

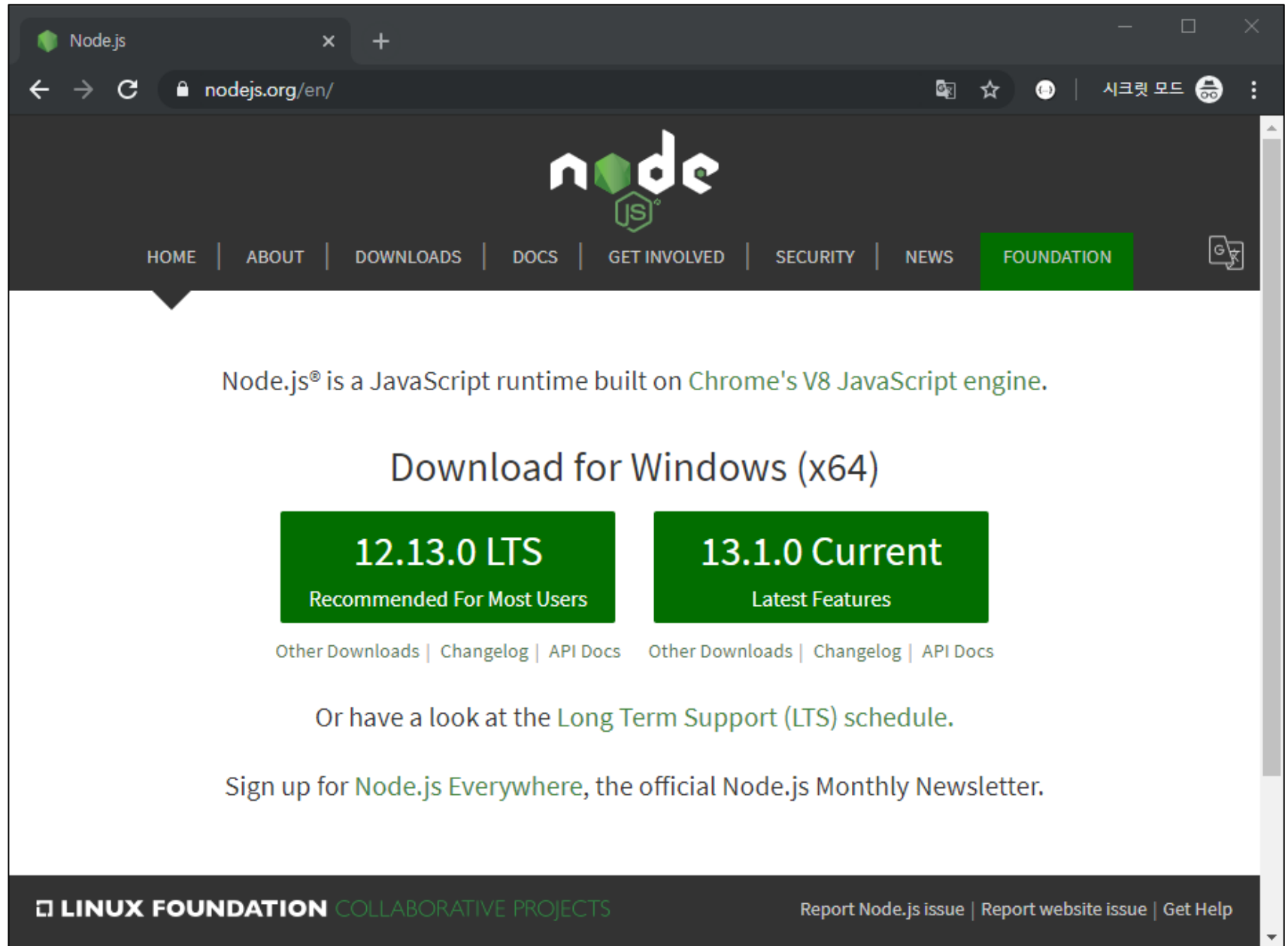
리액트

1. 자바스크립트 라이브러리
2. UI를 만들기 위해 사용
3. 페이스북과 개별 개발자 및 기업들 공동체에 의해 유지보수
4. 싱글페이지 애플리케이션이나 모바일 애플리케이션 개발에 사용될 수 있음

