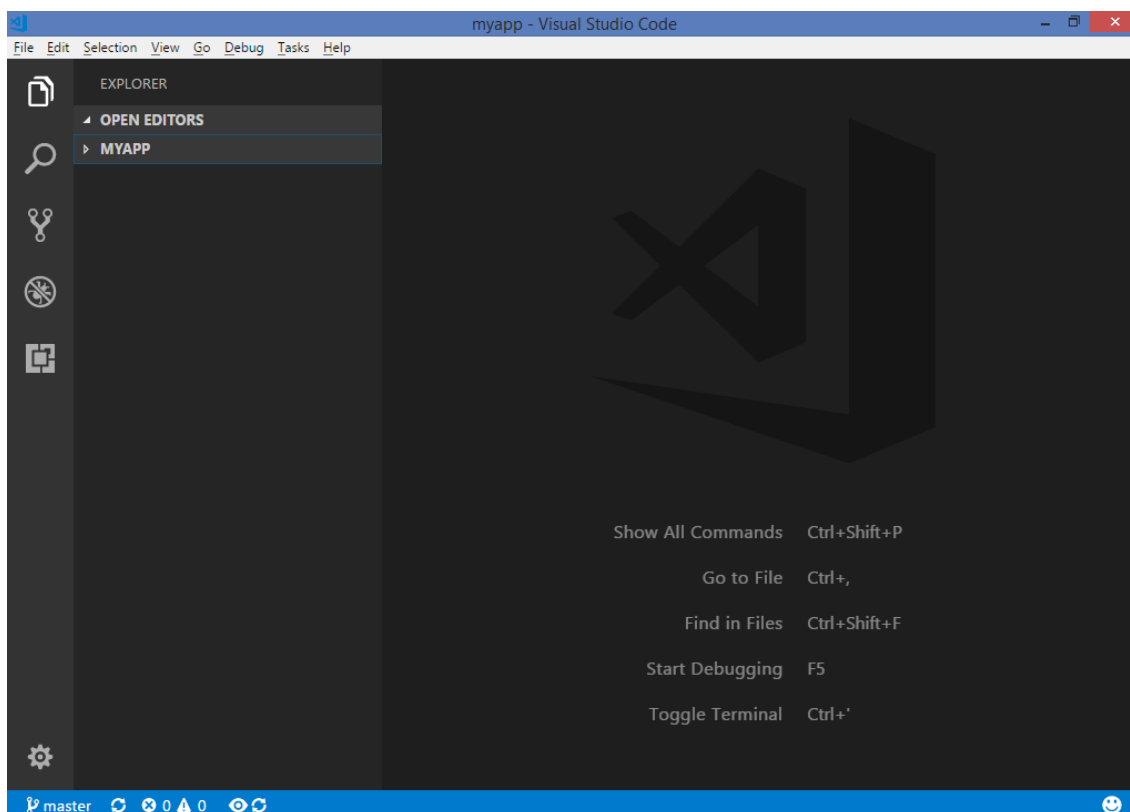
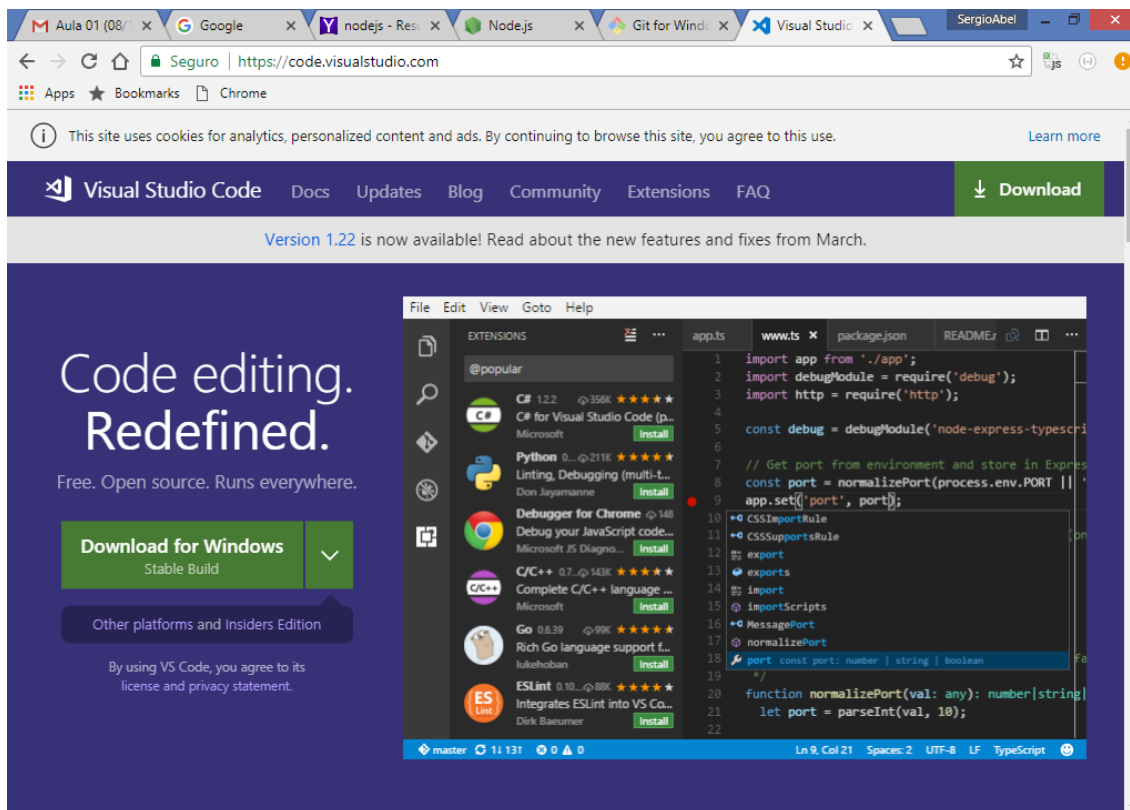
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$
```

Pasta do projeto:

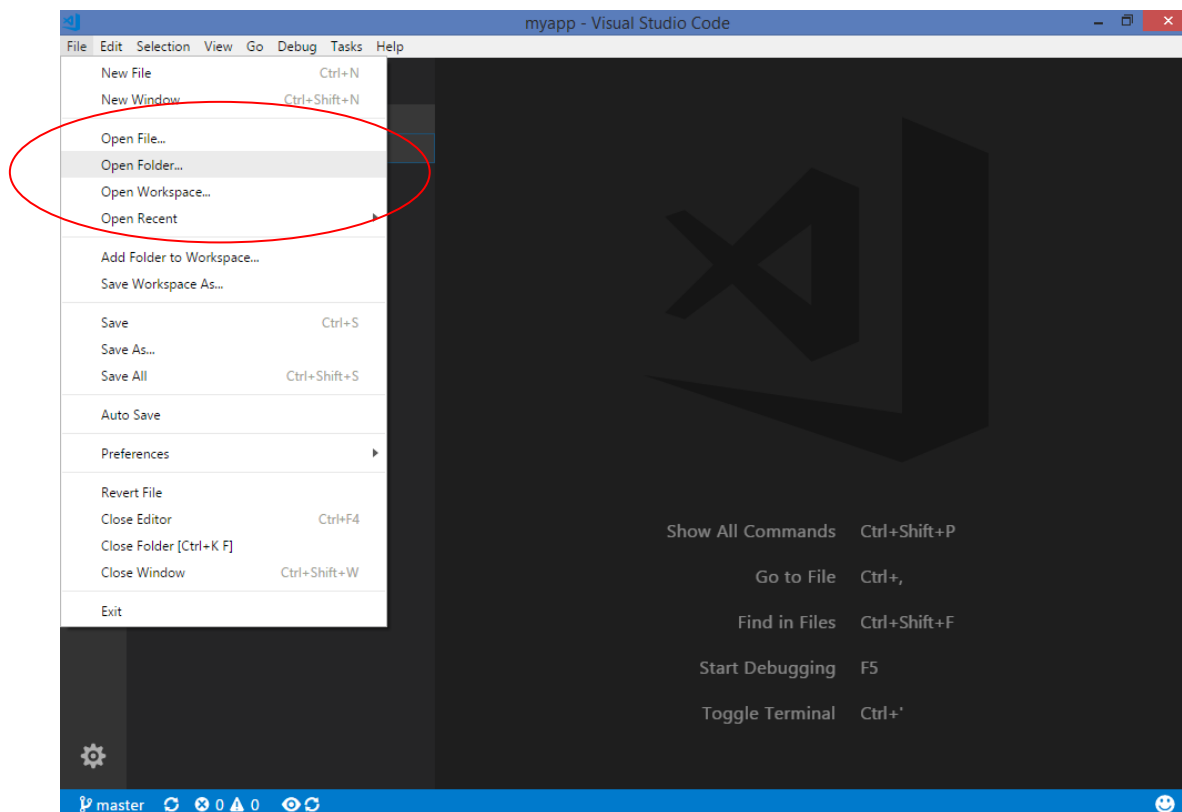


Visual Studio Code (<https://code.visualstudio.com/>)

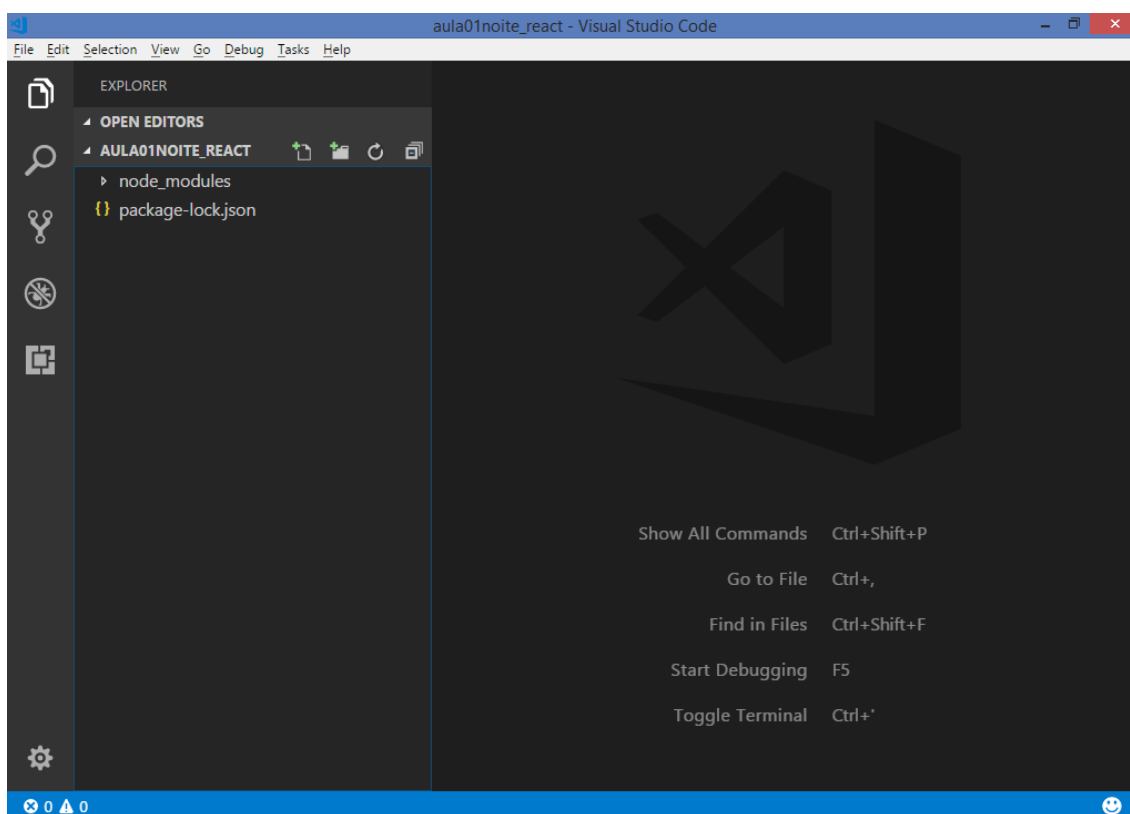
Ferramenta para desenvolvimento de código



