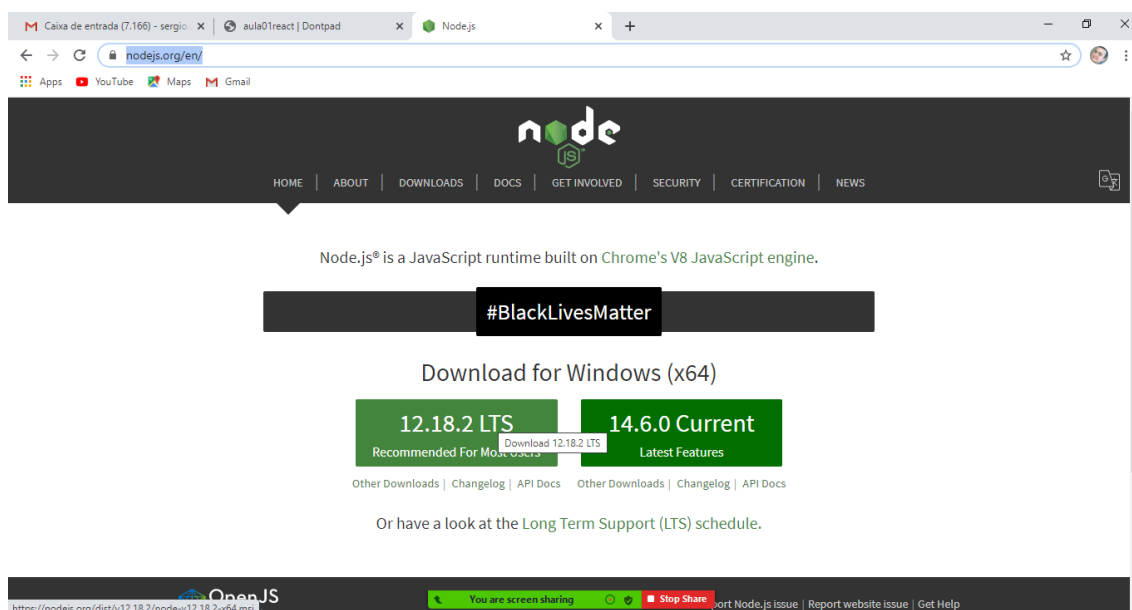


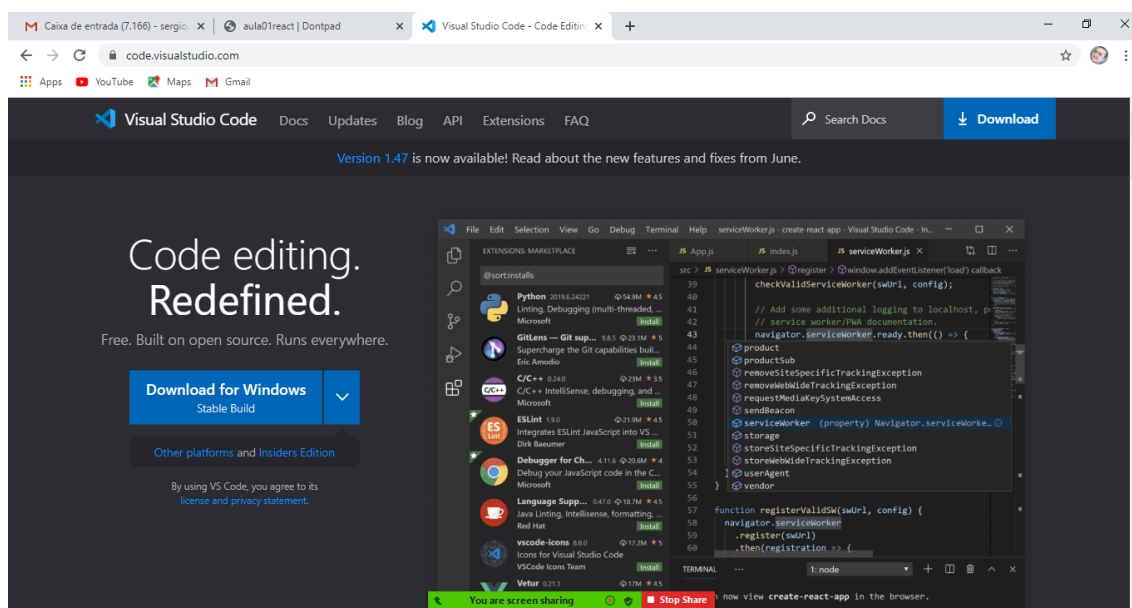
Suite de ferramentas:

- VisualStudio Code
- NODEJS
- GitBash

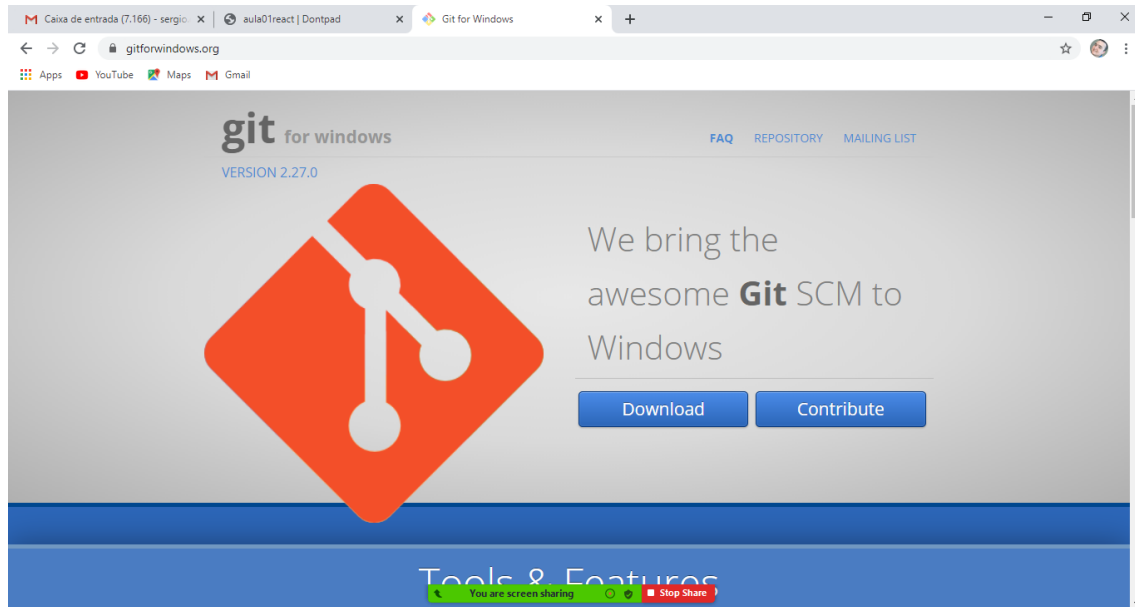
NODEJS (<https://nodejs.org/en/>)