환경설정

1. 리액트 개발을 위한 프로그램 설치
2. 프로젝트 실행
3. 프로젝트 구성 파일
4. 프로젝트 빌드

■ Node.js (NPM)



The screenshot shows the Node.js website homepage in a web browser. The browser's address bar displays 'nodejs.org/en/'. The website has a dark header with the Node.js logo and a navigation menu including 'HOME', 'ABOUT', 'DOWNLOADS', 'DOCS', 'GET INVOLVED', 'SECURITY', 'NEWS', and 'FOUNDATION' (which is highlighted in green). Below the header, a white section contains the text 'Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.' followed by the heading 'Download for Windows (x64)'. Two green buttons are presented: '12.13.0 LTS' with the subtext 'Recommended For Most Users', and '13.1.0 Current' with the subtext 'Latest Features'. Below these buttons are links for 'Other Downloads', 'Changelog', and 'API Docs'. Further down, it says 'Or have a look at the Long Term Support (LTS) schedule.' and 'Sign up for Node.js Everywhere, the official Node.js Monthly Newsletter.' The footer is dark and features the 'LINUX FOUNDATION COLLABORATIVE PROJECTS' logo on the left and links to 'Report Node.js issue', 'Report website issue', and 'Get Help' on the right.

Node.js

nodejs.org/en/

node

HOME | ABOUT | DOWNLOADS | DOCS | GET INVOLVED | SECURITY | NEWS | FOUNDATION

Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.

Download for Windows (x64)

12.13.0 LTS
Recommended For Most Users

13.1.0 Current
Latest Features

Other Downloads | Changelog | API Docs Other Downloads | Changelog | API Docs

Or have a look at the Long Term Support (LTS) schedule.

Sign up for Node.js Everywhere, the official Node.js Monthly Newsletter.