Abrindo a pasta do projeto:



Pasta do projeto aberta:

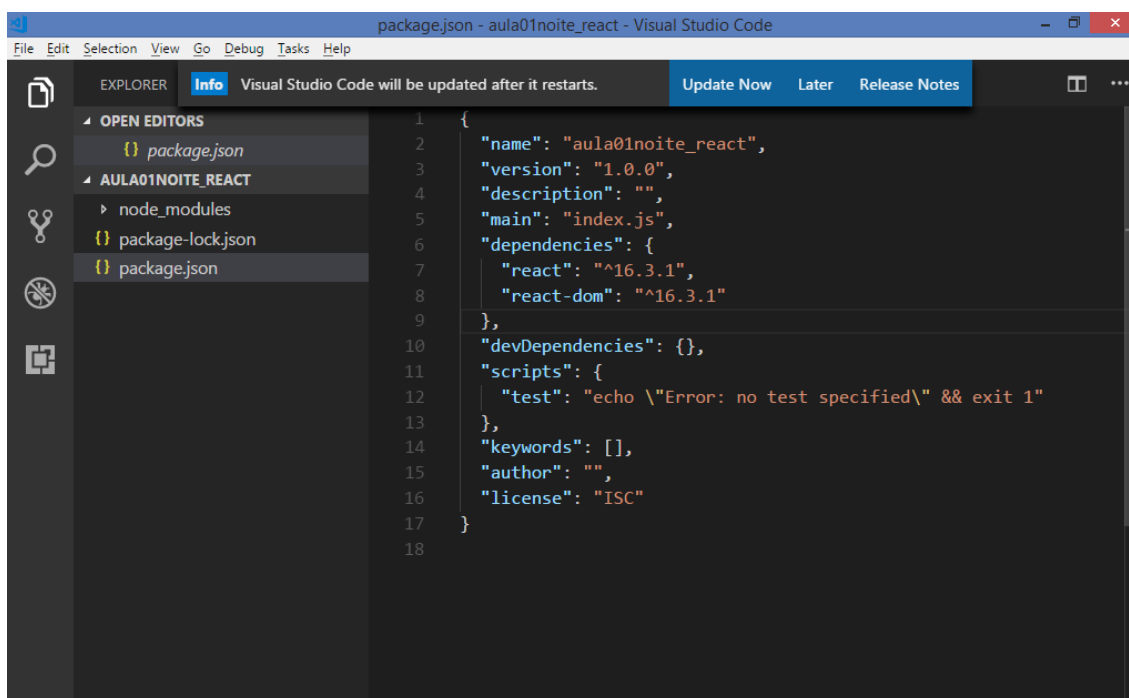


package.json

Arquivo principal para mapeamento das dependências (bibliotecas referenciadas) do projeto.

- Gerando o arquivo package.json através do NodeJS

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm init -y
```

