

Module 1: Introduction to Web Development Architecture and React

Demo Document 1

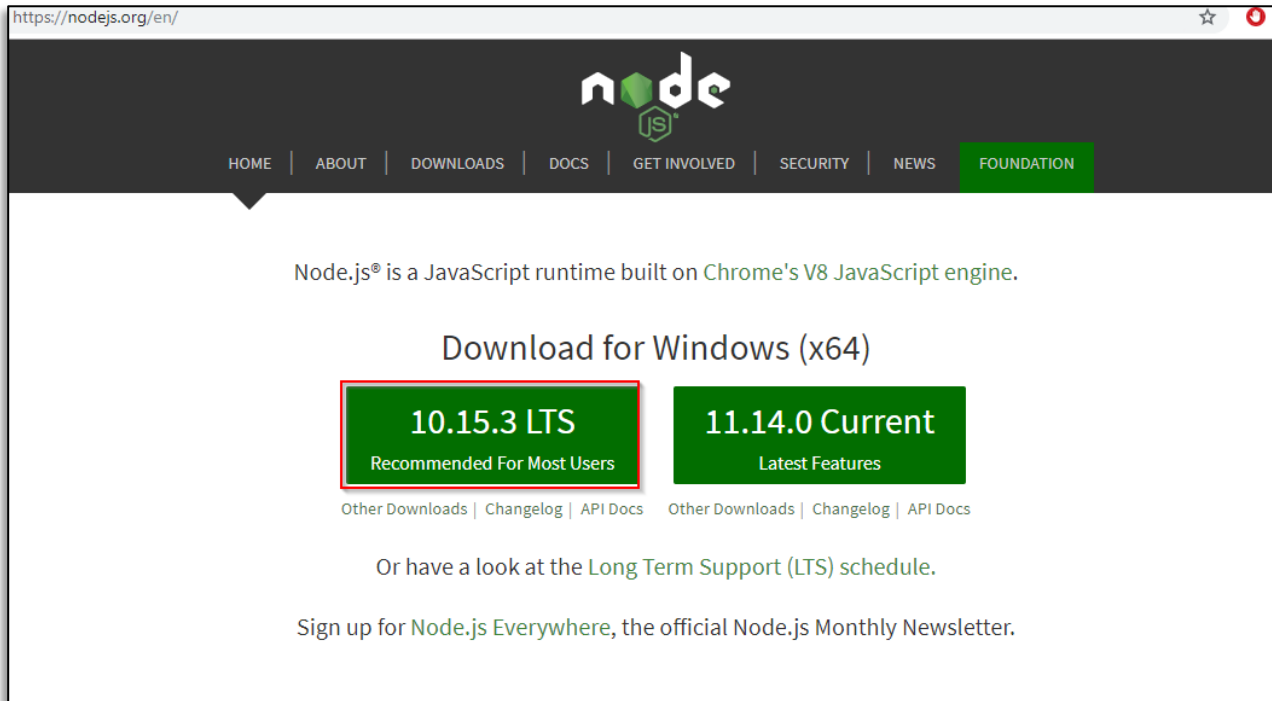
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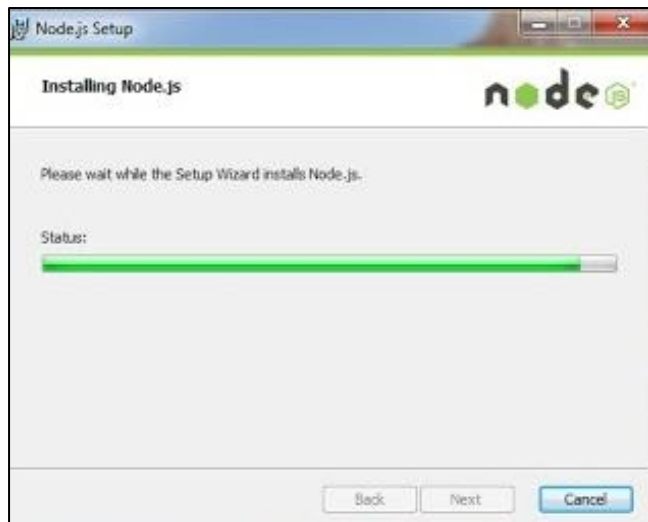
Demo: First React Application

