Makes easy to manage and build complex frontend

Browser just understands html, css and js

Phantom msg problem in facebook In the top there was notification of unread msg showned but after viewing the msg also there was still that notification present this was because there was no sync between state(variables) and ui(dom).

So when there are many states updated just by clicking one button wahape react bohot consistently work karta hai. SPA

Framework->military (django,nextjs)

Library->cool dude (react) more freedom

Core of react(state or ui manipulation,jsx)

Component reusability

Reusability of component(props)

How to propagate changes(hooks)

Router react ki functionality nahi hai uske liye alag se hame react-router-dom install karna padta hai

React ke andar by default state management nahi tha

Redux ,redux toolkit ,zustand,context api (ui bohot inconsistent ho rahi hai,problem ho rahi hai data fetch karneka then I will understand state management)

Baas (appwrite,firebase) they directly provide backend

React seo purpose se acha nahi hai. browser rendering ka ek issue hai saara code shift hota hai browser ke andar so browser slow ho jaata hai.so react is not a full fledge solution

So next js is also used

Lec2

Js usually works on browser.Nodejs provides us environment to run js

Vite and parser are bundler which combines various js file to a single js file

React-dom(web application)

React-----

React-native(mobile application)

Npm installer(to install various libraries)

Npx(system mein install nahi karna chahte directly use karna chahte hai)

Create react app is very bulky npx create-react-app app

So for this reason we can use vite and parser(this are also utilitites)

Agar node modules nahi hai to install it using npm i

Src ke andar mein ek main entry point hai index.js iska naam kuch bhi ho sakta hai jaise main.jsx

React kya karta hai wo khud ka virtual dom bhi banate hai and wo compare karta hai actual dpm se wo kitna different hai so wohi elements change karte hai jiski zarurat hai

Dom ke andar hai ek method hai jiska naam hai create root

Ham uske andar custom tags ko render kare jaise <App />

So hame js mein html use karneki capabilities de di jsx ne

Vite is light weight since react ki scripts aa rahi hai and testing library aa rahi hai wo isme nahi aati

App ek simple function hai jo ki html return kar raha hai

Vite se agar use kar rahe hai to components ko .jsx file se save karna padega and uppercase bhi karna padega

Whenever we make components we have to make the components name capital

Koi files aapko force karegi ki agar html return ho raha hai to file ka name .jsx rakho

jo script hai wo actually mein do chizo se hi chalti hai react and react dom

React hota to spa hi isliye to hamare paas ek hi div hota hai and wo parallel ek virtual dom banake rakhta hai.ham sirf users ko feel dete hai ki aap alag pages pe ho and thoda so user ko acha feel ho isliiye ham /contact us wagera bhi url mein dikha dete hai

{ yahape mein final output likhunga(evaluated experession hi likhte hai) }

If wagera ham return ke pehle hi likhte hai

Lec 4 ka Hitesh sir ka github repo check

Babel se jo \_jsx hai wo saara react ka compilation wagera jsx mein convert karna (tree structure lec 4 wala internally create karna ) import react is now not necessary this all magic is possible because of babel

Ham aaj virtual dom use nahi karte but we should have knowledge of virtual dom

createRoot ye jo method hai wo behind the scene pura dom like structure create karta hai

create root bhi dom create karta hai ,wo main dom ko compare karta hai and unhi chizo ko updata karta hai jo ki actual mein ui mein update hota hai but browser kya karta hai pure dom ko reupdate karta hai (so isi wajah se wo loading wala icon aata hai).virtual dom ke andar aap pure ke pure dom ko trace kar sakte ho tree like structure mein jo jo value change hui hai use update karte hai here there is one problem what if there is any network request or any other thing (so update karte hi dusra update aagaya) do tin baar updata hogya so agar mere paas kuch acha algo hota to mein bich wala update ignore karke siddha last wala update hi karta.har ui ko instantly update karna zaruri nhi hai.actual mein virtual dom abhi bhi hai but usko update karne wali algorithm is fibre.

Password generator app  
in this app there are many things that are generating again and again when you click numbers then numbers are added when you click characters than characters are added.ek hi method multiple time run karna hai so hame optimized method chahiye

Sabse pehle length lagega and length ko track karne ke liye useState use karna padega and then numbers and characters

Input field mein bhi data aa raha hai and is input field ka bhi to track rakhne ke liye usko bhi state mein rakhna hoga

setCharacter(true) aisa agar true kar dunga to har baar ke liye true ho jayega to is tarah ke agar events propogate karne ho to hame call back fire karna hota hai jisme hame prev value ka access milta hai

usecall back cache mein rakhta hai function ko memorize karta hai jitna ho sake

array mein dependency dalte hai

useEffect hook->jab bhi page load ho to first time mein call hota hai and dependency array mein koi bhi changes hua to wapas se run hota hai

useRef is a reference hook kisibhi chiz ka mujhe reference lena ho tabhi ham ye hook use karte hai

custom hooks(ye bhi built in hooks use karte hai) custom hooks .js file mein

hame jabbhi data milta hai wo string ke format mein hota hai so hame use string se json mein convert karna padta hai mostly api calls string format mein hi hoti hame use json mein convert karna padta hai

jo ham project ke liye api use kar rahe hai usme ek data hai jo hame nahi chahiye and ek key hai jiske saare conversion rates likhe hai wo hi key ham url mein bhi pass kar rahe hai

koi hook optional parameter leta hai but hamara hook ek currency ka input compulsory lega

ye hook kya return karega ek data mein yahape ek api call karna chahta hu

waise to mien directly using fetch call kar sakta hu but mein chahta hu ki jab ye hook load hoga tabhi mein call karna chahta hu so aisa konsa hook hai jo life cycle update hone pe trigger hota hai(useEffect) so is method se kya hoga automatic mera fetch call hojayega function ke andar aur ek function call nahi karna padega.dependency array (iss chiz mein jo bhi chiz aayega jo use hoga while update happens)

react query directly handles the string form of api fetch ke saath ham chaining karte hai mein data ko koi regular variable mei use karunga to problem hoyegi ui pe update hi nahi hoga so mujhe use state use karn apadega to setData.ham ek empty object initially daal de rahe hai incase fetch call wagera nahi hua to atleast wo empty object return ho jaye. ham ye hook kabhi call karna chate hai jabbhi koi currency mein change ho to mein wapis call karana chahta hu so wo currency pe depend karta hai therefore I will pass it in the dependency array

react router dom is 3rd party library whenever we use ‘a’ tag whole page refreshes but in react there is no concept of refreshing therefore we have link tag. NavLink provides some extra things

classes ko ham ` ` mein likhte hai (ham call back mein classes likhte hai jisse alag pages mein manipulate karna easy ho jaye) Navlink ke through hame isActive variable ka access milta hai