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



GitBash (<https://gitforwindows.org/>)



```
sergi@LAPTOP-EV6HCTL7 MINGW64 ~  
$ cd c:
```

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c  
$ mkdir curso_react
```

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c  
$ cd curso_react
```

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react  
$ node -v
```

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react  
$ npx create-react-app projeto01
```

Acessando e executando o projeto:

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react  
$ cd projeto01
```

```
sergi@LAPTOP-EV6HCTL7 MINGW64  
/c/curso_react/projeto01 (master)  
$ npm start
```

```
MINGW64/c:/curso_react/projeto01
sergi@LAPTOP-EV6HCTL7 MINGW64 /c:/curso_react
$ cd projeto01

sergi@LAPTOP-EV6HCTL7 MINGW64 /c:/curso_react/projeto01 (master)
$ npm start

> projeto01@0.1.0 start C:\curso_react\projeto01
> react-scripts start

[wds]: Project is running at http://192.168.15.4/
[wds]: webpack output is served from
[wds]: Content not from webpack is served from C:\curso_react\projeto01\public
[wds]: 404s will fallback to /
starting the development server...

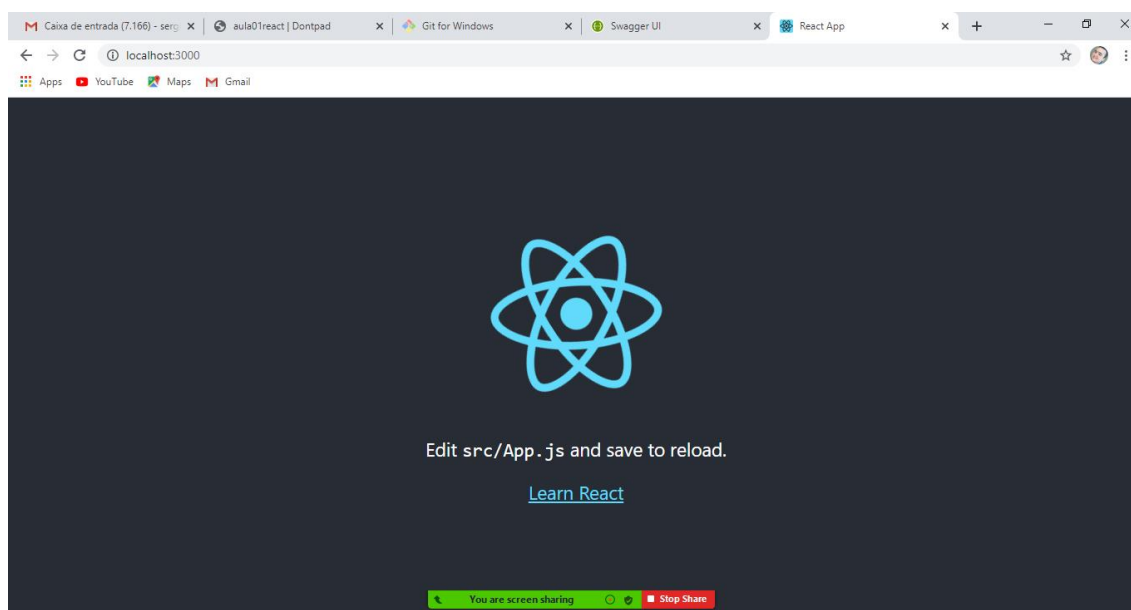
Compiled successfully!

You can now view projeto01 in the browser.

  Local:            http://localhost:3000
  On Your Network:  http://192.168.15.4:3000