Step 1: Open Visual Studio Code and select the react project 1 folder

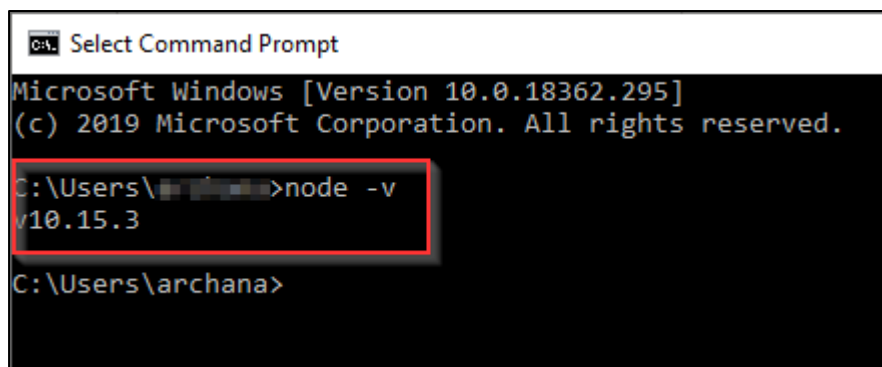


Step 2: Start the Installation Wizard

- Double click on the Installation Wizard you have just downloaded (Usually in the Downloads folder)
- Once the Installation Wizard Starts, click on Next
- Go through the Node.js License and Click on the "I Agree" checkbox. Then Click Next
- Select the folder path to Install Node.js. The default is C:\Program Files\Node.js (This is recommended)
- Click Next to Proceed
- Then, Click Install to proceed
- Wait while the Installation completes



Step 3: Open your command prompt and check the successful installation of Node.js



React

Step 4: Create a React Directory using below command-

```
mkdir reactproject
```

Step 5: Check the Directory using the command:

```
dir
```

```
C:\Users\archana>dir
Volume in drive C has no label.
Volume Serial Number is 600B-8D0E

Directory of C:\Users\archana

09-09-2019  17:06    <DIR>          .
09-09-2019  17:06    <DIR>          ..
13-08-2018  09:57    <DIR>          .aws
23-05-2019  11:08         1,458 .bash_history
22-04-2019  19:02    <DIR>          .config
17-07-2018  19:16    <DIR>          .dbeaver-drivers
17-07-2018  19:01    <DIR>          .dbeaver4
26-08-2019  22:26       55,877 .dbshell
19-09-2018  18:43    <DIR>          .eclipse
12-02-2019  16:41          94 .gitconfig
30-07-2019  23:19    <DIR>          .idlerc
25-09-2018  18:43           0 .mongorc.js
28-05-2019  12:43       280 .node_repl_history
17-07-2018  19:01    <DIR>          .oracle_jre_usage
19-09-2018  14:23    <DIR>          .p2
06-05-2019  16:01    <DIR>          .pm2
09-08-2018  11:45    <DIR>          .ssh
10-10-2018  13:50    <DIR>          .VirtualBox
20-09-2018  18:24    <DIR>          .vscode
03-09-2019  08:14    <DIR>          3D Objects
03-09-2019  08:14    <DIR>          Contacts
03-09-2019  08:14    <DIR>          Desktop
03-09-2019  08:14    <DIR>          Documents
09-09-2019  17:06    <DIR>          Downloads
29-08-2018  18:49    <DIR>          eclipse
03-09-2019  08:14    <DIR>          Favorites
04-12-2018  12:50         16 hi.txt
03-09-2019  08:14    <DIR>          Links
03-09-2019  08:14    <DIR>          Music
01-09-2019  19:42    <DIR>          OneDrive
07-03-2019  16:13    <DIR>          opsworks-php-demo
04-09-2019  16:52    <DIR>          Pictures
12-02-2019  16:42    <DIR>          pipelinerepo
09-09-2019  17:06    <DIR>          reactproject
04-12-2018  12:52         16 README.md
03-09-2019  11:07       1,026 S3_lambda_Email.txt
```

Step 6: Install Create-React-App module which makes it very easy to create and deploy React into projects with a single command.

```
C:\Users\archana>npm install -g create-react-app  
[.....] / rollbackFailedOptional: verb npm-session 6a80c48e59f672c9
```

Create-React-App is installed in the following

location: C:\Users\<username>\AppData\Roaming\npm\node_modules\create-react-app\

```
C:\Users\archana>npm install -g create-react-app  
C:\Users\archana\AppData\Roaming\npm\create-react-app -> C:\Users\archana\AppData\Roaming\npm\node_modules\create-react-app\index.js  
+ create-react-app@3.1.1  
updated 2 packages in 29.776s
```

Once Create-React-App is installed, we can use it to create a project folder and install React and dependencies automatically.

