

# What is React?

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Open source library for building user interfaces

Not a framework

Focus on UI

# Why learn React?

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Created and maintained by Facebook

More than 100k stars on Github

Huge community

In demand skillset

# React Intro...

Author:  
**Jordan  
Walke**

First Release  
**May 29, 2013**  
8 years ago

Current Release  
**16.12.0**

# React intro...

React (also known as React.js or ReactJS) is a JavaScript library for building user interfaces. It is maintained by Facebook and it play with virtual DOM



React

This is very fast due to virtual-DOM that's why react is more popular to the other Framework and library

# React intro...

React has component based Architecture for application development.



React

We can use it with NPM and without npm (cnd etc) but 90 % developer use NPM with it so we learn it with NPM package

# What we Learn in this react tutorial series

Basic

Components

Life Cycle

Forms

API call

Auth

Redux

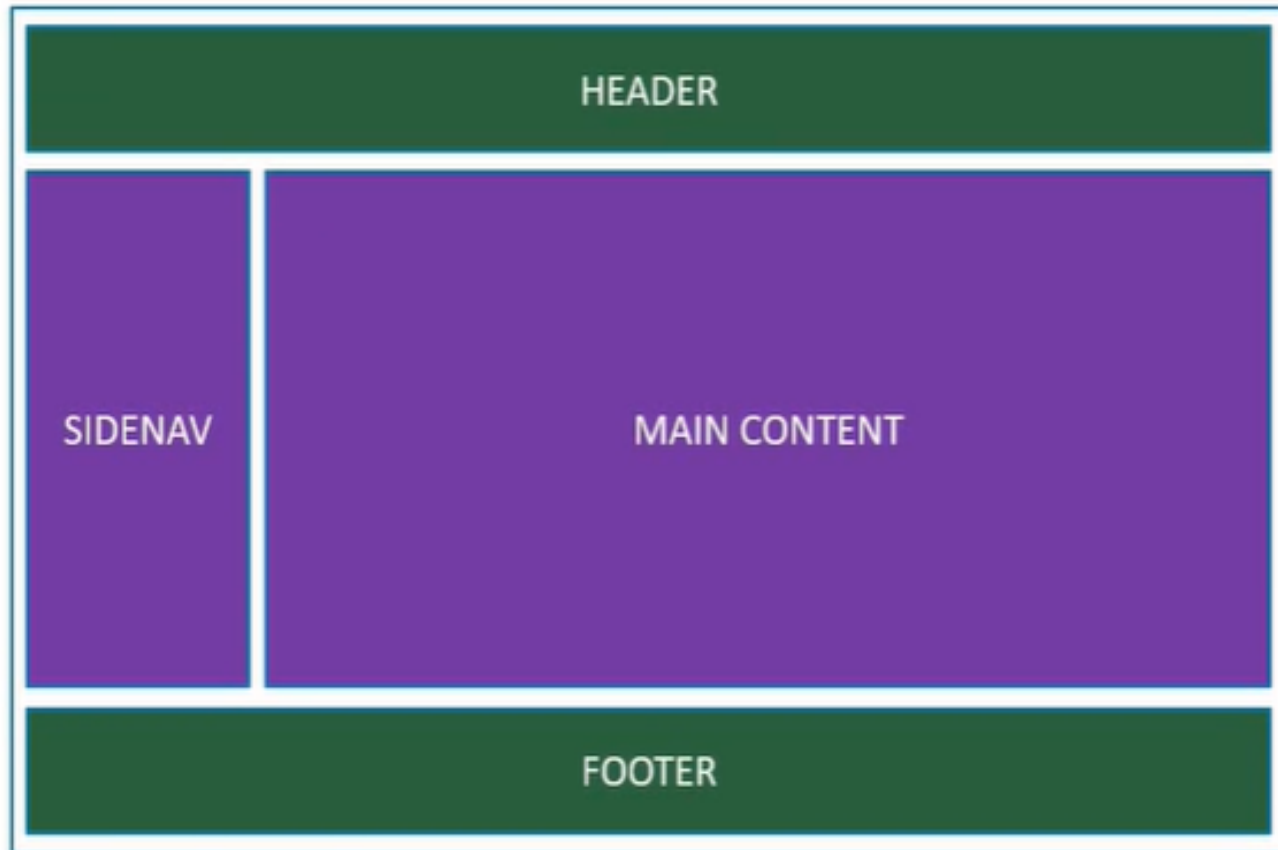
Project

Interviews



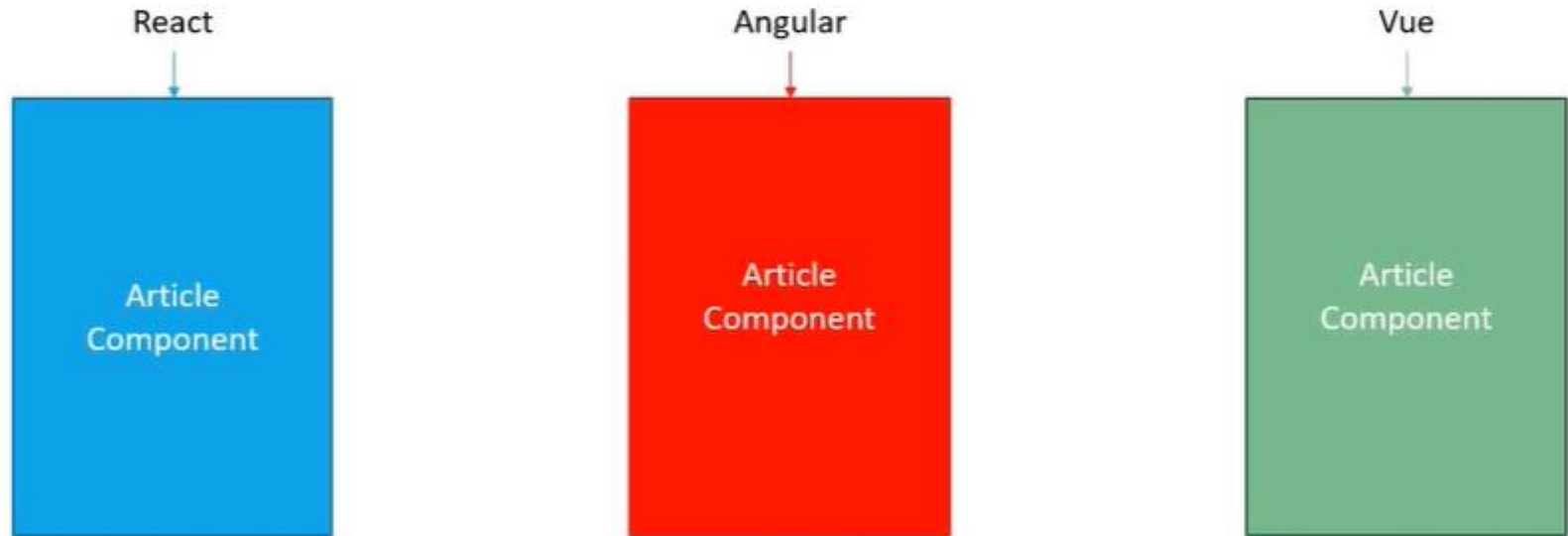
# Component Based Architecture

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# Reusable code

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## React is declarative

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Tell React what you want and React will build the actual UI

React will handle efficiently updating and rendering of the components

DOM updates are handles gracefully in React.

# More on why React?

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Seamlessly integrate react into any of your applications.

Portion of your page or a complete page or even an entire application itself.

React native for mobile applications

## Prerequisites

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HTML, CSS and JavaScript fundamentals

ES6

JavaScript – ‘this’ keyword, filter, map and reduce

ES6 – let & const, arrow functions, template literals, default parameters, object literals, rest and spread operators and destructuring assignment.

React from scratch



# Channel content - React

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Fundamentals

HTTP

Routing

Redux

Utilities

- Step 1:-Goto Comand prompt create a folder for create app.(ReactEx) folder

- Step2:-

Go to inside the folder and create a React app

Step3:-create a react application

ReactEx>npx create-react-app hello-world

Step4:-goto inside the project

ReactEx\hello-world>code .