Note that the development build is not optimized.
To create a production build, use npm run build.
```

<http://localhost:3000/>



Para interromper a execução do servidor, pressione **CTRL + C**

Adicionando bibliotecas no projeto:

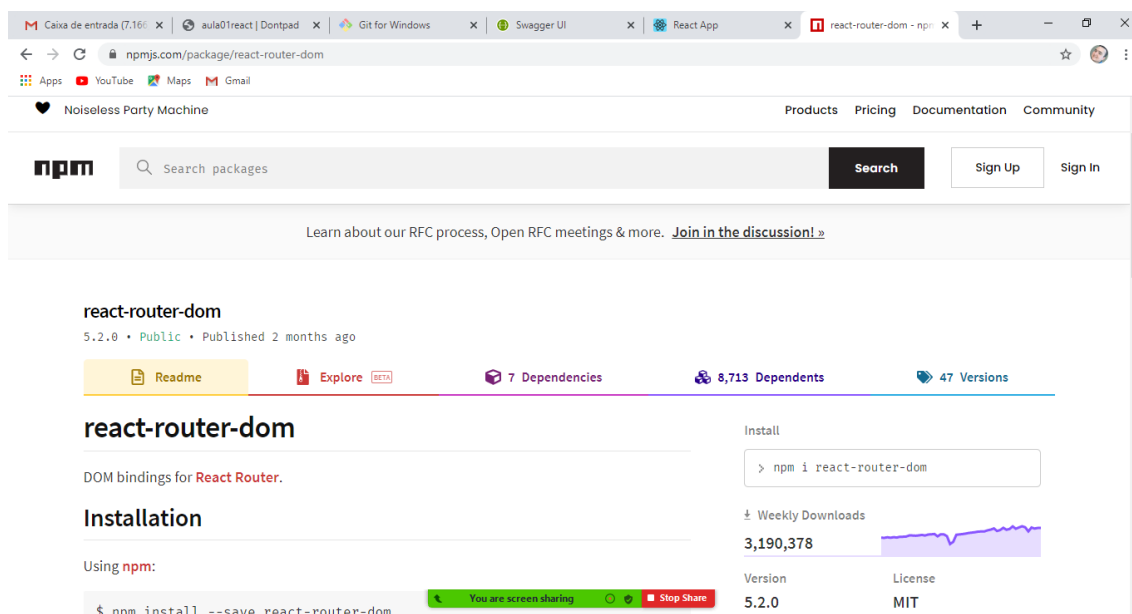
NPM – Gerenciador de pacotes do node
(Node package manager)

Utilizado para que possamos instalar bibliotecas e dependências no projeto. Todas as bibliotecas instaladas pelo NPM são registradas em um arquivo chamado **package.json** dentro do projeto.

react-router-dom

Biblioteca utilizada para desenvolvimento de navegação de rotas no projeto. Iremos utilizar principalmente para criação da SPA (Single Page Application)

<https://www.npmjs.com/package/react-router-dom>

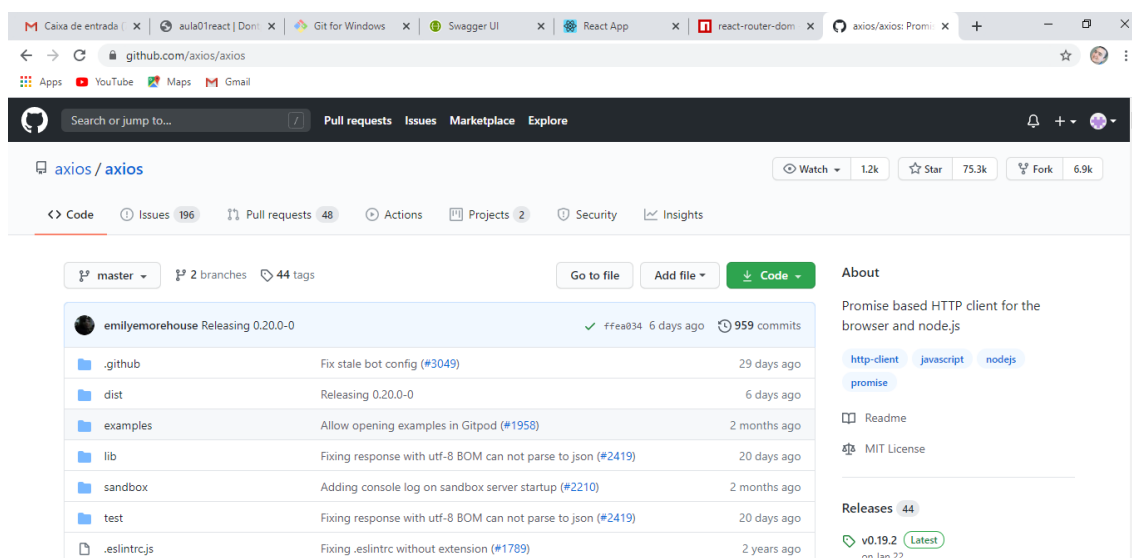


The screenshot shows the npm package page for **react-router-dom**. The package is version 5.2.0, published 2 months ago. It has 7 dependencies, 8,713 dependents, and 47 versions. The installation command is `> npm i react-router-dom`. The weekly downloads are 3,190,378. The license is MIT. The installation instructions show using npm: `$ npm install --save react-router-dom`.

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react/projeto01 (master)
$ npm install --save react-router-dom
```

Axios (<https://github.com/axios/axios>)

Biblioteca React utilizada para realizar requisições HTTP para APIs web.

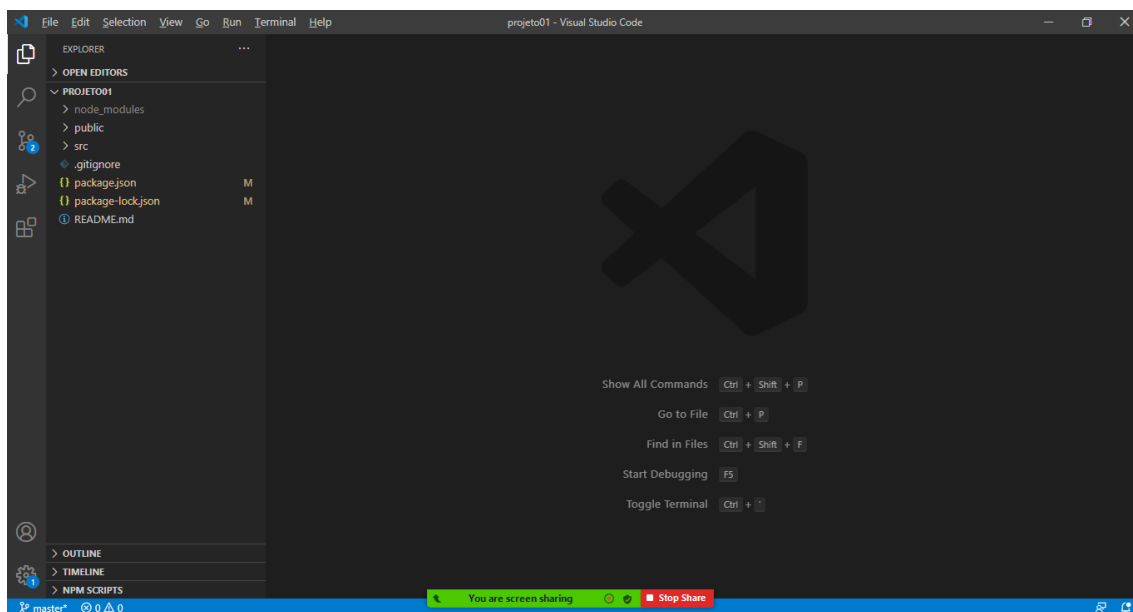


The screenshot shows the GitHub repository page for **axios/axios**. The repository is owned by **emilymorehouse** and is currently at version 0.20.0-0. It has 1.2k watchers, 75.3k stars, and 6.9k forks. The repository description is "Promise based HTTP client for the browser and node.js". The repository includes a README, MIT License, and 44 releases. The latest release is v0.19.2, released on Jan 22.