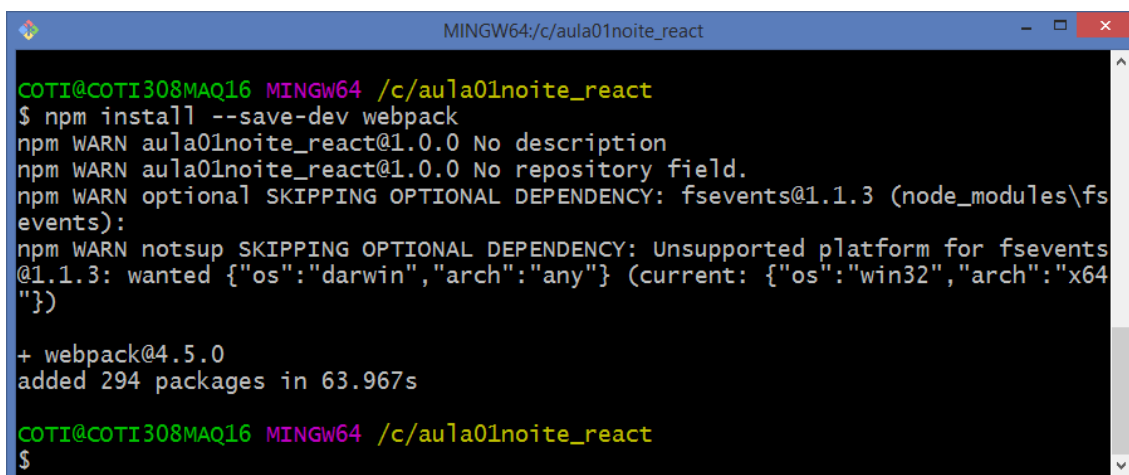


```
{
  "name": "aula01noite_react",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "dependencies": {
    "react": "^16.3.1",
    "react-dom": "^16.3.1"
  },
  "devDependencies": {},
  "scripts": {
    "test": "echo \\\"Error: no test specified\\\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC"
}
```

