**React JS**

* **What is React JS?**
* React JS is a JavaScript framework or library for building a User Interface.
* It is used to create a single page application.
* React was developed by Facebook. Jordan Walke one of the facebook’s software engineers, created React and first it is used in Facebook newsfeed.
* **What is node js and how it requires for React?**
* NodeJS is a framework of JavaScript which is mainly used for working with the backend of our application or building the backend using JavaScript
* With the combination of Node and React, developers don't require learning complex back-end languages like Python or Ruby. They can use Node for server-side development and React for front-end code building without switching between frameworks and programming languages. And it saves resources, money, and time.
* Node js provides features for creating single page application using React js.
* Check the node version the command is – node -v.
* **What are the two node js platform that is used to create and update react js Application?**
* There are two platform provides node js to create and update React App 1) npx and npm

1. npx – npx stands for node package execute when we want to create react app then we use npx and other thing npx is only use in react only one time. There is a command to create a react app

npx create-react-app my-app

* Here my-app is a app name you write any app name instead of these.
* Check the version of npx command is- npx --v

1. npm – npm stands for node package manager after creating the app if we want to update the app or add packages using npm we can do easily.

* We can run our react app using npm start.
* Check the version using npm –v.

Note – Both npx and npm version are same after react app run successfully.

Simple React Snippet it is an extension for react JS shortcut.

* **What is React Router Dom and how it is installed?**
* React Router DOM is an npm package that enables you to implement dynamic routing in a web app,
* It allows you to display pages and allow users to navigate them.
* React Router Dom is used to build single-page applications i.e. applications that have many pages or components but the page is never refreshed instead the content is dynamically fetched based on the URL. This process is called Routing and it is made possible with the help of React Router Dom.
* Install command npm install react-router-dom@6.
* In react router dom there are many other items comes **BrowserRouter, Router, Routes**
* BrowserRouter- If suppose when we want to change the component from Url that is called BrowserRouter.
* Routes- There are many components for routing that is called Routes.
* Route- There are two element to pass the component one is path that is path is path of the component and another is element call the particular component.
* **What is MDB and how it is installed?**
* MDB stands for Material Design for Bootstrap it is same as Bootstrap that we use in css but here we use MDB in React.
* npm i mdb-react-ui-kit
* This is for font Awesome – npm i @fontawesome/fontawesome-free.
* import 'mdb-react-ui-kit/dist/css/mdb.min.css';
* import "@fortawesome/fontawesome-free/css/all.min.css";
* **Nested Router**

  <BrowserRouter>

        <Routes>

          <Route path="/" element={<Header />}>

            <Route path="home" element={<Home />} />

            <Route path="about" element={<About />} />

            <Route path="contact" element={<Contact />} />

          </Route>

        </Routes>

</BrowserRouter>

* Outlet always written in React fragment and it is used to display content in particular component.
* **Create own Routes?**
* When we want to create our own router createBrowserRouter is used.
* To parameters are used path of the route and element component we have to call.

Ex

const Mainroutes = createBrowserRouter([

    {

        path: "/",

        element :<Header/>

    },

    {

       path: "/home",

       element :<><Header/><Home/></>

    },

    {

        path:"/about",

        element:<><Header/><About/></>

    },

    {

        path:"/contact",

        element: <><Header/><Contact/></>

    }

* **Lazy loading**
* Lazy loading basically used when we use to display some part when component is load when internet speed is low.

const Classcomporoutes = React.lazy(()=> import("./Classcompo/Classcomporoutes"));

const Functioncomporoutes = React.lazy(()=> import("./FunctionCompo/Functioncomporoutes"));

    {

        path:"/example",

        element:<><Header/><Example/></>,

        children:[

            {

                path:"Classcompo/\*",

                element: <Suspense fallback={<div>Loading...</div>}><Classcomporoutes/></Suspense>

            }

        ]

    },

    {

        path:"/example",

        element:<><Header/><Example/></>,

        children:[

            {

                path:"FunctionCompo/\*",

                element:<Suspense fallback={<div>Loading...</div>}><Functioncomporoutes/></Suspense>

            }

        ]

    }

Example.jsx is create

* First we have pass the folder link