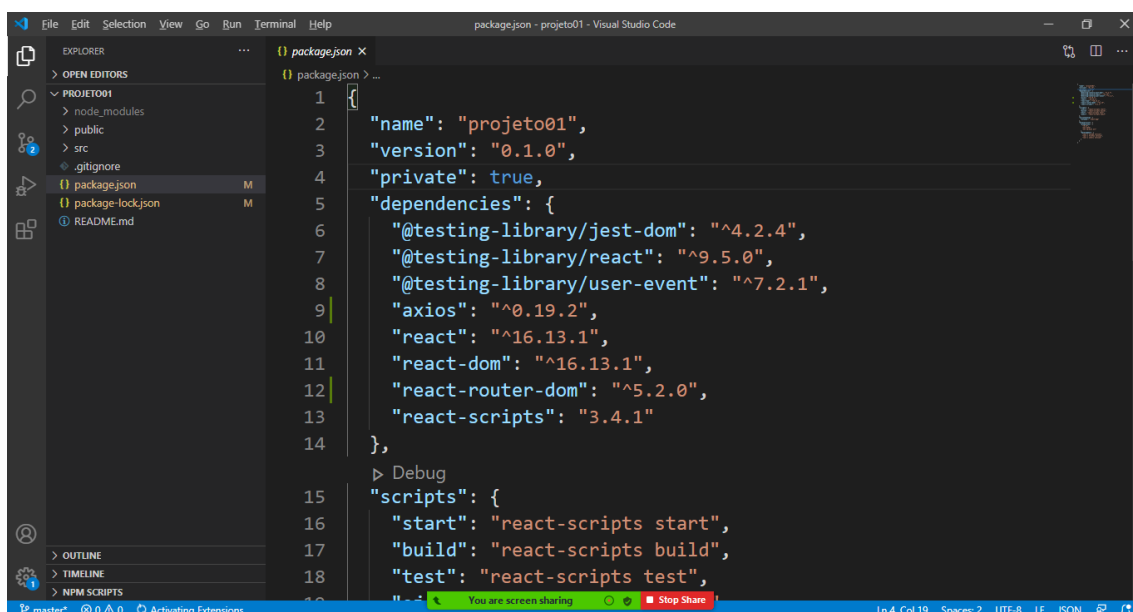
```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react/projeto01 (master)
$ npm install --save axios
```

Abrindo o projeto no VSCODE:

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react/projeto01  
(master)  
$ code .
```



/package.json
Deployment descriptor



```
{  
  "name": "projeto01",  
  "version": "0.1.0",  
  "private": true,  
  "dependencies": {
```

```
"@testing-library/jest-dom": "^4.2.4",
"@testing-library/react": "^9.5.0",
"@testing-library/user-event": "^7.2.1",
"axios": "^0.19.2",
"react": "^16.13.1",
"react-dom": "^16.13.1",
"react-router-dom": "^5.2.0",
"react-scripts": "3.4.1"
},
"scripts": {
  "start": "react-scripts start",
  "build": "react-scripts build",
  "test": "react-scripts test",
  "eject": "react-scripts eject"
},
"eslintConfig": {
  "extends": "react-app"
},
"browserslist": {
  "production": [
    ">0.2%",
    "not dead",
    "not op_mini all"
  ],
  "development": [
    "last 1 chrome version",
    "last 1 firefox version",
    "last 1 safari version"
  ]
}
}
```

Estrutura de pastas do projeto:

/node_modules

Pasta onde estão instalados todas as bibliotecas e dependências utilizadas pelo projeto. Só precisamos desta pasta em ambiente de desenvolvimento.

/public

Local onde iremos colocar todos os arquivos:

CSS, HTML, Imagens etc.

/src

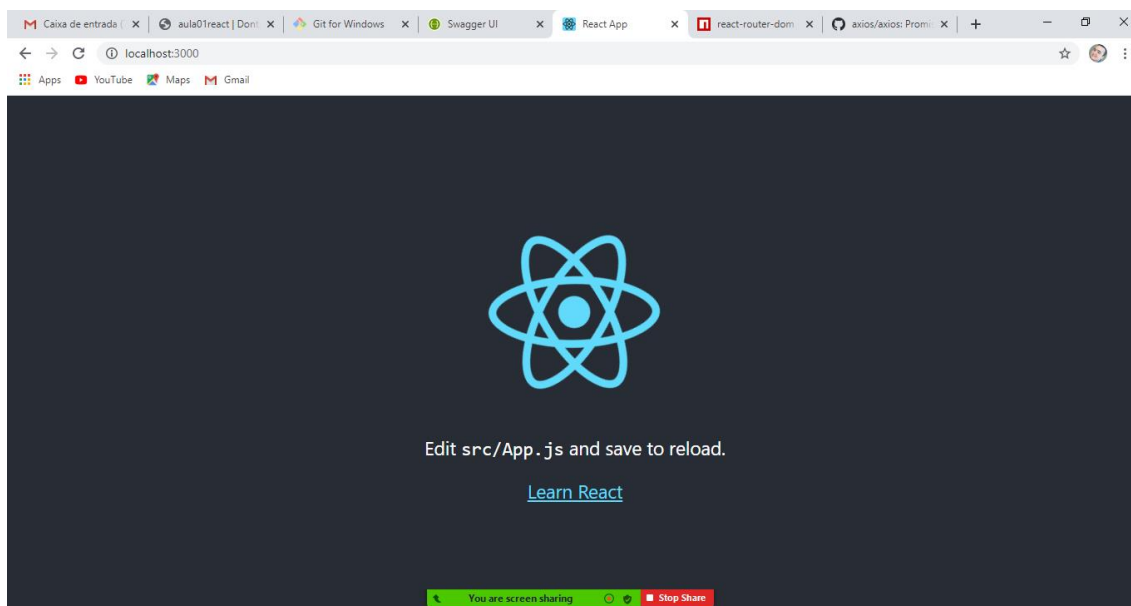
Local onde serão criados os arquivos do projeto REACT baseados em javascript / typescript (componentes, etc.)

Executando o projeto:

```
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react/projeto01  
(master)  
$ npm start
```

```
MINGW64/c/curso_react/projeto01  
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react/projeto01 (master)  
$ code .  
sergi@LAPTOP-EV6HCTL7 MINGW64 /c/curso_react/projeto01 (master)  
$ npm start  
  
> projeto01@0.1.0 start C:\curso_react\projeto01  
> react-scripts start  
  
[i] [wds]: Project is running at http://192.168.15.4/  
[i] [wds]: webpack output is served from  
[i] [wds]: Content not from webpack is served from C:\curso_react\projeto01\public  
[i] [wds]: 404s will fallback to /  
Starting the development server...  
  