Webpack (Servidor de execução)

Servidor web para executar o projeto no navegador

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev webpack
```



```
MINGW64:/c/aula01noite_react
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev webpack
npm WARN aula01noite_react@1.0.0 No description
npm WARN aula01noite_react@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.1.3 (node_modules\fs
events):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents
@1.1.3: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64
"})
+ webpack@4.5.0
added 294 packages in 63.967s
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$
```

webpack.config.js

Arquivo de configuração do servidor webpack

```
module.exports = {
  entry: './app/App.js',
  output: {
    filename: 'public/bundle.js'
  },
  module: {
    loaders: [
      {
        test: /\.js$/,
        exclude: /node_modules/,
        loader: 'babel-loader',
        query: {
          presets: ['react']
        }
      }
    ]
  }
}
```

entry: './app/App.js'

Mapeia o arquivo JavaScript principal do projeto. Neste arquivo App.js iremos carregar os componentes criados com o React para uso nas páginas.

```
output: {
  filename: 'public/bundle.js'
},
```

A configuração acima define um nome de arquivo "virtual" que quando for inserido em uma página HTML fará que com todo o conteúdo do App.js e dos demais arquivos javascript sejam carregados.

Criando a página inicial do projeto

/public/index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
```

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-
scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<title>Projeto</title>

<!-- Bootstrap -->
<link rel="stylesheet" type="text/css"

href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.0/css/bootst
rap.min.css"/>

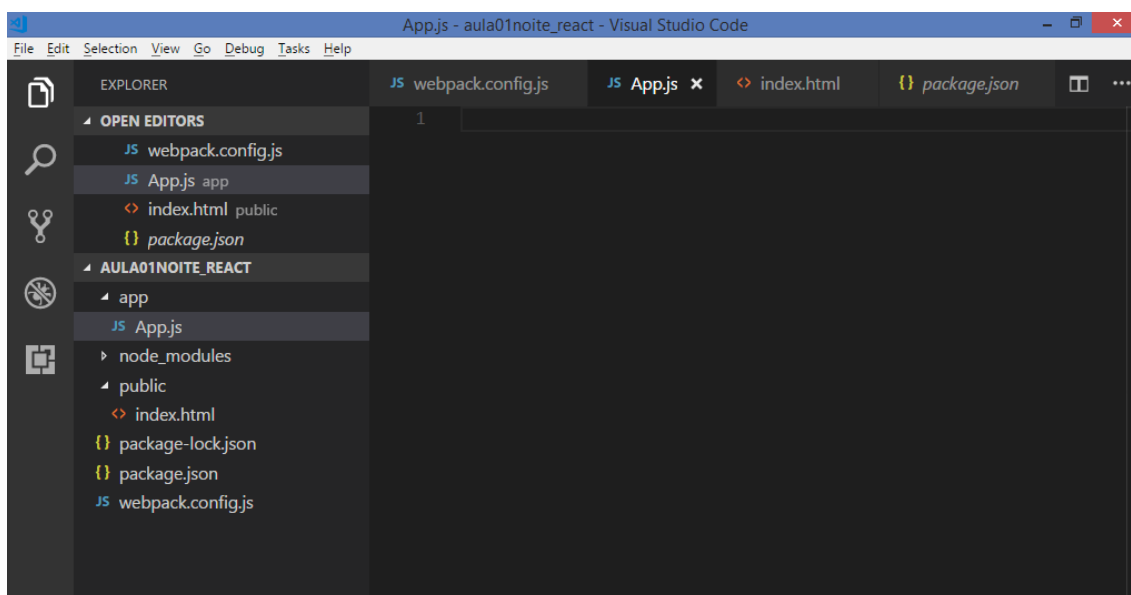
</head>
<body class="container">

    <h2>Projeto REACTJS</h2>
    COTI Informática - Turma Noite
    <hr/>

    <!-- arquivo virtual para carregar os componentes do react -->
    <script src="bundle.js"></script>

