

• What is React Js?

React is a declarative, efficient, and flexible JavaScript library for building user interfaces. It is an open-source, component-based front-end library that is responsible only for the view layer of the application. ReactJS is not a framework, it is just a library developed by Facebook to solve some problems that we were facing earlier.

• What is NPM in React Js?

NPM (Node Package Manager) is the default package manager for Node.js and is written entirely in [Javascript](#). NPM manages all the packages and modules for Node.js and consists of command line client **npm**. It gets installed into the system with installation of Node.js. The required packages and modules in Node project are installed using NPM.

• What is Role of Node Js in react Js?

NodeJS is a framework of JavaScript which is mainly used for working with the backend of our application or building the backend using JavaScript, whereas ReactJS is a JavaScript front-end library. It is mainly used for building the user interface or the frontend of our application.

NodeJS can be considered as an advantage for those frontend developers who write the client side code in JavaScript code only for browsers , now in addition they can use JavaScript for their server side code also and they do not need to learn any extra language for that.

• What is CLI command In React Js?

CLI is a command line program that accepts text input to execute operating system functions.

In the 1960s, using only computer terminals, this was the only way to interact with computers.

In the 1970s and 1980s, command line input was commonly used by Unix systems and PC systems like MS-DOS and Apple DOS.

Today, with graphical user interfaces (GUI), most users never use command-line interfaces (CLI).

However, CLI is still used by software developers and system administrators to configure computers, install software, and access features that are not available in the graphical interface.

React CLI is a **built-in feature that helps you take control over the management of the project locally**. You can create and run your applications. You can create a project by simply using this command.

• Difference between NPM vs NPX

NPM is a package manager used to install, delete, and update Javascript packages on your machine. NPX is a package executor, and it is used to execute javascript packages directly, without installing them.

• What is Components in React Js?

A **Component** is one of the core building blocks of React. In other words, we can say that every application you will develop in React will be made up of

pieces called components. Components make the task of building UIs much easier. You can see a UI broken down into multiple individual pieces called components and work on them independently and merge them all in a parent component which will be your final UI.

In React, we mainly have two types of components:

1.) Functional Components: Functional components are simply javascript functions. We can create a functional component in React by writing a javascript function.

2.) Class Components: The class components are a little more complex than the functional components. The functional components are not aware of the other components in your program whereas the class components can work with each other. We can pass data from one class component to other class components.

The name of a component should always start with a capital letter.

• What is Header and Content Components in React Js?

Headers are compositions that extend standard navbar functionalities. They contain additional components like a jumbotron, sub-navbar, or image covers which serve as a containers for extra navigation elements - usually links, forms, or call-to-action buttons.

Components are **independent and reusable bits of code**. They serve the same purpose as JavaScript functions, but work in isolation and return HTML.

Components come in two types, Class components and Function components.

• How to install React Js on Windows, linux Operating System?

For Windows:

Step 1: Install Node.js installer for windows.

Step 2: Open command prompt to check whether it is completely installed or not type the command → **node -v**

Step 3: Now in the terminal run the below command:

npm install create-react-app

It will globally install react app for you. To check everything went well run the command

create-react-app --version

Step 4: Now Create a new folder where you want to make your react app using the below command:

mkdir newfolder

ReactJS Assignment

Move inside the same folder using the below command:

`cd newfolder (your folder name)`

Step 5: Now inside this folder run the command :

`create-react-app reactfirst YOUR_APP_NAME`

Due to npm naming restrictions, names can no longer contain capital letters, thus type your app's name in lowercase.

Step 6: Use the terminal and move inside your app name folder. Use command `cd reactapp` (your app name)

Step 7: To start your app run the below command :

`npm start`

Once you run the above command a new tab will open in your browser showing React logo.

For Linux :

Step 1: Install NPM

ReactJS Assignment

Since npm and node is required to install create-react-app so you need to first install them from default Ubuntu repo by using npm command.

```
sudo apt install
```

Step 2: Install create-react-app

Now that both npm and node is setup and ready, next step is to install create-react-app by using command as shown below.

```
sudo npm -g install create-react-app
```

Step 3: Create a React App

Now that all the tools required to run ReactJS applications setup and ready, it is time to create a new reactjs app, say cyberithub in our case using command as shown below. This will install all the required packages and setup cyberithub application as you can see below.

```
create-react-app cyberithub
```

Step 4 :

Switch to cyberithub directory using cd cyberithub command as shown below.

```
cd cyberithub/
```

Step 5 :

Then run react application cyberithub using command as shown below.

npm start

Once you run the above command a new tab will open in your browser showing React logo.

• How to install NPM and How to check version of NPM?

To see if NPM is installed, type **npm -v in Terminal**. This should print the version number.

• How to check version of React Js?

Using package.json file

The package.json file contains a lot of information in the name/value pairs in [JSON](#) format. We can easily check our React version .

Using command line

We can easily check the React version by using the command mentioned below on our command line.

npm view react version

• How to change in components of React Js?

To change the state of the React component is useful when you are working on a single page application, it simply replaces the content of the existing component for the user without reloading the webpage.

ReactJS Assignment

We have to set initial state value inside constructor function and set click event handler of the element upon which click, results in changing state. Then pass the function to the click handler and change the state of the component inside the function using **setState**.