Compiled successfully!  
  
You can now view projeto01 in the browser.  
  
Local:      http://localhost:3000  
On Your Network: http://192.168.15.4:3000  
  
Note that the development build is not optimized.  
To create a production build, use npm run build.
```

<http://localhost:3000/>



/src/App.js

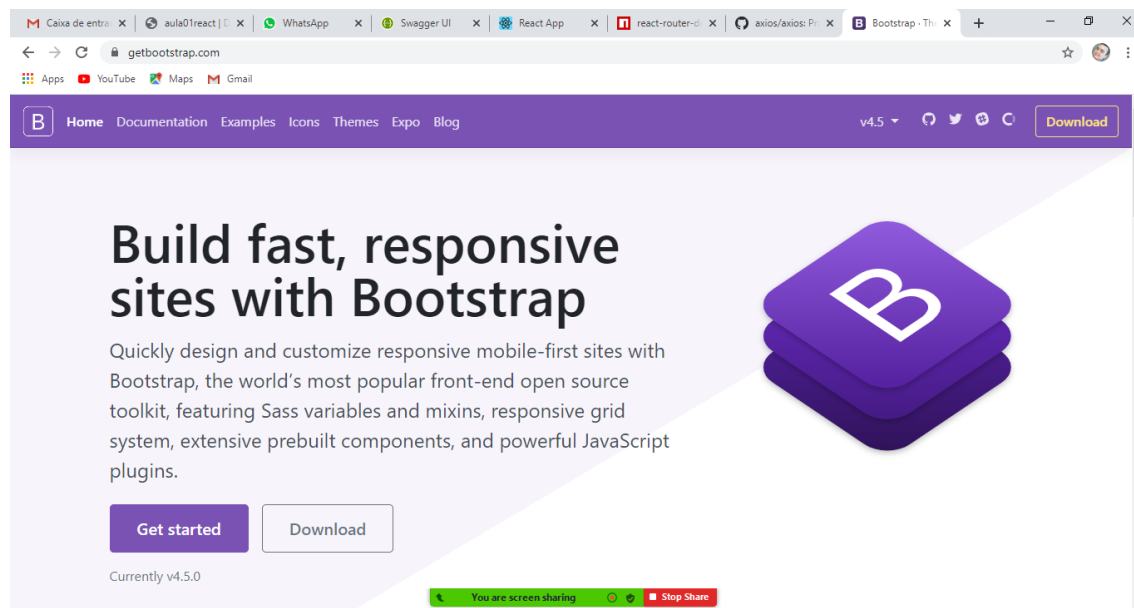
Principal componente do projeto REACT. É o ponto de partida para começarmos o desenvolvimento dos demais componentes da aplicação;

/public/index.html

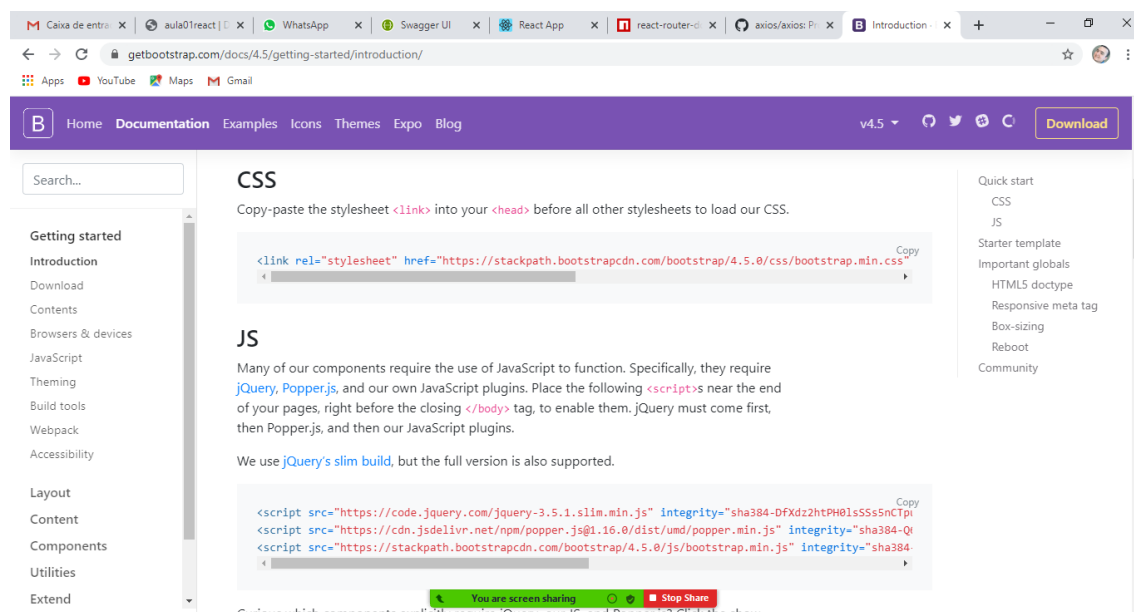
Página inicial do projeto. É nesta página que o componente App foi carregado.

Adicionando o bootstrap:

<https://getbootstrap.com/>



<https://getbootstrap.com/docs/4.5/getting-started/introduction/>



Regra:

- Conteúdo CSS sempre dentro da tag <HEAD>
- Conteúdo JS sempre antes de fechar a tag <BODY>

/public/index.html

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

<head>
  <meta charset="utf-8" />
  <link rel="icon" href="%PUBLIC_URL%/favicon.ico" />
  <meta name="viewport" content="width=device-width, initial-
scale=1" />
  <meta name="theme-color" content="#000000" />
  <meta name="description" content="Web site created using create-
react-app" />
  <link rel="apple-touch-icon" href="%PUBLIC_URL%/logo192.png" />
  <link rel="manifest" href="%PUBLIC_URL%/manifest.json" />
  <title>React App</title>

  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/boot
strap/4.5.0/css/bootstrap.min.css"
    integrity="sha384-
9aIt2nRpC12Uk9gS9baD1411NQApmFC26EwAOH8WgZ15MYXXFfc+NcPb1dKGj7Sk" cros
sorigin="anonymous">

</head>

<body>
  <noscript>You need to enable JavaScript to run this app.</noscript>
  <div id="root"></div>

  <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
    integrity="sha384-
DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
    crossorigin="anonymous"></script>
  <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/
popper.min.js"
    integrity="sha384-
Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
    crossorigin="anonymous"></script>
  <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/b
ootstrap.min.js"
    integrity="sha384-
OgVRvuATP1z7JjHLkuOU7Xw704+h835Lr+6QL9UvYjZE3Ipu6Tp75j7Bh/kR0JKI"
    crossorigin="anonymous"></script>

</body>

</html>
```