</body>
</html>
```

/app/App.js



Instalando o Babel

Os arquivos criados com o React utilizam uma linguagem que é uma variação do javascript, denominado **JSX (JavaScript com XHTML)**

É necessário que tenhamos uma ferramenta capaz de traduzir o conteúdo dos arquivos JSX para o navegador na forma de javascript.

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev babel-core babel-loader babel-preset-react
```



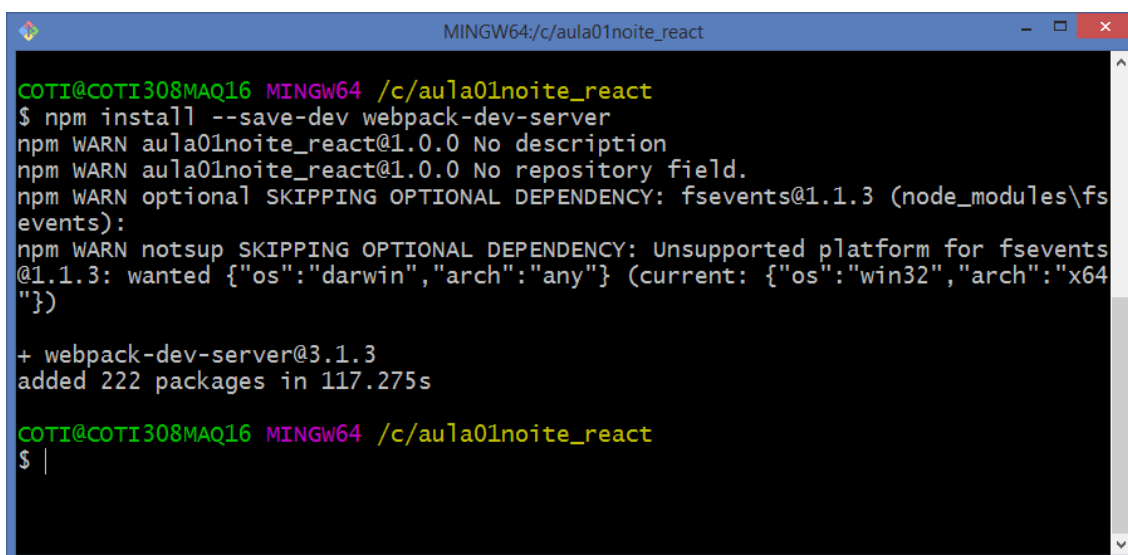
```
MINGW64/c/aula01noite_react

COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev babel-core babel-loader babel-preset-react
npm WARN aula01noite_react@1.0.0 No description
npm WARN aula01noite_react@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.1.3 (node_modules\fs
events):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents
@1.1.3: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64
"})
+ babel-core@6.26.0
+ babel-preset-react@6.24.1
+ babel-loader@7.1.4
added 50 packages in 44.454s

COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$
```

Instalando uma dependencia para executar o servidor do WebPack

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev webpack-dev-server
```



```
MINGW64/c/aula01noite_react

COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev webpack-dev-server
npm WARN aula01noite_react@1.0.0 No description
npm WARN aula01noite_react@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.1.3 (node_modules\fs
events):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents
@1.1.3: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64
"})
+ webpack-dev-server@3.1.3
added 222 packages in 117.275s

COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ |
```

Instale as seguintes dependencias como
usuario administrador no GitBash:

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev webpack-cli
```

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev babel-preset-env
```

Faça com que o package.json fique conforme abaixo:

package.json

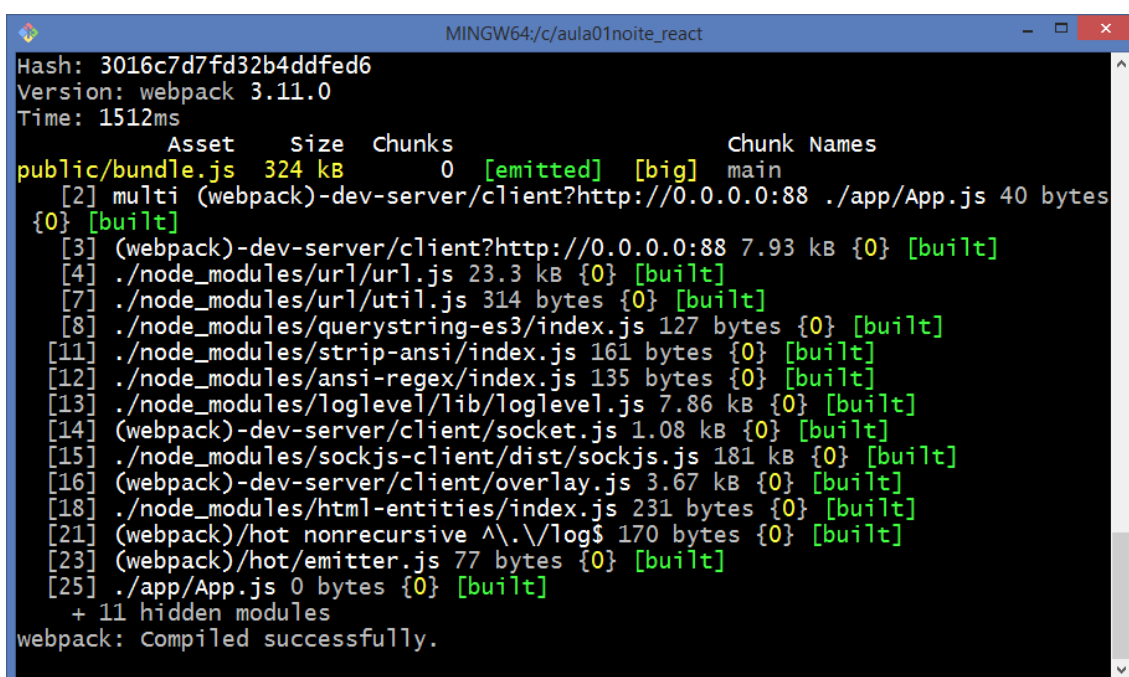
Configurar um script para executar o servidor webpack

```
{
  "name": "aula01noite_react",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "dependencies": {
    "react": "^16.3.1",
    "react-dom": "^16.3.1"
  },
  "devDependencies": {
    "babel-core": "^6.26.0",
    "babel-loader": "^7.1.4",
    "babel-preset-env": "^1.6.1",
    "babel-preset-react": "^6.24.1",
    "webpack": "^3.10.0",
    "webpack-cli": "^2.0.14",
```

```
"webpack-dev-server": "^2.11.1"
},
"scripts": {
  "test": "echo \"Error: no test specified\" && exit 1",
  "start" : "./node_modules/.bin/webpack-dev-server --host 0.0.0.0 --port 88"
},
"keywords": [],
"author": "",
"license": "ISC"
}
```

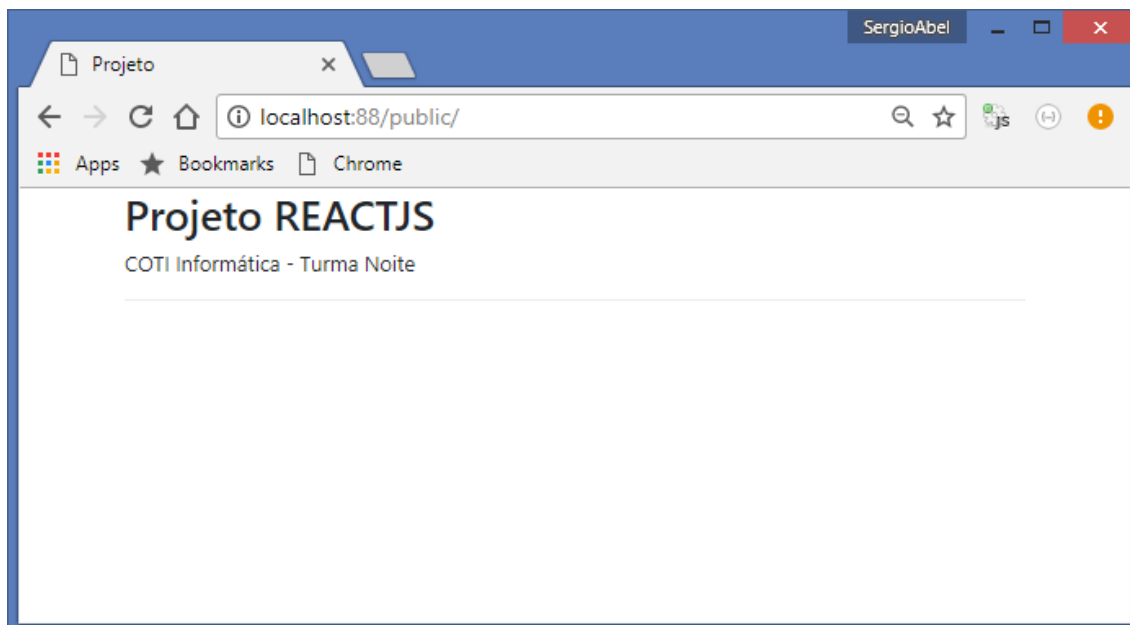
Executando:

COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
\$ npm start