Step 7: Create a New project and start React application into it. (using create-react-app <application_name>)

```
C:\Users\archana>create-react-app reactproject1  
  
Creating a new React app in C:\Users\archana\reactproject1.  
  
Installing packages. This might take a couple of minutes.  
Installing react, react-dom, and react-scripts...  
[.....] | extract:postcss-merge-rules: sill extract postcss-merge-rules@^4.0.3 extracted
```

By default, packages: **react**, **react-dom**, and **react-scripts** are included in it.

```
Creating a new React app in C:\Users\archana\reactproject1.

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

> core-js@2.6.9 postinstall C:\Users\archana\reactproject1\node_modules\babel-runtime\node_modules\core-js
> node scripts/postinstall || echo "ignore"

> core-js@3.1.4 postinstall C:\Users\archana\reactproject1\node_modules\core-js
> node scripts/postinstall || echo "ignore"

+ react@16.9.0
+ react-scripts@3.1.1
+ react-dom@16.9.0
added 1444 packages from 685 contributors and audited 905233 packages in 268.117s
found 0 vulnerabilities

Success! Created reactproject1 at C:\Users\archana\reactproject1
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:
```

Step 8: Change the path to current folder and using the below command:

```
C:\Users\archana> cd reactproject1

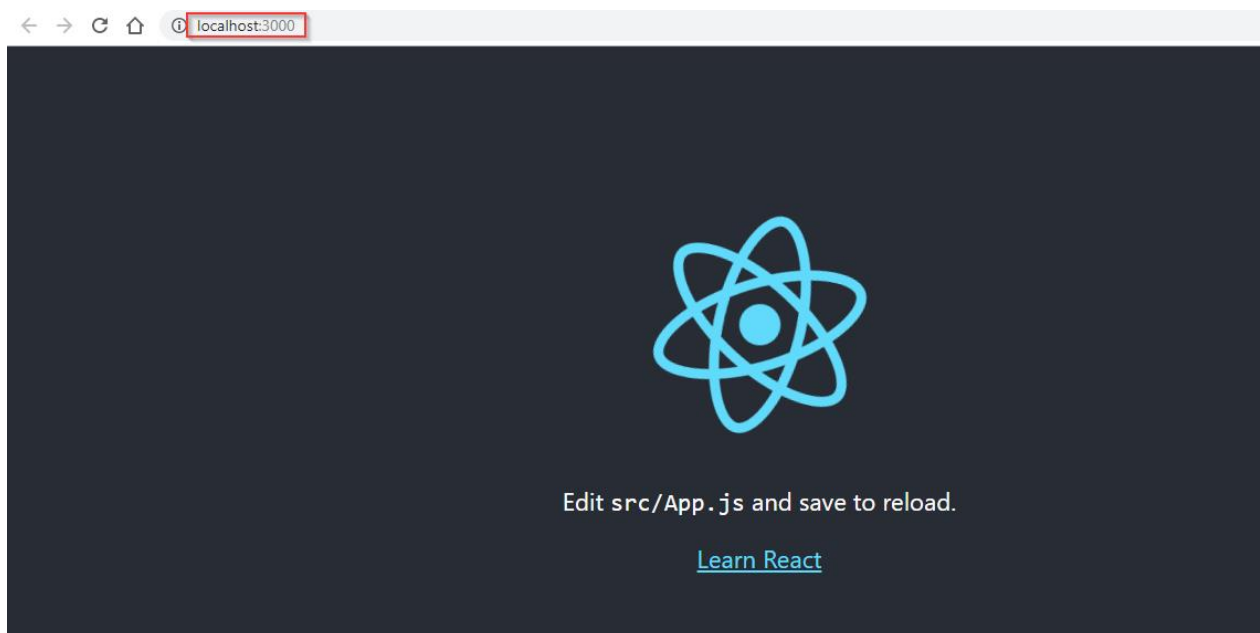
C:\Users\archana\reactproject1>
```