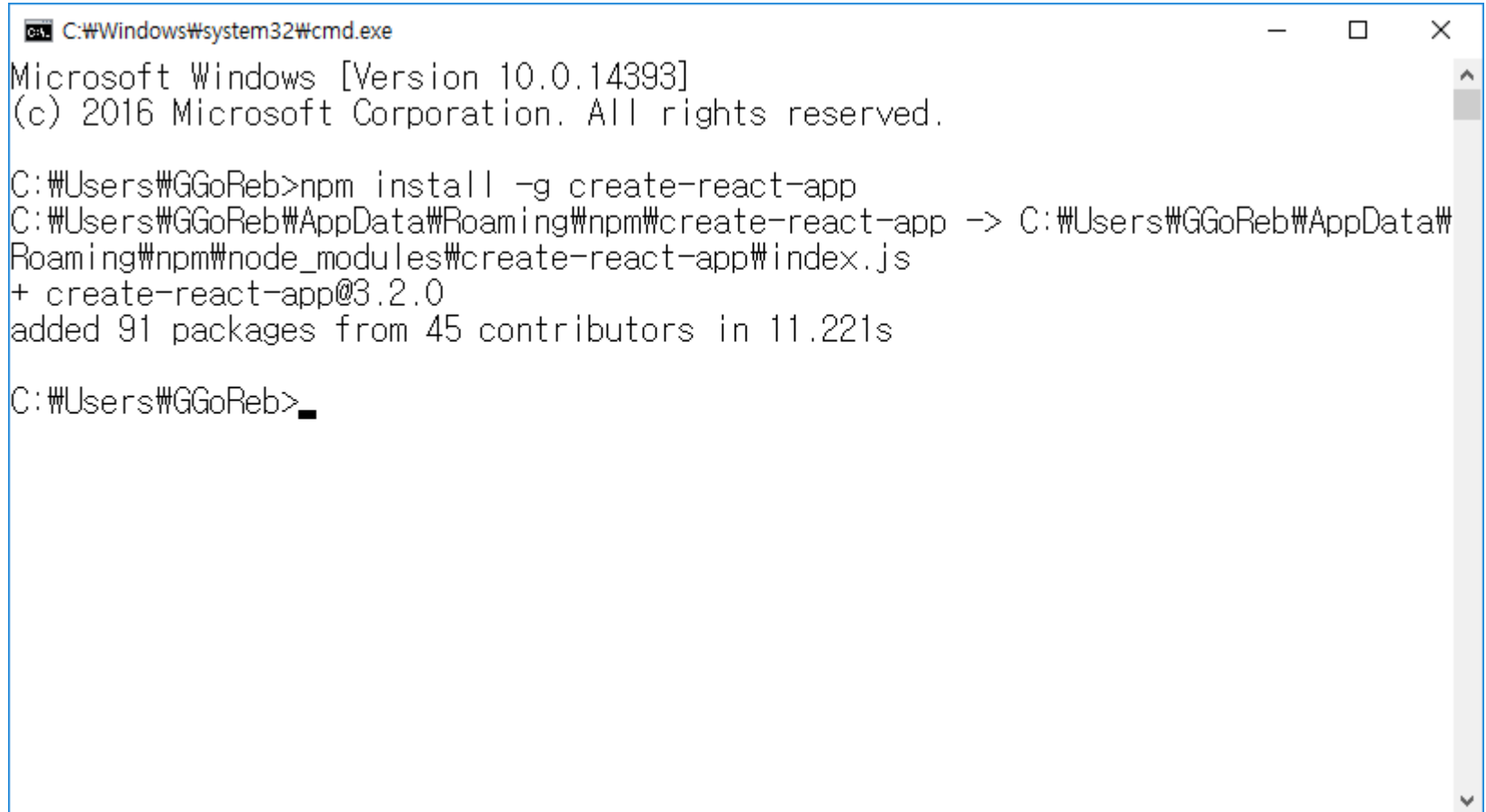
LINUX FOUNDATION COLLABORATIVE PROJECTS

Report Node.js issue | Report website issue | Get Help

■ React

● create-react-app 설치

- npm install -g create-react-app



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Users\GGoReb>npm install -g create-react-app
C:\Users\GGoReb\AppData\Roaming\npm\create-react-app -> C:\Users\GGoReb\AppData\Roaming\npm\node_modules\create-react-app\index.js
+ create-react-app@3.2.0
added 91 packages from 45 contributors in 11.221s


C:\Users\GGoReb>
```

React 참고 문서 : <https://reactjs.org/docs>

■ React

● 프로젝트 생성

- create-react-app .



```
C:\Users\GGoReb>cd /
C:\>mkdir react
C:\>cd react
C:\react>mkdir react-app
C:\react>cd react-app
C:\react\react-app>create-react-app .
Creating a new React app in C:\react\react-app.
Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts...
[...]
```

■ VS Code

● <https://code.visualstudio.com/>

Visual Studio Code - Code Editor

code.visualstudio.com

This site uses cookies for analytics, personalized content and ads. By continuing to browse this site, you agree to this use. [Learn more](#)

Visual Studio Code Docs Updates Blog API Extensions FAQ

Version 1.39 is now available! Read about the new features and fixes from September.

Code editing. Redefined.

Free. Built on open source. Runs everywhere.

Download for Windows
Stable Build

Other platforms and Insiders Edition

By using VS Code, you agree to its [license and privacy statement](#).

EXTENSIONS MARKETPLACE

- @sortinstalls
- Python 2019.6.24021 4.5.0 4.5.0
- Linting, Debugging (multi-threaded) ... Microsoft
- GitLens — Git superpowers 0.8.5 23.1M 5
- Supercharge the Git capabilities built into VS Code. Eric Amadio
- C/C++ 0.24.0 23M 3.5
- C/C++ IntelliSense, debugging, and more. Microsoft
- ESLint 1.8.0 21.9M 4.5
- Integrates ESLint JavaScript code into VS Code. Dirk Bäumer
- Debugger for Chrome 4.11.6 20.6M 4
- Debug your JavaScript code in the Chrome DevTools. Microsoft
- Language Support for Java 0.47.0 18.7M 4.5
- Java Linting, IntelliSense, formatting, and more. Red Hat
- vscode-icons 8.8.0 17.2M 5
- Icons for Visual Studio Code. VSCODE Icons Team
- Vetur 0.21.1 17M 4.5
- Vue tooling for VS Code. Pine Wu
- CF 1.21.0 15.6M 4
- CF for Visual Studio Code (powered by Microsoft)

serviceWorker.js - create-react-app - Visual Studio Code - Insiders

```
39 // register
40 checkValidServiceWorker(swUrl, config);
41 // Add some additional logging to localhost, pointing developers to service
42 // worker/PWA documentation.
43 navigator.serviceWorker.ready.then(() => {
44   console.log('This site is registered as a service worker. This means that
45     this browser supports PWA.
46     productSub
47   });
48   // Is not registered
49   registerServiceWorker(swUrl, config);
50   // Is not
51   registerServiceWorker(swUrl, config);
52   // Is not
53   registerServiceWorker(swUrl, config);
54   // Is not
55   registerServiceWorker(swUrl, config);
56   // Is not
57   registerServiceWorker(swUrl, config);
58   // Is not
59   registerServiceWorker(swUrl, config);
60   // Is not
61   registerServiceWorker(swUrl, config);
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90   // Is not
91   registerServiceWorker(swUrl, config);
92   // Is not
93   registerServiceWorker(swUrl, config);
94   // Is not
95   registerServiceWorker(swUrl, config);
96   // Is not
97   registerServiceWorker(swUrl, config);
98   // Is not
99   registerServiceWorker(swUrl, config);
100  // Is not
```

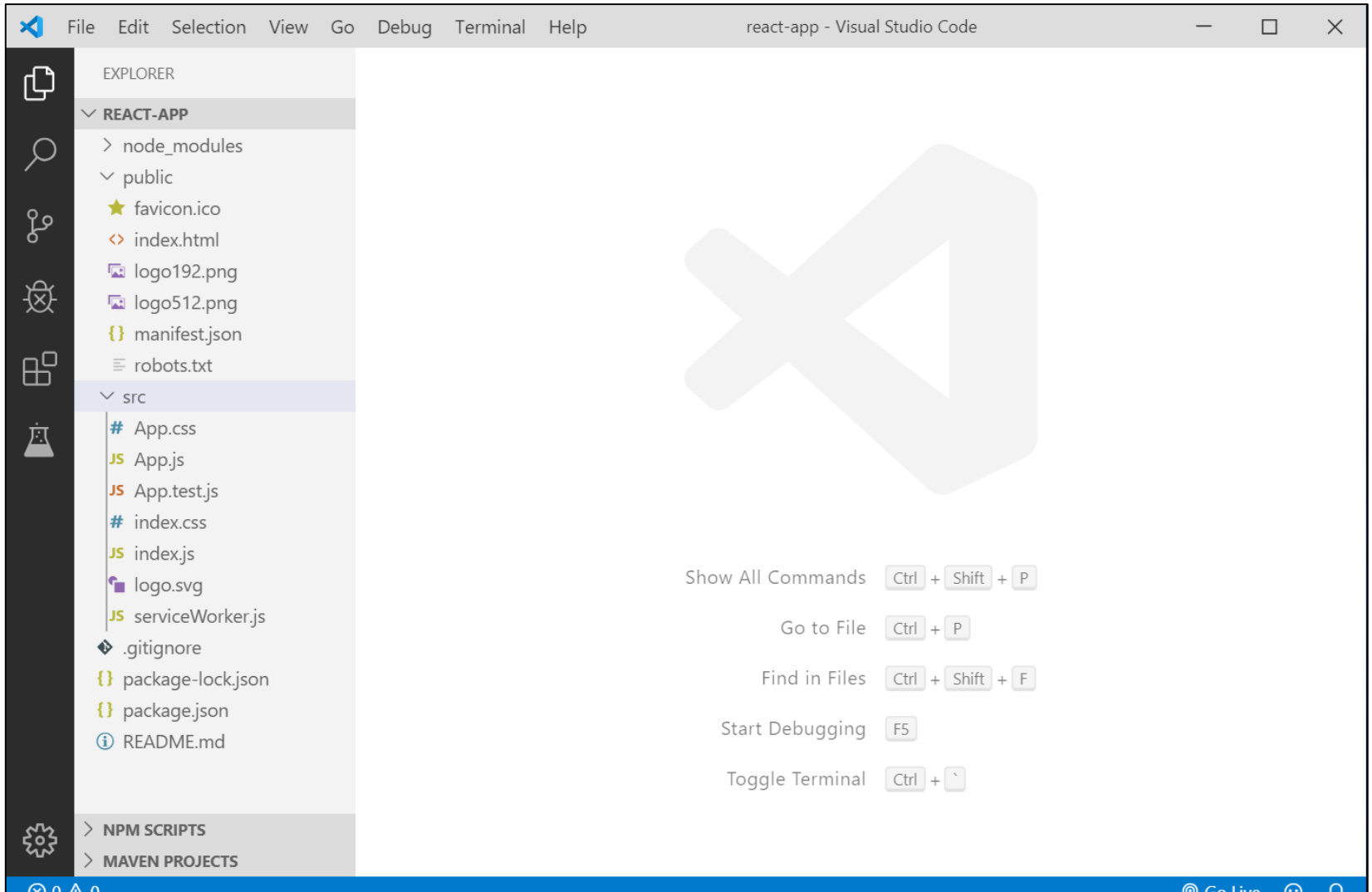
Local: http://localhost:3000/
On Your Network: http://10.211.55.3:3000/

Note that the development build is not optimized.

IntelliSense Debugging Built-in Git Extensions

■ 프로젝트

● VS Code - Open Folder → C:/react/react-app



■ 프로젝트 구동

- Ctrl + J (Terminal) ➔ npm (run) start

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  1: node  +  [ ]  [ ]  ^  X

Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

PS C:\react\react-app> npm run start

> react-app@0.1.0 start C:\react\react-app
> react-scripts start

[ ]
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  1: node  +  [ ]  [ ]  ^  X

Compiled successfully!

You can now view react-app in the browser.

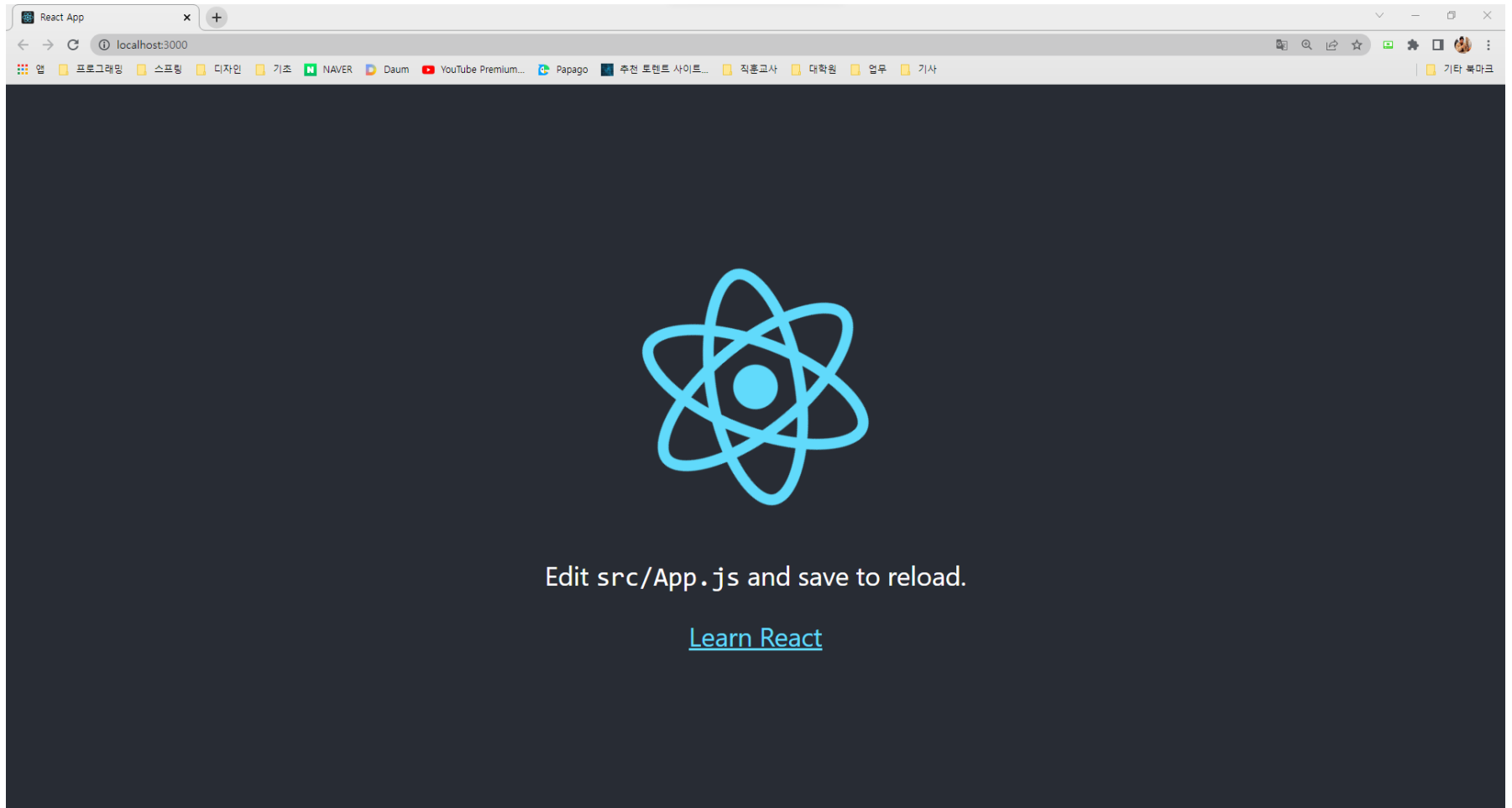
  Local:            http://localhost:3000/
  On Your Network:  http://192.168.56.1:3000/

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

[ ]
```