Na página **index.html** há uma tag que define o local onde o componente **App** está sendo renderizado:

```
<div id="root"></div>
```

/src/index.js

Arquivo de inicialização (Setup) do projeto REACT.

```
import React from 'react';
import ReactDOM from 'react-dom';
import './index.css';
import App from './App';
import * as serviceWorker from './serviceWorker';

ReactDOM.render(
  <React.StrictMode>
    <App />
  </React.StrictMode>,
  document.getElementById('root')
);

serviceWorker.unregister();
```

/src/App.js

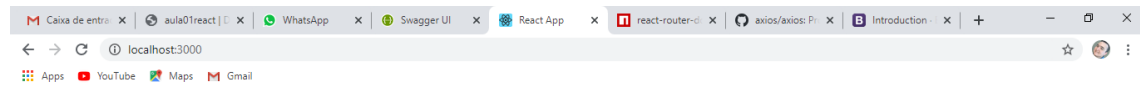
Desenvolvendo o componente App.js

```
//importando bibliotecas base do REACT
import React from 'react';

//criando o componente como uma classe
//REGRA: O nome do componente deve ser igual ao nome do arquivo
class App extends React.Component{

  //todo componente deverá ter, obrigatoriamente, uma função render()
  //função utilizada para definir o conteúdo HTML que o componente irá
  //exibir
  render(){
    return(
      <div>
        <h1>Hello World!</h1>
      </div>
    )
  }
}

//para que possamos importar o componente em outro arquivos
//é necessário exportá-lo
export default App;
```



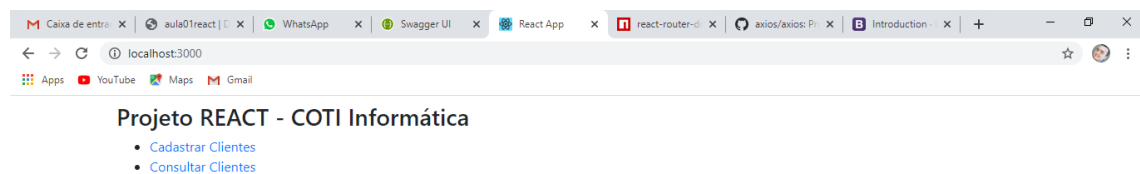
```
//importando bibliotecas base do REACT
import React from 'react';

//criando o componente como uma classe
//REGRA: O nome do componente deve ser igual ao nome do arquivo
class App extends React.Component{

  //todo componente deverá ter, obrigatoriamente, uma função render()
  //função utilizada para definir o conteúdo HTML que o componente irá
  //exibir
  render(){
    return(
      <div className="container mt-2">
        <h3>Projeto REACT - COTI Informática</h3>
        <ul>
          <li><a href="#">Cadastrar Clientes</a></li>
          <li><a href="#">Consultar Clientes</a></li>
        </ul>
        <hr/>
      </div>
    )
  }
}

//para que possamos importar o componente em outro arquivos
//é necessário exporta-lo
export default App;
```

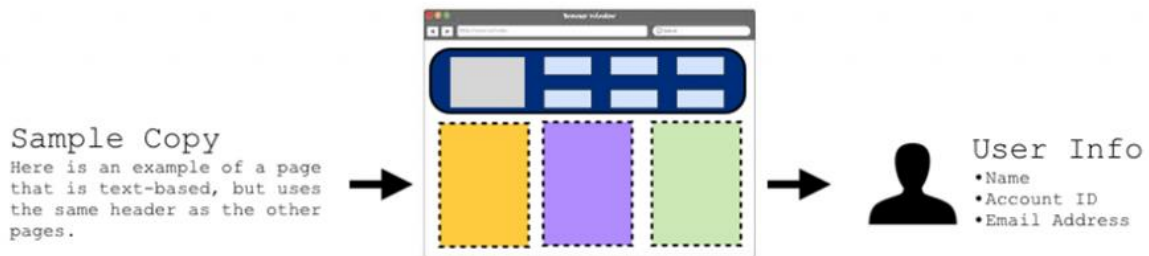
<http://localhost:3000/>



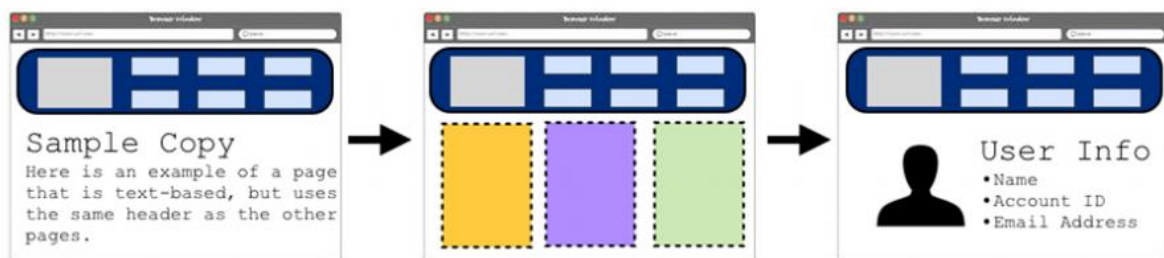
SPA – Single Page Application

Consiste em uma página capaz de renderizar componentes dentro de um container sem recarregar todo o conteúdo da página HTML.

