# React Js

(1) What is React Js?

Ans: React (often referred to as React.js or ReactJS) is an open-source JavaScript library for building user interfaces (UIs) and user interface components. It was developed and is maintained by Facebook and a community of individual developers and companies. React is a popular choice for building modern web applications and is widely used in the development of single-page applications (SPAs) and mobile applications.

(2) What is NPM in React Js?

Ans: NPM stands for “Node package manager”.

NPM, or Node Package Manager, is a dependency management tool for JavaScript. It is used to install and manage JavaScript libraries and packages, including React.

NPM is installed with Node.js, which is a JavaScript runtime environment. Once you have Node.js installed, you can install NPM by running the following command in your terminal:

Cmd: npm install -g npm

Initialize a new React project with npx create-react-app my-app.

Run React development scripts using NPM commands,

npm start to start the development server.

(3) What is role of Node Js in react Js?

Ans: Node.js is a JavaScript runtime environment that allows you to run JavaScript code on the server side. This means that you can use Node.js to build web servers, APIs, and other server-side applications.

Node.js can be used to build the backend for React.js applications. This means that you can use Node.js to handle requests from the user, process data, and generate responses.

Here are some popular websites and applications that use Node.js and React.js:

Facebook

Netflix

Twitter

Airbnb

Reddit

Uber

React.js is responsible for rendering the frontend user interface and handling user interactions on the client side.

(4) What is CLI command in ReactJs?

Ans: CLI: Command Line Interface

In React.js, a CLI is a set of commands and tools that help developers create, manage, and build React applications more efficiently. React CLI tools are typically used for initializing new projects, running development servers, building production-ready code, and performing various development tasks. The most popular CLI tool for React is "Create React App."

* Here are some common CLI commands and their descriptions:

1.Create a New React App

npx create-react-app my-app

2.Start the Development Server

npm start

3.Build for Production

npm run build

4. Runs the React.js test suite

npm test

5. Ejects the React.js project from Create React App, giving you more control over the project configuration

npm run eject

6. Add New Dependencies

npm install package-name

(5) What is Components in ReactJs?

Ans: Components in React JS are reusable pieces of code that can be used to build user interfaces. Components can be nested within other components, and they can be reused throughout your application.

React components can be categorized into two main types: functional components and class components.

(6) What is Header and Content Components in ReactJs?

Ans: Header and content components in React JS are two common types of components that are used to build user interfaces.

* Header components are typically used to display the title, logo, and other navigation elements of a web page. They are often placed at the top of the page, and they can be fixed in place so that they are always visible to the user.
* Content components are typically used to display the main body of a web page. They can contain text, images, videos, and other types of content.

(7) How to install React Js on Windows, linux Operating System?

Ans: Installing React JS on Windows

1.Download and install Node.js from the official website.

2.Open a command prompt and run the following command to install NPM: npm -g install npm

3. To install React JS, run the following command:

npm install create-react-app

This will install the create-react-app tool, which can be used to create new React JS applications.

* Installing React JS on Linux

1. Open a terminal and run the following command to install Node.js: sudo apt install nodejs
2. To install NPM, run the following command:

sudo apt install npm

1. To install React JS, run the following command:

sudo npm install -g create-react-app

This will install the create-react-app tool, which can be used to create new React JS applications.

To start the React JS development server, run the following command in the my-app directory:

npm start

This will start the development server on port 3000. You can then open a web browser and navigate to http://localhost:3000 to view your React JS application.

(8) How to install NPM and how to check version of NPM?

Ans: To install NPM, you will need to install Node.js. Once you have installed Node.js, you can install NPM by running the following command in a terminal:

npm install -g npm

To check the version of NPM, run the following command in a terminal:

npm -v

(9) How to check version of ReactJs?

Ans:

1.Using npm:

(A) npm list react

(B) npm view react version

2.Checking the package.json file:

"dependencies": {

"react": "17.0.2",

// other dependencies

}

3.Using the browser console:

console.log(React.version);

(10) How to change in components of ReactJs?

Ans: There are two ways to change the state of components in ReactJs:

1.Using the setState() method:

The setState() method is the most common way to change the state of a component. It takes an object as an argument, and the properties of the object are merged into the component's state.

For example, to change the value of a property called count in the component's state, you would call the setState() method like this:

this.setState({

count: this.state.count + 1

});

2. Using the useState() hook:

The useState() hook is a new way to manage state in React JS. It returns an array with two values: the current state and a function to update it.

For example, to manage the value of a property called count in a component's state, you would use the useState() hook like this:

const [count, setCount] = useState(0);

(11) How to Create a List View in ReactJs?

Ans: Code:

import React from 'react';

const ListView = ({ data }) => {

  return (

    <ul>

      {data.map(item => (

        <ListItem key={item.id} data={item} />

      ))}

    </ul>

  );

};

const ListItem = ({ data }) => {

  return <li>{data.name}</li>;

};

// Example usage

const App = () => {

  const dataArray = [

    { id: 1, name: 'Item 1' },

    { id: 2, name: 'Item 2' },

    { id: 3, name: 'Item 3' },

  ];

  return <ListView data={dataArray} />;

};

export default App;

(12) Creat Increment decrement state change by button click?

Ans: Code:

import React, { useState } from 'react'

export default function Incrementordecrrement() {

    const [data, setData] = useState({

        number: 0,

    });

    return (

        <div className="d-flex justify-content-center">

            <button onClick={() => setData({ ...data, number: data.number + 1 })} className="m-4">Increment</button>

            <span className="fs-4 m-4 fw-bold" > {data.number} </span>

            <button onClick={() => {

                if (data.number > 0) {

                    setData({ ...data, number: data.number - 1 })

                }

            }} className="m-4">

                Decrement

            </button>

        </div>

    )

}

Output:

