**React JS**

**Function component**

**Class Component**

**Technically, class is a Program Template**

**Class have various behaviours**

1. **Blue Print**
2. **Model**
3. **Entity**

**React Class Component**

***Set up the Environment for React 18:***

**1) You can use React in an existing web app.**

**2)You can create a new React app.**

***Step 1:***

**Download and install Node.js on your PC.**

**We are installing Node.js for a package manager “npm”.**

**With Node.js, we always install the stable version called LTS.**

**And also, we can use a version after 12+ for Node.js.**

**Also, the NPM version must be 6+.**

***Check Node Version:* node –v**

***Check NPM Version:* npm –v**

***Step-2:***

**Download and install the “Visual Studio Code” editor.**

**Install the following extensions for VS Code.**

**a)Live Server**

**b)vscode-icons**

**c)IntelliSense for CSS class names in HTML.**

***How to use React in an existing web application?***

**1)Create a new folder for your project**

**Drive name:\ <project-name>**

**2)Open the folder in your editor [VS Code]**

**3)Open a terminal in your project location.**

**4)And run Command: npm init –y.**

**This is going to create a package.json file for our project.**

**A package.json is a file that contains the metadata (info about your project).**

**5) Add the following folders to the project.**

**-public [all static data are kept in public Ex: html, text, pdf, images]**

**-src [all dynamic files are kept in src, like .css, .scss, .js, .ts]**

**Note:**

1. **In order to use React in any page, you need 3 basic libraries.**

**a)React [Core Library]**

**b)ReactDOM [Virtual DOM]**

**c)Babel [JavaScript Compiler]**

***React CDN(Content Distribution Network) Links:***

[**https://legacy.reactjs.org/docs/cdn-links.html**](https://legacy.reactjs.org/docs/cdn-links.html)

**<script crossorigin src="https://unpkg.com/react@18/umd/react.development.js"> </script>**

**<script crossorigin src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"> </script>**

***Babel CDN(Content Distribution Network) Link:***

**We can require only Babel Standalone here:**

[**https://babeljs.io/docs/babel-standalone**](https://babeljs.io/docs/babel-standalone)

**<script src="https://unpkg.com/@babel/standalone/babel.min.js">**

**</script>**

***Open Terminal In your Project :***

**npm install react --save**

**npm install react-dom --save**

**npm install @babel/standalone --save**

**and maintain this order for better practice.**

**All your Library Files are stored in the folder “Node\_modules”**

***Module in JavaScript:***

**Functions**

**Classes**

**Variables**

**Build Library**

***Module System In JS:***

**1.** CommonJS (CJS)

**2.** **ES Modules (ESM)**

**3. UMD( Universal Module Definition / Distribution) -> Node js**

**4.AMD(Asynchronous Module** **Definition** **/ Distribution)**

***For using the React + vite (It is always recommended):***

**1)npm create vite@latest First\_app**

**2)cd First\_app**

**3)npm install**

**4)npm run dev**

**5)** **npm install vite@4.5.0 @vitejs/plugin-react@4.0.3 --save-exact**

**If you are facing any issues with Crypto.js is a function like, use command no 5 to downgrade the version of Vite.**