Single Page App:



Regular Website:



Criando os componentes para cadastro e consulta de clientes

/src/components/**CadastroCliente.js**

```
import React from 'react';

class CadastroCliente extends React.Component{
  render(){
    return(
      <div>
        <h4>Cadastro de Clientes</h4>
        <p>Preencha os campos do formulário:</p>
      </div>
    )
  }
}

export default CadastroCliente;
```

/src/components/**ConsultaCliente.js**

```
import React from 'react';

class ConsultaCliente extends React.Component{
  render(){
    return(
      <div>
        <h4>Consulta de Clientes</h4>
        <p>Relação de clientes cadastrados no sistema.</p>
      </div>
    )
  }
}

export default ConsultaCliente;
```

Utilizando o **react-router-dom**

/src/**App.js**

```
//importando bibliotecas base do REACT
import React from 'react';

//importando bibliotecas para desenvolvimento de rotas
import { Route, NavLink, HashRouter } from 'react-router-dom';

//importando os componentes criados no projeto
import CadastroCliente from './components/CadastroCliente';
import ConsultaCliente from './components/ConsultaCliente';

//criando o componente como uma classe
//REGRA: O nome do componente deve ser igual ao nome do arquivo
class App extends React.Component {

  //todo componente deverá ter, obrigatoriamente, uma função render()
  //função utilizada para definir o conteúdo HTML que o componente irá
  //exibir
  render() {
    return (
      <HashRouter>
        <div className="container mt-2">
          <h3>Projeto REACT - COTI Informática</h3>
          <ul>
            <li><NavLink to="/cadastro-cliente">
              Cadastrar Clientes
            </NavLink>

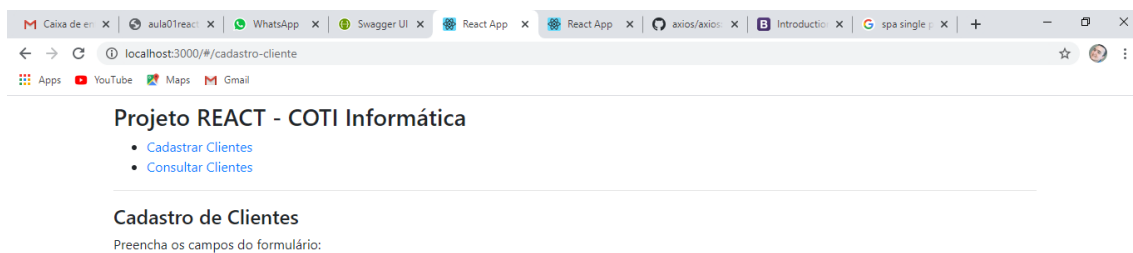
```

```
    </li>
    <li><NavLink to="/consulta-cliente">
      Consultar Clientes
    </NavLink>
  </li>
</ul>
<hr />
<Route path="/cadastro-cliente"
  component={CadastroCliente}/>
<Route path="/consulta-cliente"
  component={ConsultaCliente}/>
</div>
</HashRouter>
)
}
}

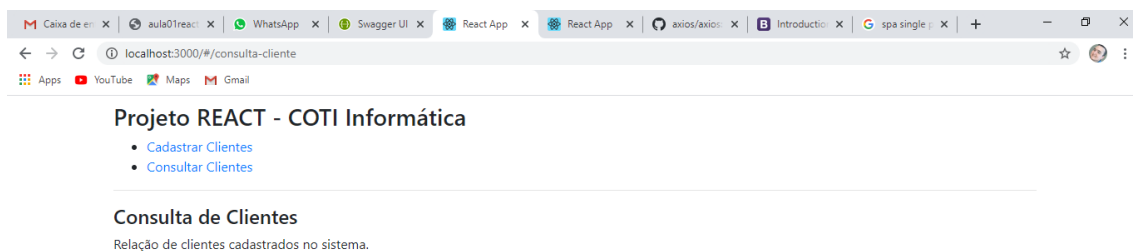
//para que possamos importar o componente em outro arquivos
//é necessário exporta-lo
export default App;
```

Executando:

- <http://localhost:3000/#/cadastro-cliente>



- <http://localhost:3000/#/consulta-cliente>



Desenhando as páginas de cadastro e consulta de clientes:

/src/components/CadastroCliente.js

```
import React from 'react';

class CadastroCliente extends React.Component {
  render() {
    return (
      <div>
        <h4>Cadastro de Clientes</h4>
        <p>Preencha os campos do formulário:</p>

        <div className="row">
          <div className="col-md-4">
            <form>

              <div className="form-group">
                <label>Nome do Cliente:</label>
                <input type="text"
                  className="form-control"
                  placeholder="Nome do Cliente"
                  autoComplete="off" />
              </div>

              <div className="form-group">
                <label>Email do Cliente:</label>
                <input type="email"
                  className="form-control"
                  placeholder="Email do Cliente"
                  autoComplete="off" />
              </div>

              <div className="form-group">
                <input type="submit"
                  value="Cadastrar Cliente"
                  className="btn btn-success
                    btn-sm" />
              </div>

            </form>
          </div>
        </div>
      </div>
    )
  }
}

export default CadastroCliente;
```

