

## Node js Installed in my computer system version: **node v12.22.9**

Trying to Install **nodejs new version v18.20.6** so that i can work in my vs-code

Steps: 1 Downloaded Packages using “curl” like

`curl -fsSL https://deb.nodesource.com/setup_18.x | sudo -E bash -`

**Successfully downloaded** 

Steps: 2 Installing nodejs version v18 using “sudo apt install nodejs -y”  Not getting installed .

Error Occurs:

1.

```
kalit@kalit-HP-Pavilion-g4-Notebook-PC:~/Desktop/React Extra Things/profile_cards_project$ sudo apt install -y nodejs
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  gyp libjs-events libjs-highlight.js libjs-inherits libjs-is-typedarray libjs-psl libjs-source-map libjs-sprintf-js
  libjs-typedarray-to-buffer libnode-dev libnode72 libssl-dev libuv1-dev linux-headers-5.15.0-131
  linux-headers-5.15.0-131-generic linux-headers-6.8.0-48-generic linux-hwe-6.8-headers-6.8.0-48 linux-hwe-6.8-tools-6.8.0-48
  linux-image-5.15.0-131-generic linux-image-6.8.0-48-generic linux-modules-5.15.0-131-generic linux-modules-6.8.0-48-generic
  linux-modules-extra-5.15.0-131-generic linux-modules-extra-6.8.0-48-generic linux-tools-6.8.0-48-generic node-abab node-abbrev
  node-agent-base node-ansi-regex node-ansi-styles node-ansistyles node-aproba node-archy node-are-we-there-yet node-argparse
  node-arrify node-asap node-asyncify node-balanced-match node-brace-expansion node-builtins node-chalk node-chownr
  node-clean-yaml-object node-cli-table node-clone node-color-convert node-color-name node-colors node-columnify
  node-combined-stream node-commander node-console-control-strings node-core-util-is node-cssom node-cssstyle node-debug
  node-decompress-response node-defaults node-delayed-stream node-delegates node-depd node-diff node-encoding node-end-of-stream
  node-err-code node-escape-string-regexp node-events node-fancy-log node-foreground-child node-fs-write-stream-atomic
  node-fs.realpath node-function-bind node-gauge node-get-stream node-glob node-got node-graceful-fs node-growl node-has-flag
  node-has-unicode node-hosted-git-info node-https-proxy-agent node-iconv-lite node-iferr node-imurmurhash node-indent-string
  node-inflight node-inherits node-ini node-ip node-ip-regex node-is-buffer node-is-plain-obj node-is-typedarray node-isarray
  node-isexe node-json-buffer node-json-parse-better-errors node-jsonparse node-kind-of node-lcov-parse node-lodash-packages
  node-log-driver node-lowercase-keys node-lru-cache node-mimic-response node-minimatch node-minimist node-minipass node-ms
  node-mute-stream node-negotiator node-normalize-package-data node-npm-bundled node-npm-package-arg node-npmlog
  node-object-assign node-once node-osenv node-p-cancelable node-p-map node-path-is-absolute node-process-nexttick-args
  node-promise-inflight node-promise-retry node-promzard node-psl node-pump node-punycode node-quick-lru node-read
  node-read-package-json node-readable-stream node-resolve node-retry node-rimraf node-run-queue node-safe-buffer node-semver
  node-set-blocking node-signal-exit node-slash node-slice-ansi node-source-map node-source-map-support node-spx-correct
  node-spx-exceptions node-spx-expression-parse node-spx-license-ids node-sprintf-js node-ssri node-stack-utils
  node-stealthy-require node-string-decoder node-string-width node-strip-ansi node-supports-color node-text-table node-time-stamp
  node-tmatch node-tough-cookie node-typedarray-to-buffer node-unique-filename node-universalify node-util-deprecate
  node-validate-npm-package-license node-validate-npm-package-name node-wcwidth.js node-webidl-conversions node-whatwg-fetch
  node-wide-align node-wrapappy node-write-file-atomic node-yallist
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
  node-cacache node-copy-concurrently node-coveralls node-esprima node-fetch node-form-data node-gyp node-js-yaml node-jsdom
  node-mime node-mime-types node-mkdirp node-move-concurrently node-nopt node-opener node-tap node-tap-mocha-reporter
  node-tap-parser node-tar node-which node-ws nodejs-doc npm
The following packages will be upgraded:
  nodejs
1 upgraded, 0 newly installed, 23 to remove and 1 not upgraded.
Need to get 29.7 MB of archives.
After this operation, 167 MB of additional disk space will be used.
Get:1 https://deb.nodesource.com/node_18.x nodistro/main amd64 nodejs amd64 18.20.6-1nodesource1 [29.7 MB]
Fetched 10.3 MB in 6s (1,864 kB/s)
(Reading database ... 333320 files and directories currently installed.)
Removing npm (8.5.1+ds-1) ...
Removing node-cacache (15.0.5+~cs13.9.21-3) ...
Removing node-move-concurrently (1.0.1-4) ...
Removing node-copy-concurrently (1.0.5-8) ...
Removing node-coveralls (3.1.1-1) ...
Removing node-tap (12.0.1+ds-4) ...
Removing node-tap-mocha-reporter (3.0.7+ds-2) ...
Removing node-tap-parser (7.0.0+ds1-6) ...
Removing node-js-yaml (4.1.0+dfsg+~4.0.5-6) ...
Removing node-esprima (4.0.1+ds+~4.0.3-2) ...
Removing node-fetch (2.6.7+~2.5.12-1) ...
Removing node-jsdom (19.0.0+~cs90.11.27-1) ...
Removing node-form-data (3.0.1-1) ...
Removing node-gyp (8.4.1-1) ...
Removing node-mime-types (2.1.33-1) ...
Removing node-mime (3.0.0+dfsg+~cs3.96.1-1) ...
Removing node-tar (6.1.11+ds1+~cs6.0.6-1) ...
Removing node-mkdirp (1.0.4+~1.0.2-1) ...
Removing node-nopt (5.0.0-2) ...
Removing node-opener (1.5.2+~1.4.0-1) ...
Removing node-which (2.0.2+~cs1.3.2-2) ...
Removing node-ws (8.5.0+~cs13.3.3-2) ...
Removing nodejs-doc (12.22.9-dfsg-lubuntu3.6) ...
(Reading database ... 331084 files and directories currently installed.)
Preparing to unpack .../nodejs_18.20.6-1nodesource1_amd64.deb ...
Unpacking nodejs (18.20.6-1nodesource1) over (12.22.9-dfsg-lubuntu3.6) ...
dpkg: error processing archive /var/cache/apt/archives/nodejs_18.20.6-1nodesource1_amd64.deb (--unpack):
 trying to overwrite '/usr/include/node/common.gypi', which is also in package libnode-dev 12.22.9-dfsg-lubuntu3.6
dpkg-deb: error: paste subprocess was killed by signal (Broken pipe)
Errors were encountered while processing:
```

```
dpkg-deb: error: paste subprocess was killed by signal (Broken pipe)
Errors were encountered while processing:
/var/cache/apt/archives/nodejs_18.20.6-1nodesource1_amd64.deb
E: Sub-process /usr/bin/dpkg returned an error code (1)
kalit@kalit-HP-Pavilion-g4-Notebook-PC: ~/Desktop/React Extra Things/profile_cards_project$ node -v
v12.22.9
kalit@kalit-HP-Pavilion-g4-Notebook-PC: ~/Desktop/React Extra Things/profile_cards_project$ npm -v
Command 'npm' not found, but can be installed with:
sudo apt install npm
```