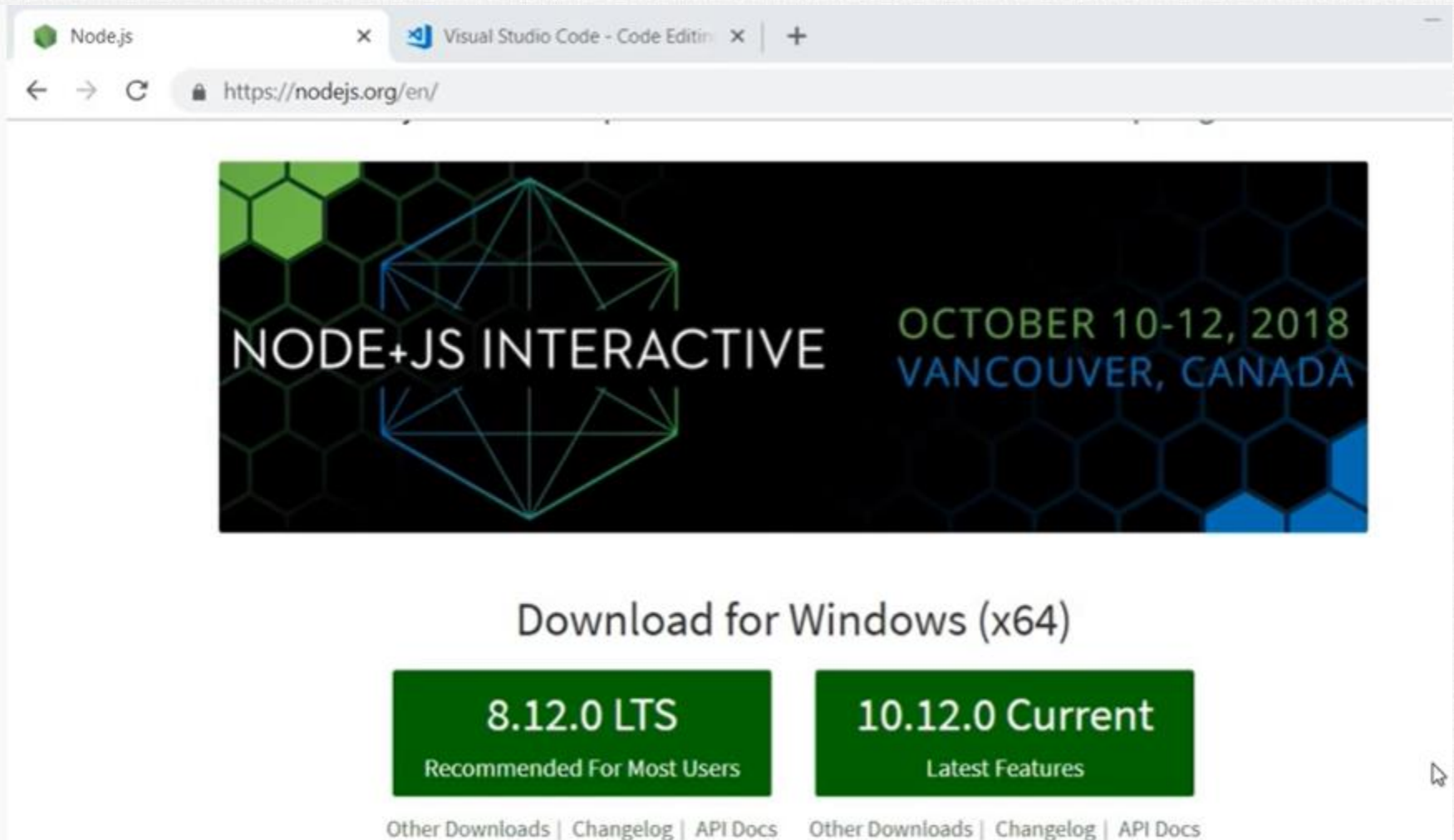
This project is open in VS code

Run the project:-open VS terminal:-

ReactEx\hello-world>npm start

# Software:-

- >node --version



The screenshot shows a web browser window with two tabs: 'Node.js' and 'Visual Studio Code - Code Editin...'. The address bar displays 'https://nodejs.org/en/'. The main content area features a large banner for 'NODE+JS INTERACTIVE' with the dates 'OCTOBER 10-12, 2018' and location 'VANCOUVER, CANADA'. Below the banner, the text 'Download for Windows (x64)' is centered. Two green buttons are displayed: '8.12.0 LTS' with the subtext 'Recommended For Most Users', and '10.12.0 Current' with the subtext 'Latest Features'. At the bottom, there are links for 'Other Downloads | Changelog | API Docs' for both versions.

Node.js

Visual Studio Code - Code Editin...

https://nodejs.org/en/

NODE+JS INTERACTIVE

OCTOBER 10-12, 2018  
VANCOUVER, CANADA

Download for Windows (x64)

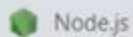
8.12.0 LTS  
Recommended For Most Users

10.12.0 Current  
Latest Features

Other Downloads | Changelog | API Docs

Other Downloads | Changelog | API Docs





Node.js



Visual Studio Code - Code Editin

<https://code.visualstudio.com>

Visual Studio Code

[Docs](#)[Updates](#)[Blog](#)[Community](#)[Extensions](#)[FAQ](#)

Download

Version 1.28 is now available! Read about the new features and fixes from September.

# Code editing. Redefined.

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Stable Build

[Other platforms and Insiders Edition](#)

By using VS Code, you agree to its  
license and privacy statement.

File Edit View Goto Help

EXTENSIONS

@popular



C# 1.2.2

356K

★★★★★

C# for Visual Studio Code (p...

Microsoft

Install



Python 0...

211K

★★★★★

Linting, Debugging (multi-L...

Don Jayamanne

Install



Debugger for Chrome

148

Debug your JavaScript code...

Microsoft JS Diagno...

Install



C/C++ 0.7...

143K

★★★★★

Complete C/C++ language ...

Microsoft

Install



Go 0.6.39

99K

★★★★★

Rich Go language support L...

lukehoban

Install



ESLint 0.10...