Step 9: Run the application project using **npm start**

```
C:\Users\archana\reactproject1> npm start

> reactproject1@0.1.0 start C:\Users\archana\reactproject1
> react-scripts start
```

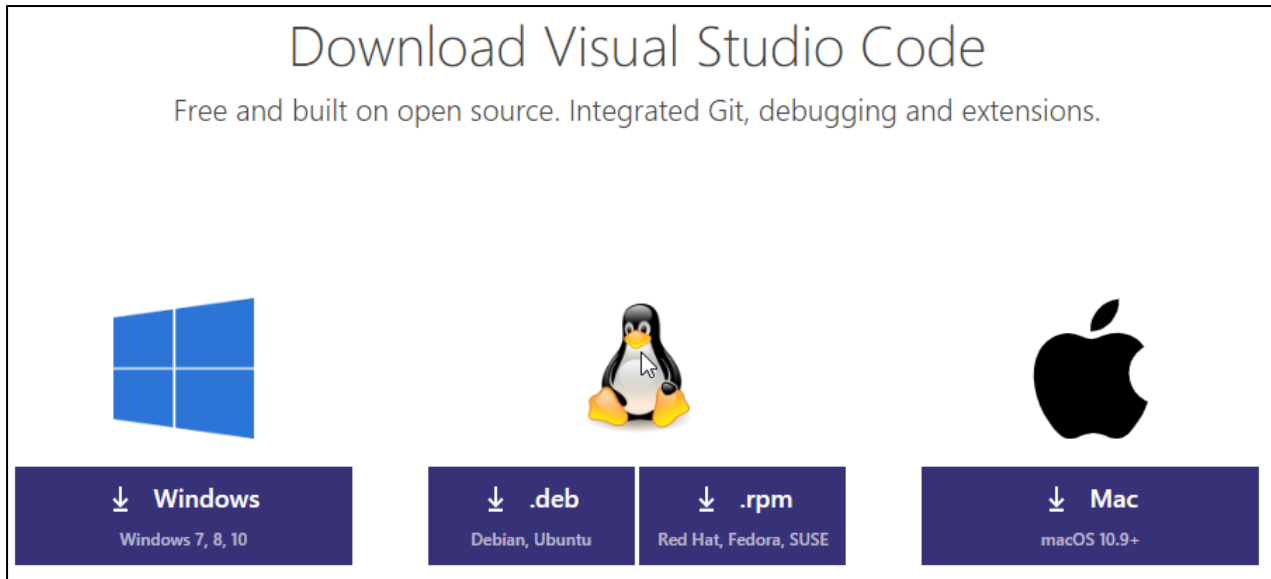
Step 10: Check the output it will directly navigate you to local host 3000



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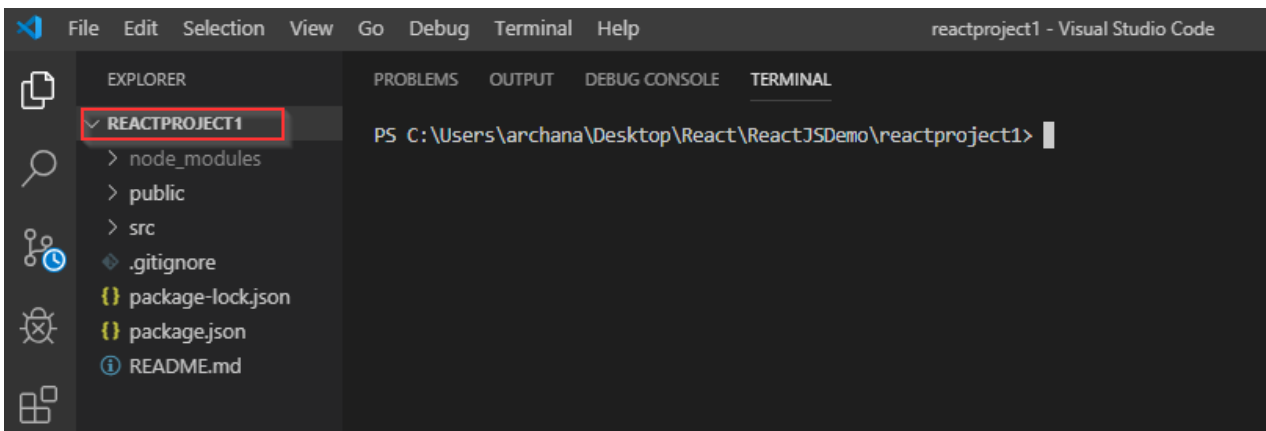
Visual Studio Code