■ 프로젝트 구동

● 브라우저 ➔ <http://localhost:3000>



■ 프로젝트 구성 파일

● public/index.html

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

● src/index.js

```
const root =
ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <App />
  </React.StrictMode>
);
```

- 위 코드에 의해 index.html의 id가 root인 요소에 생성

```
<!doctype html>
<html lang="en">
  <head>...</head>
  <body>
    <noscript>You need to enable
      JavaScript to run this app.
    </noscript>
    ... <div id="root"> == $0
      <div class="App">
        <header class="App-header">...
        </header>
      </div>
    </div>
```

■ 프로젝트 구성 파일

● StrictMode

- StrictMode는 애플리케이션 내의 **잠재적인 문제를 알아내기 위한 도구**
- **Fragment와 같이 UI를 렌더링하지 않으며**, 자손들에 대한 추가적인 검사와 경고를 활성화

■ 프로젝트 구성 파일

● src/App.js

- function 형식을 class 형식의 코드로 변경

```
import React, {Component} from 'react';
import './App.css';

class App extends Component {
  render() {
    return (
      <div className="App">
        </div>
    );
  }
}

export default App;
```

■ 프로젝트 구성 파일

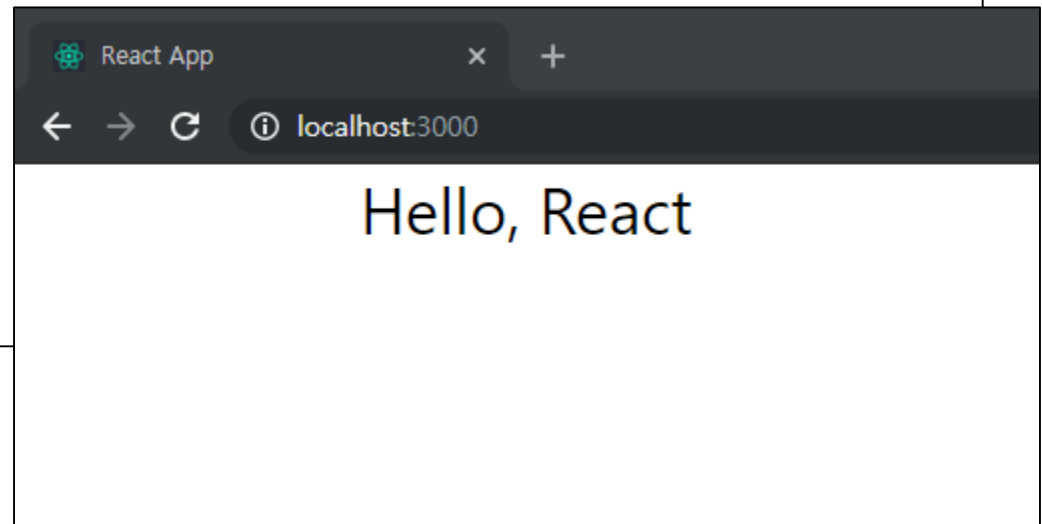
● src/App.js

- 출력 내용 변경 확인

```
import React, {Component} from 'react';
import './App.css';

class App extends Component {
  render() {
    return (
      <div className="App">
        Hello, React
      </div>
    );
  }
}

export default App;
```



■ 프로젝트 구성 파일

- src/index.css (프로젝트 전체 적용 CSS)

```
body {  
  margin: 0;  
}
```

- src/App.css (App 모듈 내에서만 적용되는 CSS)

```
.App {  
  text-align: center;  
}
```

■ 프로젝트 빌드

- 서버로 배포하여 서비스를 적용하기 위한 작업
- 빌드 후 build 폴더에 관련 파일이 직렬화된 형태로 생성
- Ctrl + J (Terminal) ➔ npm run build

The image shows a VS Code interface with two terminal windows and an Explorer view. The top terminal window, titled '2: node', shows the execution of 'npm run build' in a Windows PowerShell environment. The output indicates that an optimized production build is being created. The bottom terminal window, titled '2: powershell', shows the completion of the build and provides instructions for serving the files using 'serve'. The Explorer view on the right shows the 'build' folder containing various static assets and JavaScript files.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL 2: node
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

PS C:\react\react-app> npm run build

> react-app@0.1.0 build C:\react\react-app
> react-scripts build

Creating an optimized production build...
█
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL 2: powershell

```
The build folder is ready to be deployed.
You may serve it with a static server:

  npm install -g serve
  serve -s build

Find out more about deployment here:

  https://bit.ly/CRA-deploy

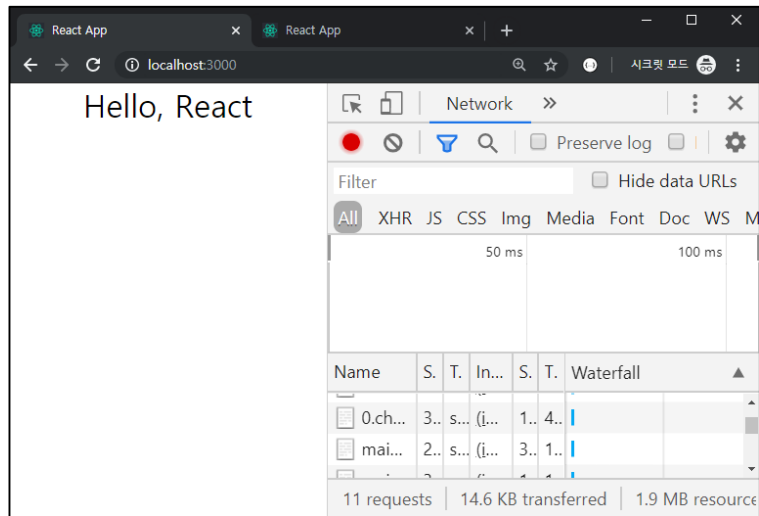
PS C:\react\react-app>
```

REACT-APP

- build
 - static
 - asset-manifest.json
 - favicon.ico
 - index.html
 - logo192.png
 - logo512.png
 - manifest.json
 - precache-manifest.9bca0
 - robots.txt
 - service-worker.js

■ 프로젝트 빌드

● 빌드 전 데이터 용량



● 빌드 후 데이터 용량

