**Day 5 :11 Aug 24**

**React JS performance**

**React Virtualization**

**Base upon event it load only those dom element on browser on demand.**

**One of the library we use ie react-window. This third party library help use to load the data on browser on demand.**

create-react-app react-with-virtualization

cd react-with-virtualization

npm install react-window

lazy loading components

lazy loading library help us to load the component or resource on demand.

In react we can use third party library ie react-lazy-load-image-component

create-react-app react-lazy-loading-app

cd react-lazy-loading-app

npm install react-lazy-load-image-component axios

react debouncing : it is a technique generally we use any web application to limit the rate at which a function is executed. Using this technique we can make delay for the function execution for particular time.

Example : search field, scrolling, or resizing etc.

create-react-app react-deboucing-app

cd react-deboucing-app

npm install lodash : it is a third party library which provide the debouncing features.

npm install axios

<https://dummyjson.com/users>

<https://dummyjson.com/users/search?q=Steven>

React memorization : this technique mainly used to optimization of the react application avoiding re-render unnecessary virtual dom content to actual dom.

Using three api we can avoid

1. React.memo
2. useMemo
3. useCallback

React.memo : it is a HOC (higher order component). Using React.memo we can wrap functional component to prevent re-rendering if the props have not changes.

create-react-app react-with-react-memo

cd react-with-react-memo

useMemo useMemo is a type of hook which we can use in functional component this help use to memoizes the result of calculation in cache memory it will only or execute that code if any dependencies changes. Else it return the result from cache memory.

let useMemoRef = useMemo(function,[dependencies])

function is responsible to do calculation. If any changes happened in dependencies then only that function going to execute.

**create-react-app react-with-usememo**

cd **react-with-usememo**

useCallback() it is a hook which help to memorize callback functions, preventing them from being re create one every render.

useCallback(function,[depededency])

**create-react-app react-use-callback**

**cd react-use-callback**

<input type=”search” name=”search-data” onKeyUp=”search()”/>