88K

★★★★★

Integrates ESLint into VS Co...

app.ts

www.ts x

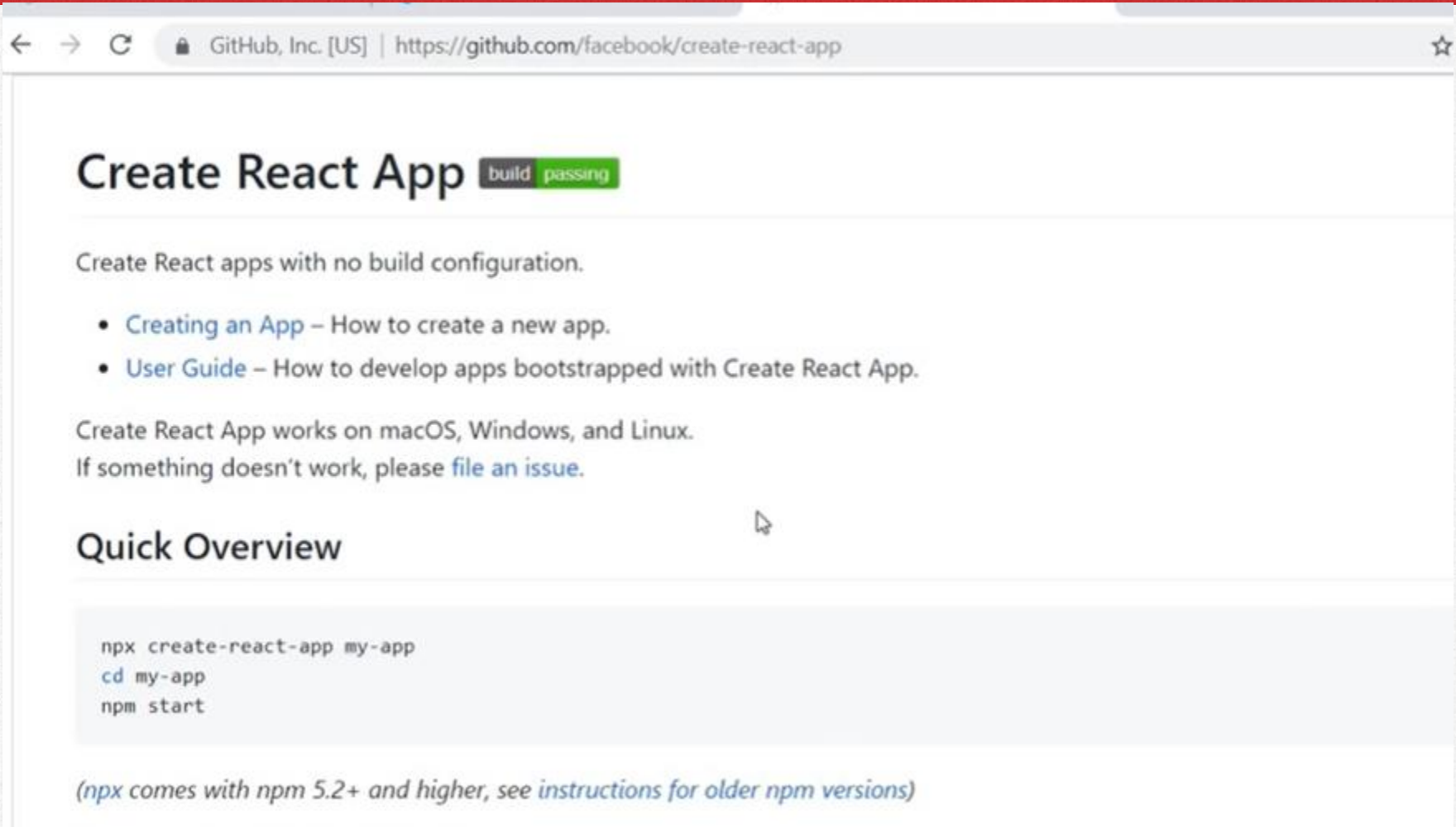
package.json

README



```
1 import app from './app';
2 import debugModule = require('debug');
3 import http = require('http');
4
5 const debug = debugModule('node-express-types
6
7 // Get port from environment and store in Exp
8 const port = normalizePort(process.env.PORT |
9 app.set('port', port);
10
11 export
12
13 exports
14
15 import
16
17 @ importScripts
18
19 @ MessagePort
20
21 @ normalizePort
22
23 port: const port: number | string | boolean
24
25
26 function normalizePort(val: any): number | stri
```

# Project name put in small letter.



The screenshot shows the GitHub repository page for 'facebook/create-react-app'. The browser's address bar displays the URL 'https://github.com/facebook/create-react-app'. The repository name 'Create React App' is prominently displayed at the top, followed by a green badge indicating 'build passing'. Below this, a description states 'Create React apps with no build configuration.' and lists two links: 'Creating an App' and 'User Guide'. A note mentions that the tool works on macOS, Windows, and Linux, and provides a link to 'file an issue' if something doesn't work. A 'Quick Overview' section follows, containing a code block with three lines of terminal commands: 'npx create-react-app my-app', 'cd my-app', and 'npm start'. A final note in italics states '(npx comes with npm 5.2+ and higher, see instructions for older npm versions)'.

← → ↻ 🔒 GitHub, Inc. [US] | https://github.com/facebook/create-react-app ☆

## Create React App build passing

Create React apps with no build configuration.

- [Creating an App](#) – How to create a new app.
- [User Guide](#) – How to develop apps bootstrapped with Create React App.

Create React App works on macOS, Windows, and Linux.  
If something doesn't work, please [file an issue](#).

### Quick Overview

```
npx create-react-app my-app
cd my-app
npm start
```

*(npx comes with npm 5.2+ and higher, see [instructions for older npm versions](#))*



## EXPLORER

## OPEN EDITORS

X JS App.js hello-world\src

## REACT

hello-world

node\_modules

public

src

App.css

JS App.js

App.test.js

index.css

JS index.js

logo.svg

JS serviceWorker.js

.gitignore

package-lock.json

JS App.js x

hello-world &gt; src &gt; JS App.js &gt; App &gt; render

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

- Two command to create a React application
- 1)npx:-npm package runner its install when you install node,so create a react app without install npm.npx take create of this for us
- 2)npm:--we install the create react app globally and then use the package to generate the project.
- using this command first run npm install
- create-react-app -g (globally)

# Create-react-app

---

## **npx**

*npx create-react-app <project\_name>*

npm package runner

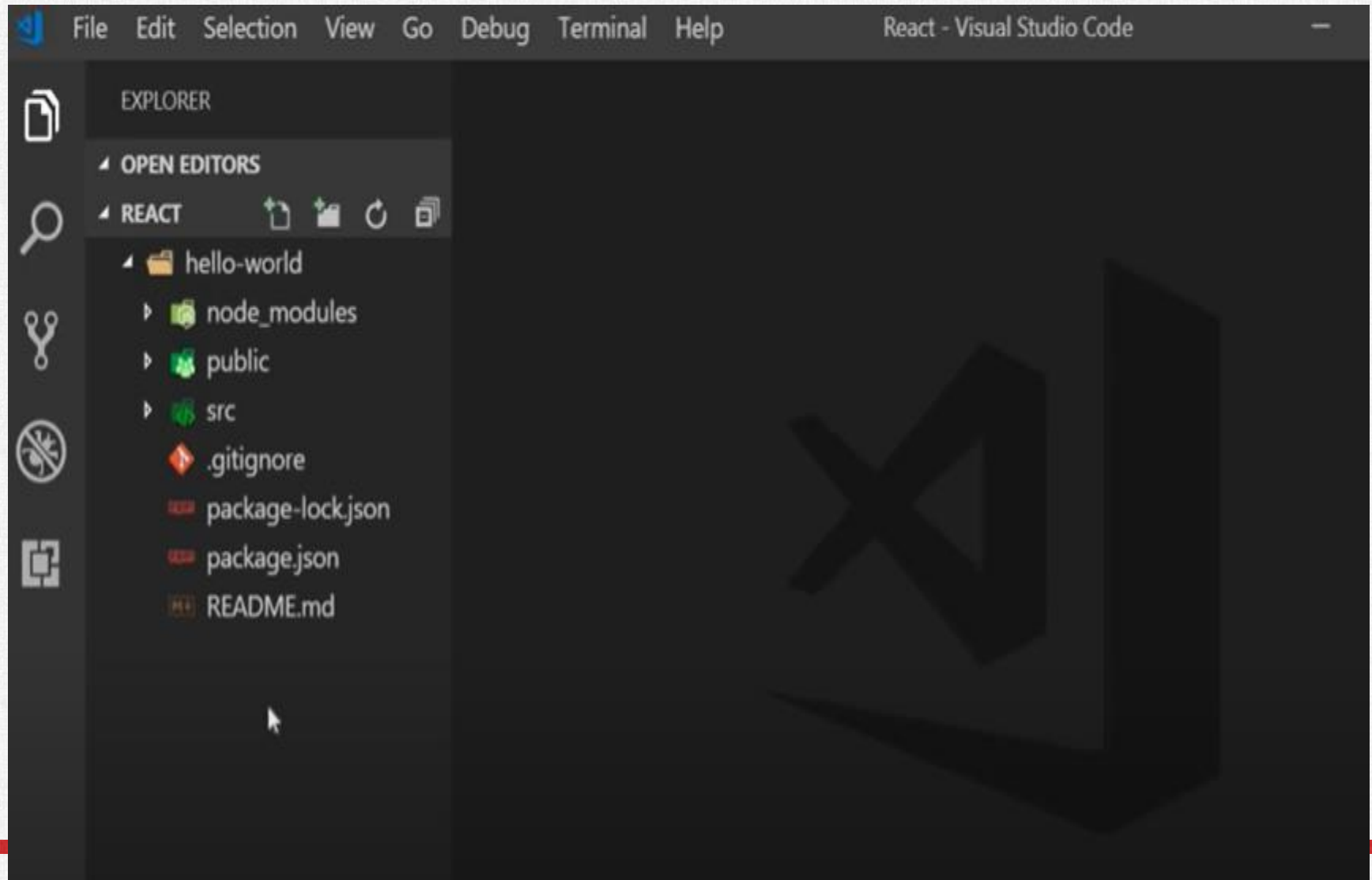
## **npm**

*npm install create-react-app -g*

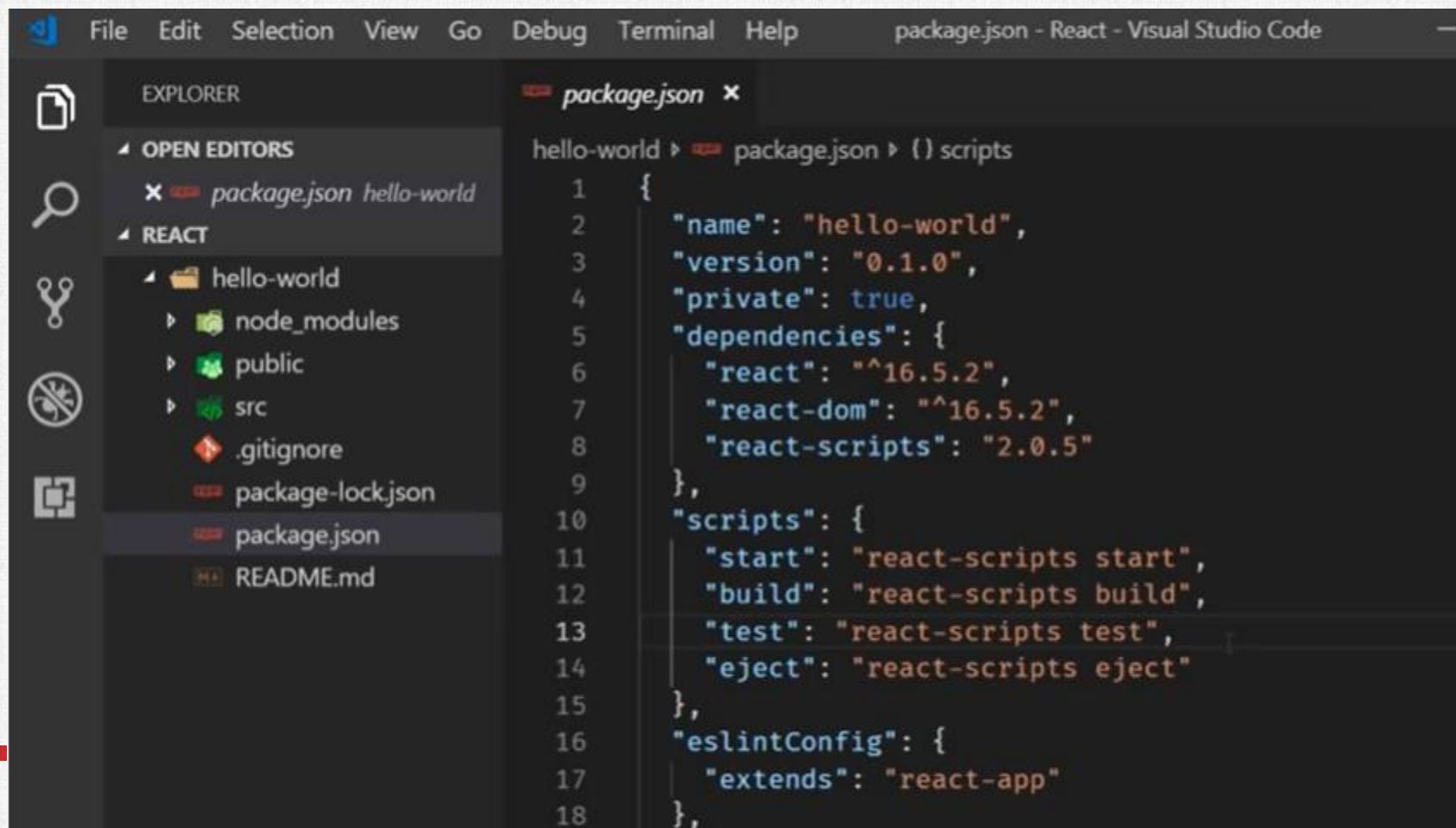
*create-react-app<project\_name>*



Inside the root folder 3 and 4 files inside the hello-world project.



- 1)Package.json:-contains the dependency(version) and the scripts(contain build,test,start) required for the application



The screenshot shows the Visual Studio Code interface with the 'package.json' file open in the editor. The Explorer sidebar on the left shows the project structure for 'hello-world', including 'node\_modules', 'public', 'src', '.gitignore', 'package-lock.json', 'package.json', and 'README.md'. The editor displays the following JSON content:

```
hello-world > package.json > {} scripts
1  {
2    "name": "hello-world",
3    "version": "0.1.0",
4    "private": true,
5    "dependencies": {
6      "react": "^16.5.2",
7      "react-dom": "^16.5.2",
8      "react-scripts": "2.0.5"
9    },
10   "scripts": {
11     "start": "react-scripts start",
12     "build": "react-scripts build",
13     "test": "react-scripts test",
14     "eject": "react-scripts eject"
15   },
16   "eslintConfig": {
17     "extends": "react-app"
18   },
19 }
```



- `Package-lock.json`: -insure the consistent installation of your dependency .
- `Node_module` Folder: all the dependency are installed.its generate when we run create react app command or run `npm install`
- `Public` Folder:-This folder contains 3 files (`index.html` file , this is the only html file inside the project.we are building single page application and this is it.
- View are dynamically change in browser this `index.html` file that's get serve up.not going to add any code in this file ,may we add some code in head tag not add in body tag .
- You want react to control the UI.
- `Index.html`:-only one div tag `id="root"` in run time the react application take over this tag ultimately responsible for the UI

- 
- Index.html:--this is the entry point of react application.
  - Src Folder:--this is the entry point of react
  - Index.js:-start the react from here.all the code(99%) we have to put inside src folders Files.
  - No chance to put the code inside the Public folders file
-





File Edit Selection View Go Debug Terminal Help

index.html - React - Visual Studio Code



EXPLORER

OPEN EDITORS

index.html hello-world\pu...