- Download and Install **visual studio code** from: <https://code.visualstudio.com/download>

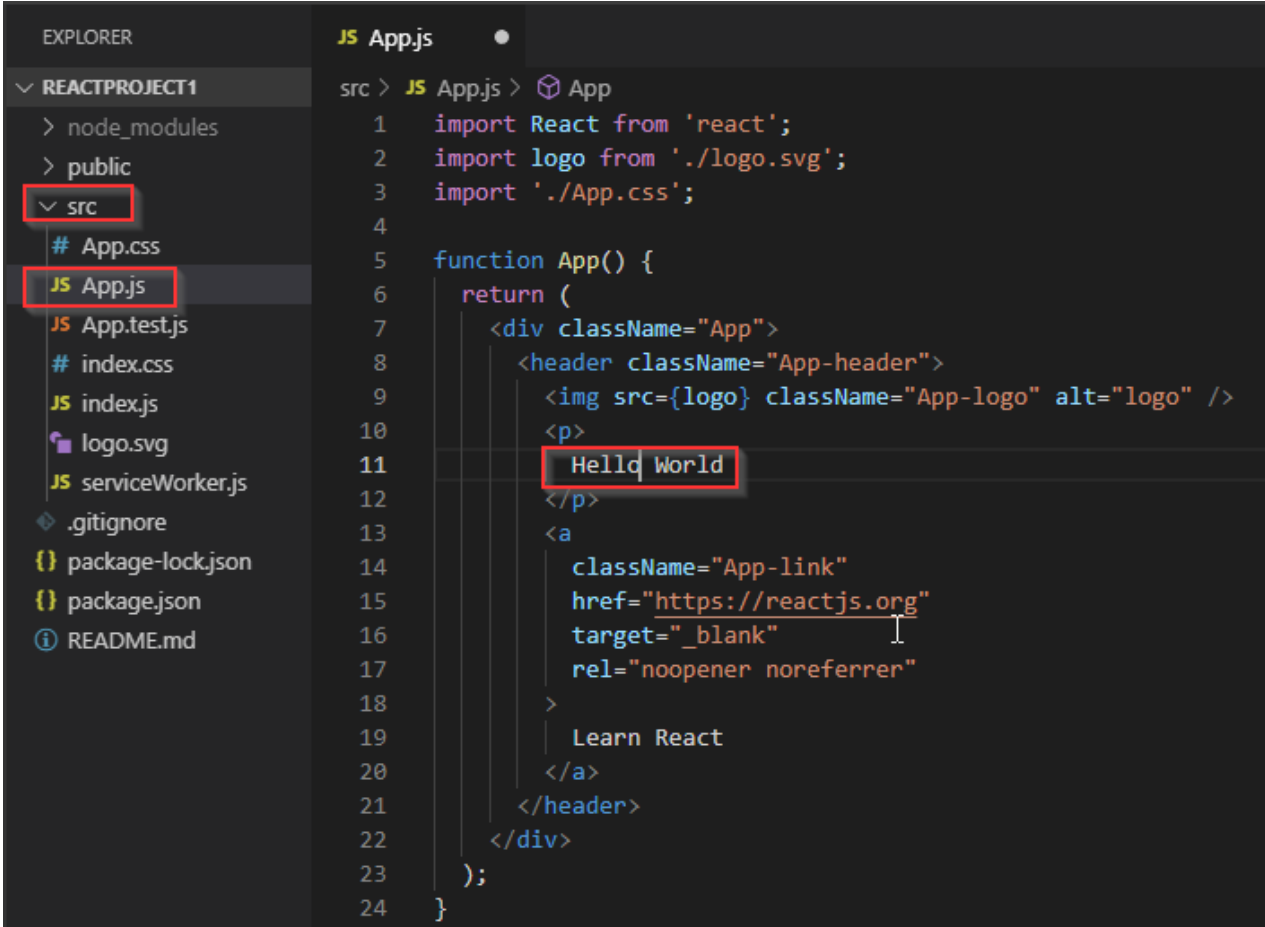


First React Application:

Step 11: Open visual studio code and select the folder reactproject1



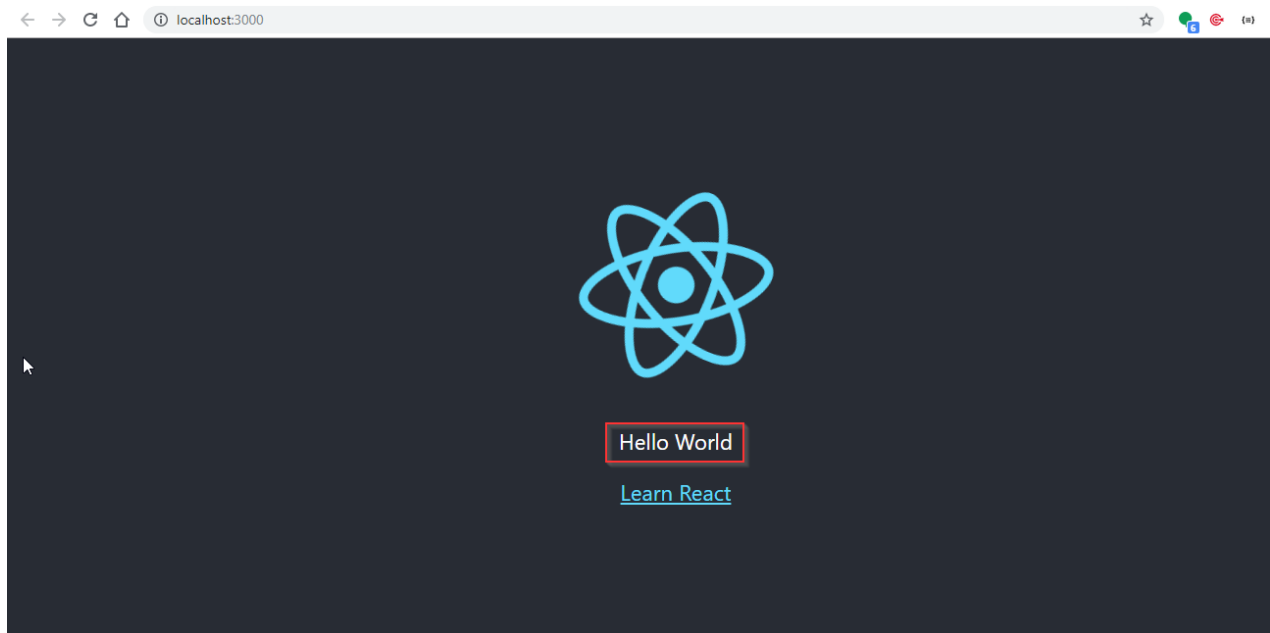
Step 12: Click on “src” and select the app.js file and edit the text in the code to “Hello World”



The screenshot shows the Visual Studio Code interface. On the left, the 'EXPLORER' sidebar displays the file structure of 'REACTPROJECT1'. The 'src' folder is expanded, and 'App.js' is selected. The main editor area shows the content of 'App.js', which includes imports for React, a logo, and App.css, followed by a function App() that returns a JSX element. The text 'Hello World' is highlighted with a red box in the JSX element.

```
1 import React from 'react';
2 import logo from './logo.svg';
3 import './App.css';
4
5 function App() {
6   return (
7     <div className="App">
8       <header className="App-header">
9         <img src={logo} className="App-logo" alt="logo" />
10        <p>
11          Hello World
12        </p>
13        <a
14          className="App-link"
15          href="https://reactjs.org"
16          target="_blank"
17          rel="noopener noreferrer"
18        >
19          Learn React
20        </a>
21      </header>
22    </div>
23  );
24 }
```

Step 13: Open the terminal and start the application using “npm start”, it will automatically navigate you to localhost 3000



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