```
Hash: 3016c7d7fd32b4ddfed6
Version: webpack 3.11.0
Time: 1512ms
   Asset      Size  Chunks             Chunk Names
public/bundle.js 324 kB          0 [emitted] [big]  main
[2] multi (webpack)-dev-server/client?http://0.0.0.0:88 ./app/App.js 40 bytes {0} [built]
[3] (webpack)-dev-server/client?http://0.0.0.0:88 7.93 kB {0} [built]
[4] ./node_modules/url/url.js 23.3 kB {0} [built]
[7] ./node_modules/url/util.js 314 bytes {0} [built]
[8] ./node_modules/querystring-es3/index.js 127 bytes {0} [built]
[11] ./node_modules/strip-ansi/index.js 161 bytes {0} [built]
[12] ./node_modules/ansi-regex/index.js 135 bytes {0} [built]
[13] ./node_modules/loglevel/lib/loglevel.js 7.86 kB {0} [built]
[14] (webpack)-dev-server/client/socket.js 1.08 kB {0} [built]
[15] ./node_modules/sockjs-client/dist/sockjs.js 181 kB {0} [built]
[16] (webpack)-dev-server/client/overlay.js 3.67 kB {0} [built]
[18] ./node_modules/html-entities/index.js 231 bytes {0} [built]
[21] (webpack)/hot nonrecursive ^\./log$ 170 bytes {0} [built]
[23] (webpack)/hot/emitter.js 77 bytes {0} [built]
[25] ./app/App.js 0 bytes {0} [built]
+ 11 hidden modules
webpack: Compiled successfully.
```

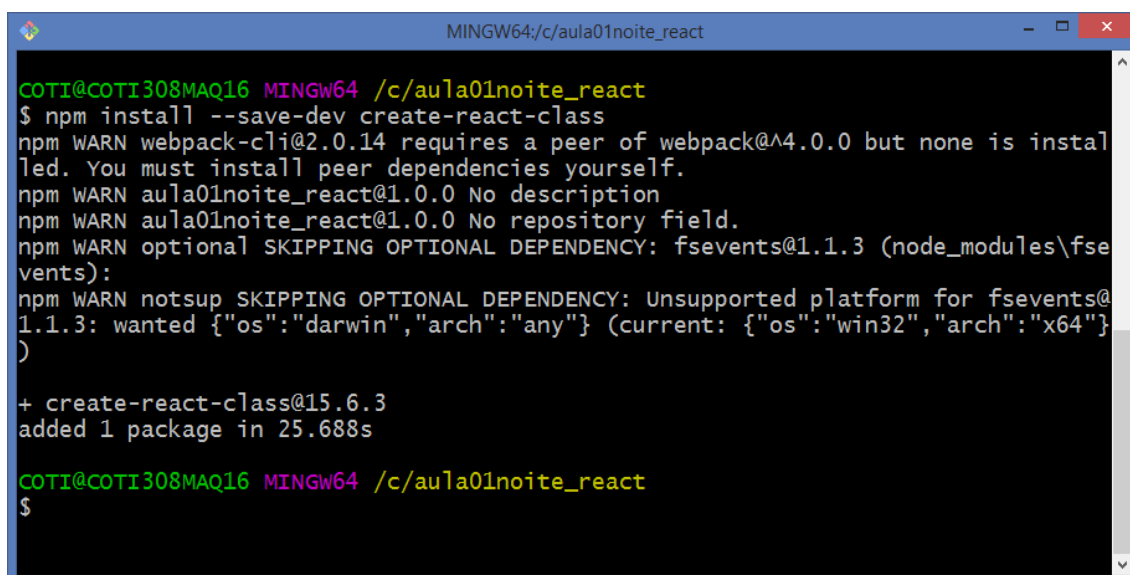
<http://localhost:88/public/>



Criando as classe com React

** Necessário a instalação da biblioteca:

```
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev create-react-class
```



```
MINGW64/c/aula01noite_react
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$ npm install --save-dev create-react-class
npm WARN webpack-cli@2.0.14 requires a peer of webpack@^4.0.0 but none is installed. You must install peer dependencies yourself.
npm WARN aula01noite_react@1.0.0 No description
npm WARN aula01noite_react@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.1.3 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.1.3: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
+ create-react-class@15.6.3
added 1 package in 25.688s
COTI@COTI308MAQ16 MINGW64 /c/aula01noite_react
$
```

Criando uma primeira classe com React
para montar um formulário de cadastro:

/app/FormCadastro.js

```
//importar as dependencias do React
var React = require('react');
var CreateReactClass = require('create-react-class');

//declarando a classe..
//nome da classe deverá sempre começar CAIXA-ALTA
var FormCadastro = CreateReactClass({

  //render -> função do React utilizado para retornar
  //o conteúdo HTML que será exibido por esta classe
  //na página web..
  render : function(){
    return(
      <div>
        <form method="post">
          <label>Nome do Produto</label>
          <input type="text" className="form-control"
            placeholder="Informe o nome"/>
          <br/>

          <label>Preço:</label>
          <input type="text" className="form-control"
            placeholder="Informe o preço"/>
          <br/>

          <label>Quantidade:</label>
          <input type="text" className="form-control"
            placeholder="Informe a quantidade"/>
          <br/>

          <input type="submit" value="Cadastrar Produto"
            className="btn btn-success"/>
        </form>
      </div>
    );
  }
});
```

Para que possamos "exportar" o conteúdo desta classe de forma que ela possa ser "requerida" pelo arquivo App.js, será necessário incluir a linha abaixo:

```
//importar as dependencias do React
var React = require('react');
var CreateReactClass = require('create-react-class');

//declarando a classe..
//nome da classe deverá sempre começar CAIXA-ALTA
var FormCadastro = CreateReactClass({

  //render -> função do React utilizado para retornar
  //o conteúdo HTML que será exibido por esta classe
  //na página web..
  render : function(){
    return(
      <div>
        <form method="post">
          <label>Nome do Produto</label>
          <input type="text" className="form-control"
            placeholder="Informe o nome"/>
          <br/>

          <label>Preço:</label>
          <input type="text" className="form-control"
            placeholder="Informe o preço"/>
          <br/>

          <label>Quantidade:</label>
          <input type="text" className="form-control"
            placeholder="Informe a quantidade"/>
          <br/>

          <input type="submit" value="Cadastrar Produto"
            className="btn btn-success"/>
        </form>
      </div>
    );
  }
});

module.exports = FormCadastro;
```

/app/App.js

```
//importando as dependencias..  
var React = require('react');  
  
//react-dom: dependencia capaz de ler uma função render de uma  
classe  
//e mesclar o seu retorno HTML ao conteudo DOM de uma página web  
//atraves do VIRTUAL DOM  
var ReactDOM = require('react-dom');  
  
