**ReactJs**

**Module: 9 ReactJs Intro**

1.What is ReactJs?

* It’s an open-source javascript library which added component in your website.
* It’s used for making a single page web application.
* It’s not a framework. It is a library.
* It focus on doing building user interfaces.

2. What is NPM in ReactJs?

* NPM is a node package manager.
* NPM is world’s largest software registry.
* It’s an online directory that contains the various already registered open-source packages.
* C:\>npm install <package>

3.What is role of NodeJs in ReactJs?

* Node Js is a framework of javascript which is mainly used for working with 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 front-end of our application.

4.What is CLI command in React Js?

* React have its own CLI but currently they they are only supporting creating an app(create-react-app)
* Create-react-app used to generate the boilerplate version of a react application through command line.
* npx create-react-app my-app

5.What is component in React Js?

* Components are independent and reusable bits of code.
* Components in React basically return a piece of JSX code that tells what should be rendered on the screen.
* Two types of components are,
* (1)Functional components: Functional components are simply javascript functions. we can create a functional components in react by writing a javascript function.

Function demoComponents(){

Return

(<h1>

hello message…..!!!

</h1>

)

(2)Class components: The class components are little more complex than functional components. The functional components are not aware of the other components in your program wheres the class components can work with each other.we can pass data from one class components to another class components.

Class demoClass Components extends React.Component{

Render(){

Return <h1>hell message….</h1>

}

}

(6)

(7) How to install React Js on Windows, Linux Operating System? How to Install NPM and How to check version of NPM?

Install on windows,

* Step-1 install node.js installer for windows.Install LTS(latest) version
* Step-2 open command prompt to check whether it is completely installed or not type the command,
* node -v
* npm install create-react-app
* create-react-app –version
* cd projectname
* npm start

install on linux,

* step-1 install npm
* Step-2 install create-react-app utility
* Step-3 create and launch your first react application

Install NPM,

* Step-1 download node.js installer
* Step-2 install node.js and npm from browser
* Step-3 verify installation

(8) How to check version of React Js?

* Open the package.json. look under the dependencies section.

(9) How to change in components of React Js?

* We have to set initial state value inside constructor function & set click event handler of the element uopn which click,result in changing state then pass function to the click handler & change the state of the component inside the functionusing setState.

(10) How to Create a List View in React Js?

* Dependencies,
* Installation & configuration
* Adding syncfusion packages
* Adding Listview components
* Adding CSS references
* Bind data(source
* Running application

**MODULE: 10 List & Hooks**

**Explain Life cycle in Class Component & functional component with Hooks.**

**Class Component**

* In a class component there are several phases that a component goes through during its lifecycle:

(1)Mounting: This is when the component is being created and inserted into the DOM.

constructor: Initializing state and binding methods.

render: Rendering the component's UI.

componentDidMount: Executed after the component is rendered. Good for setting up side-effects like fetching data.

(2)Updating: This phase occurs whenever a component's state or props change.

shouldComponentUpdate: Decides if the component should re-render. Can be used for performance optimization.

render: Re-renders the updated UI.

componentDidUpdate: Called after the component re-renders due to state or props changes.

(3)Unmounting: This phase happens when a component is removed from the DOM.

componentWillUnmount: Used to clean up resources, subscriptions, or timers.

**Functional component with Hooks**

useState: Allows you to add state to a functional component.

useEffect: Handles side effects (data fetching, subscription) in a way similar to componentDidMount, ComponentDidUpdate & ComponentWillUnmount combined.Functional components with Hooks simplify the component lifecycle by combining various lifecycle methods into the useEffect Hooks. This approach makes it easier to manage state & side effects into a more straighforward and concise manner compared to traditional class components.