REACT

hello-world

node\_modules

public

favicon.ico

index.html

manifest.json

src

.gitignore

package-lock.json

package.json

README.md

index.html x

hello-world > public > index.html > html > body > div#root

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Unlike `"/favicon.ico"` or `"favicon.ico"`, `"%PUBLIC_URL%"` work correctly both with client-side routing and server-side rendering. Learn how to configure a non-root public URL by

→

`<title>React App</title>`

`</head>`

`<body>`

`<noscript>`

You need to enable JavaScript to run this app.

`</noscript>`

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

←

This HTML file is a template.

If you open it directly in the browser, you will see a blank page.



## EXPLORER

## OPEN EDITORS

× package-lock.json hello-...

## REACT

hello-world

node\_modules

public

src

.gitignore

package-lock.json

package.json

README.md

package-lock.json ×

hello-world &gt; package-lock.json &gt; ...

```
1  {}
2  "name": "hello-world",
3  "version": "0.1.0",
4  "lockfileVersion": 1,
5  "requires": true,
6  "dependencies": {
7    "@babel/code-frame": {
8      "version": "7.0.0",
9      "resolved": "https://registry.npmjs.org/@babel/code-frame",
10     "integrity": "sha512-OfC2uemaknXr87bdLUkWog7nYuliM9Ij5H
11     "requires": {
12       "@babel/highlight": "7.0.0"
13     }
14   },
15   "@babel/core": {
16     "version": "7.1.0",
17     "resolved": "https://registry.npmjs.org/@babel/core/-/c
18     "integrity": "sha512-9EWmD0cQAbcXSc+31RIoYgEHx3KQ2CCSMD
```



## EXPLORER

### OPEN EDITORS



### REACT



#### hello-world



#### node\_modules



▸ .bin

▸ .cache

▸ @babel

▸ @csstools

▸ @svgr

▸ @types

▸ @webassemblyjs

▸ @xtuc

▸ abab

▸ accepts

▸ acorn

▸ acorn-dynamic-imp...

▸ acorn-globals







## EXPLORER

## OPEN EDITORS

x {} manifest.json hello-world...

## REACT



- hello-world
  - node\_modules
  - public
    - favicon.ico
    - index.html



{ } manifest.json

- src
- .gitignore
- package-lock.json
- package.json
- README.md

{ } manifest.json x

hello-world &gt; public &gt; {} manifest.json &gt; ...

```
1  {
2    "short_name": "React App",
3    "name": "Create React App Sample",
4    "icons": [
5      {
6        "src": "favicon.ico",
7        "sizes": "64x64 32x32 24x24 16x16",
8        "type": "image/x-icon"
9      }
10   ],
11   "start_url": ".",
12   "display": "standalone",
13   "theme_color": "#000000",
14   "background_color": "#ffffff"
15 }
16
```



EXPLORER

## OPEN EDITORS

x index.html hello-world\pu...

## REACT

hello-world

node\_modules

public

★ favicon.ico

index.html

{ } manifest.json

src

.gitignore

package-lock.json

package.json

README.md

index.html x

hello-world ▸ public ▸ index.html ▸ html ▸ body ▸ div#root

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Unlike `"/favicon.ico"` or `"favicon.ico"`, `"%PUBLIC_URL%/fa`  
work correctly both with client-side routing and a non-r  
Learn how to configure a non-root public URL by running

→

`<title>React App</title>``</head>``<body>``<noscript>`

You need to enable JavaScript to run this app.

`</noscript>``<div id="root"></div>``<!--`

This HTML file is a template.

If you open it directly in the browser, you will see an

You can add webfonts, meta tags, or analytics to this fi

Index.js File:-Render the index.html page inside the react using ReactDOM.render() method and call the root id from index.html page

- React application bind to the html code:
- ReactDOM.render(
  - <React.StrictMode>
  - <App />
  - </React.StrictMode> ,
  - document.getElementById( 'root' )
  - );



# App.test.js:-put the unit test code.

---

- ServiceWorker.js file:-use for cache, notification
- README.MD:-this file tell the command how to run and build the code

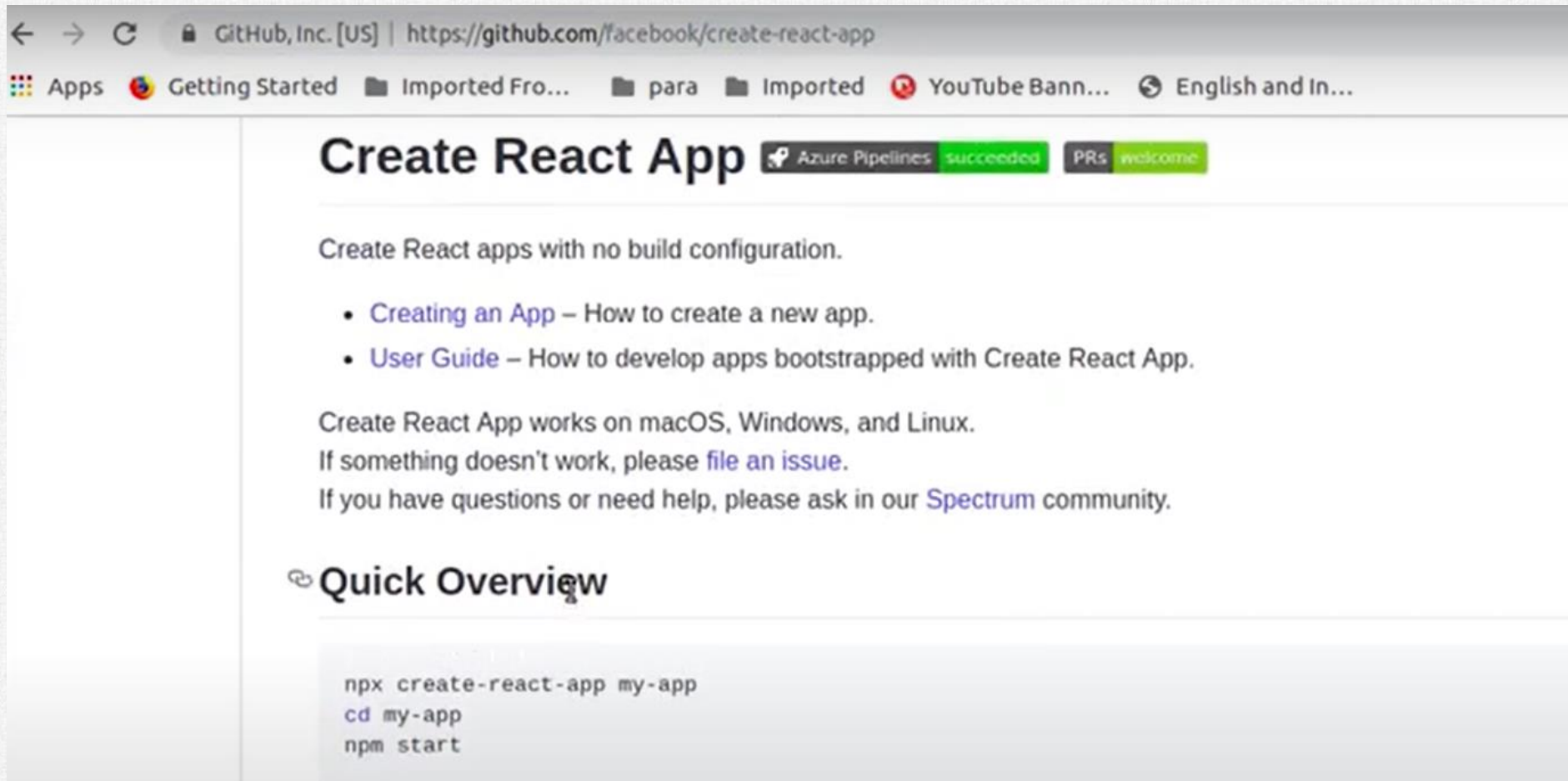
- 1 What we need to Start
- 2 Install
- 3 Start A app
- 4 Make A basic Change for check
- 5
- 6 NPM
- 7 Node
- 8

```
anil@anil-HP-Notebook: ~/Desktop/react-tut
anil@anil-HP-Notebook:~$ node -v
v10.8.0
anil@anil-HP-Notebook:~$ npm -v
6.2.0
anil@anil-HP-Notebook:~$ cd Desktop/
anil@anil-HP-Notebook:~/Desktop$ mkdir react-tut
anil@anil-HP-Notebook:~/Desktop$ cd react-tut/
anil@anil-HP-Notebook:~/Desktop/react-tut$
```



# Create App in React:-

- Npx create-react-app blog



The screenshot shows the GitHub repository page for 'facebook/create-react-app'. The browser's address bar displays 'https://github.com/facebook/create-react-app'. The repository name 'Create React App' is prominently displayed at the top, accompanied by two status badges: 'Azure Pipelines succeeded' and 'PRs welcome'. Below the title, a brief description states 'Create React apps with no build configuration.' This is followed by two bullet points: 'Creating an App – How to create a new app.' and 'User Guide – How to develop apps bootstrapped with Create React App.' Further down, it mentions 'Create React App works on macOS, Windows, and Linux.' and provides links for 'file an issue' and the 'Spectrum community'. A 'Quick Overview' section is visible at the bottom, containing a code block with the following commands:

```
npx create-react-app my-app
cd my-app
npm start
```

- 
- Search in google :-
  - Create-react-app:---

Thanks