//importando a classe criada na pasta app..  
var FormCadastro = require('./FormCadastro');
```

Voltando na página index.html

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <meta charset="UTF-8">  
  <meta name="viewport" content="width=device-width, initial-  
scale=1.0">  
  <meta http-equiv="X-UA-Compatible" content="ie=edge">  
  <title>Projeto</title>  
  
  <!-- Bootstrap -->  
  <link rel="stylesheet" type="text/css"  
href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.0/css/bootst  
rap.min.css"/>  
</head>  
<body class="container">  
  
  <h2>Projeto REACTJS</h2>  
  COTI Informática - Turma Noite  
  <hr/>  
  
  <div class="row">  
    <div class="col-md-4">  
      <div id="formcadastro"></div>  
    </div>
```

```
</div>

<!-- arquivo virtual para carregar os componentes do react -->
<script src="bundle.js"></script>

</body>
</html>
```

Voltando ao arquivo App.js

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <meta http-equiv="X-UA-Compatible" content="ie=edge">
  <title>Projeto</title>

  <!-- Bootstrap -->
  <link rel="stylesheet" type="text/css"

href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.0/css/bootst
rap.min.css"/>

</head>
<body class="container">

  <h2>Projeto REACTJS</h2>
  COTI Informática - Turma Noite
  <hr/>

  <div class="row">
    <div class="col-md-4">
      <div id="formcadastro"></div>
    </div>
    <div class="col-md-8">
      <div id="gridconsulta"></div>
    </div>
  </div>

  <!-- arquivo virtual para carregar os componentes do react -->
  <script src="bundle.js"></script>
```



```
</body>  
</html>
```

Criando uma nova classe js em React

```
//importar as dependencias do React  
var React = require('react');  
var CreateReactClass = require('create-react-class');  
  
//declarando a classe..  
//nome da classe deverá sempre começar CAIXA-ALTA  
var GridConsulta = CreateReactClass({  
  
  //render -> função do React utilizado para retornar  
  //o conteúdo HTML que será exibido por esta classe  
  //na página web..  
  render : function(){  
  
    return(  
      <div>  
        <table className="table table-hover">  
          <thead>  
            <tr>  
              <th>Código</th>  
              <th>Nome do Produto</th>  
              <th>Preço</th>  
              <th>Quantidade</th>  
              <th>Total</th>  
            </tr>  
          </thead>  
          </table>  
        </div>  
      );  
    }  
  });  
  
module.exports = GridConsulta;
```

Voltando ao arquivo **App.js**

```
//importando as dependencias..  
var React = require('react');
```

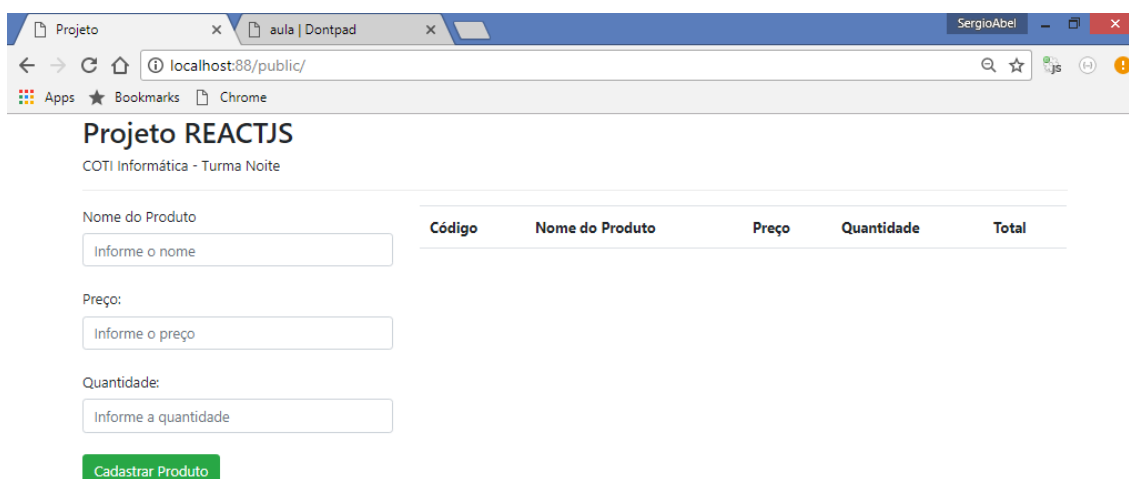
```
//react-dom: dependencia capaz de ler uma função render de uma
classe
//e mesclar o seu retorno HTML ao conteudo DOM de uma página web
//atraves do VIRTUAL DOM
var ReactDOM = require('react-dom');

//importando a classe criada na pasta app..
var FormCadastro = require('./FormCadastro');

//importando a classe criada na pasta app..
var GridConsulta = require('./GridConsulta');

//renderizar o conteudo retornado pela classe FormCadastro
//no elemento id='formcadastro' contido na página index.html
ReactDOM.render(
  <FormCadastro/>,
  document.getElementById('formcadastro')
);

ReactDOM.render(
  <GridConsulta/>,
  document.getElementById('gridconsulta')
);
```



| Código | Nome do Produto | Preço | Quantidade | Total |
|--------|-----------------|-------|------------|-------|
|--------|-----------------|-------|------------|-------|

Continua...