/src/components/**ConsultaCliente.js**

```
import React from 'react';

class ConsultaCliente extends React.Component {
  render() {
    return (
      <div>
        <h4>Consulta de Clientes</h4>
        <p>Relação de clientes cadastrados no sistema.</p>

        <div className="row">
          <div className="col-md-12">
            <div className="table-responsive">

              <table className="table table-
bordered table-condensed table-striped table-hover">
                <thead>
                  <tr>
                    <th>Nome do Cliente</th>
                    <th>Email do Cliente</th>
                    <th>Data de Cadastro</th>
                    <th>Operações</th>
                  </tr>
                </thead>
                <tbody>
                  <tr>
                    <td> - </td>
                    <td> - </td>
                    <td> - </td>
                    <td>
                      <button className="btn btn
-sm btn-primary mr-1">
                        Atualizar
                      </button>
                      <button className="btn btn
-sm btn-danger">
                        Excluir
                      </button>
                    </td>
                  </tr>
                </tbody>
                <tfoot>
                  <tr>
                    <td colspan="4">
                      Quantidade de registros: 0
                    </td>
                  </tr>
                </tfoot>
              </table>
            </div>
          </div>
        </div>
      </div>
    );
  }
}
```



```

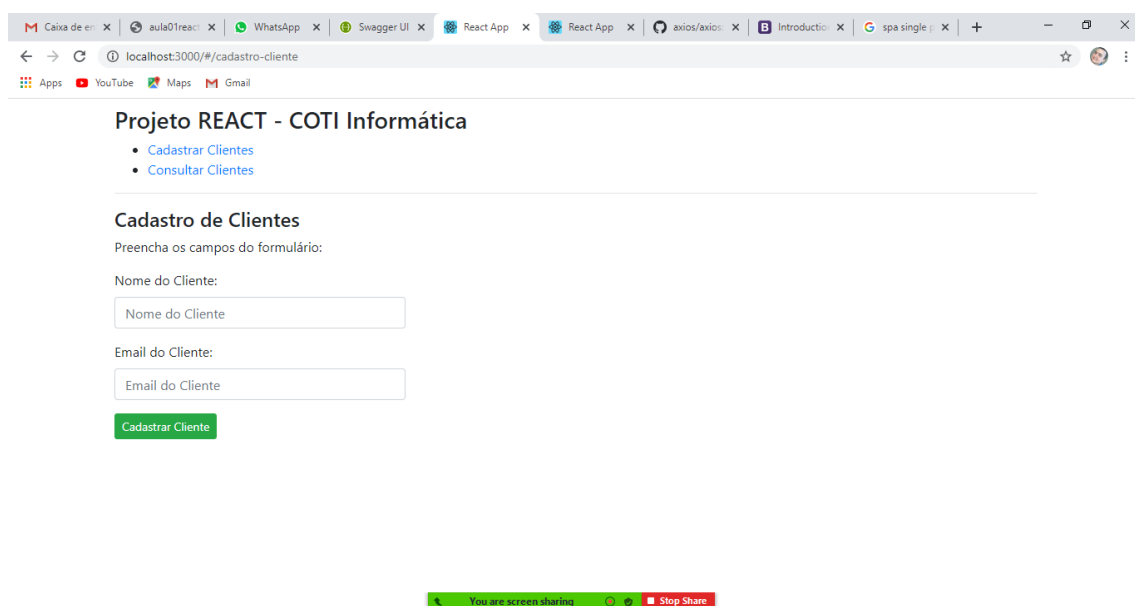
        </div>
      </div>

    </div>
  )
}
}

export default ConsultaCliente;

```

<http://localhost:3000/#/cadastro-cliente>



Projeto REACT - COTI Informática

- Cadastrar Clientes
- Consultar Clientes

Cadastro de Clientes

Preencha os campos do formulário:

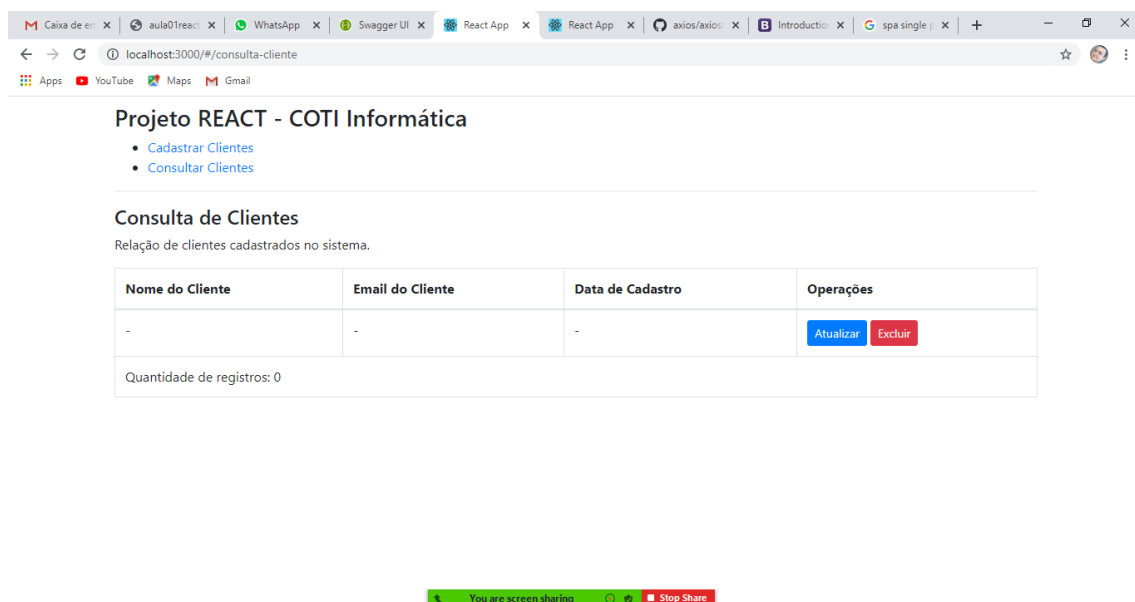
Nome do Cliente:

Email do Cliente:

[Cadastrar Cliente](#)

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<http://localhost:3000/#/consulta-cliente>



Projeto REACT - COTI Informática

- Cadastrar Clientes
- Consultar Clientes

Consulta de Clientes

Relação de clientes cadastrados no sistema.

Nome do Cliente	Email do Cliente	Data de Cadastro	Operações
-	-	-	Atualizar Excluir

Quantidade de registros: 0

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