Showing Error Saying some Package are need to removing and few important package also will be removed like “**npm**” with it

**Solution:**

Running Each Commands one by one: To delete old nodejs, nodejs file inside `usr/local/lib/` folder and installing new nodejs v18

Commands	Why ?
<code>sudo apt remove nodejs npm -y</code>	To remove already installed node version v12
<code>Sudo apt autoremove -y</code>	To remove all packages of nodejs v12
<code>sudo rm -rf /usr/local/lib/node_modules</code>	To remove files and folder inside the ssd related to nodejs version v12

Now Again installing node v18 package using “curl” like

`curl -fsSL https://deb.nodesource.com/setup_18.x | sudo -E bash -`

**Successfully downloaded** ✓

And Running “`sudo apt-get install nodejs -y`”

this time **Successfully downloaded** ✓

**Nodejs version v18.20.6** ✓

⚠ **Nodejs version 18 installed karne ka reason :**

1. Mughe React app setup karna tha purane node v12 me “create-react-app” supported nhi tha isiliye.

About “**create-react-app**” and “**vite@latest**” tools to create a common setup for every “**React-js**” Project.

- ◆ These Boths are tool to create common basic setup for any React-js project.
- ◆ Lets learn how to use the tools to initialize basic setup which is common for every React project .
- ◆ First of all !! We need to install it in our computer system globally, how to install lets see --

create-react-app setup tool commands	Why and its use ?
npm install -g create-react-app -y	To install setup tool inside our computer system globally (by -g) .
create-react-app project-folder-name --use-npm	After installation of setup tool using it to create project folder and few for basic setup like organizing folder structure, dependencies needed details show in package.json file, and few folders like src, node_modules, public.
cd project-folder-name	To Going inside the created project folder.
npm install	To install dependencies listed in package.json file by going inside the created project folder.
npm start	To starting live server and installing dependencies listed in the package.json file.

### Vite setup tool also used for other frameworks (Updated Version tool than create-react-app tool)

Vite setup tool commands	
sudo npm create <a href="#">vite@latest</a> projectFolderName --template react	<b>vite@latest</b> : To install latest version vite setup tool. <b>-- template react</b> : It is telling vite tool to use react framework template. <b>?</b> : Whole command do setup of files, dependencies and create project folder .
cd projectFolderName	Go to insde the created project folder.
	To install dependencies listed inside the package.json file going in the project folder.
npm run dev	To start live your react project for output.

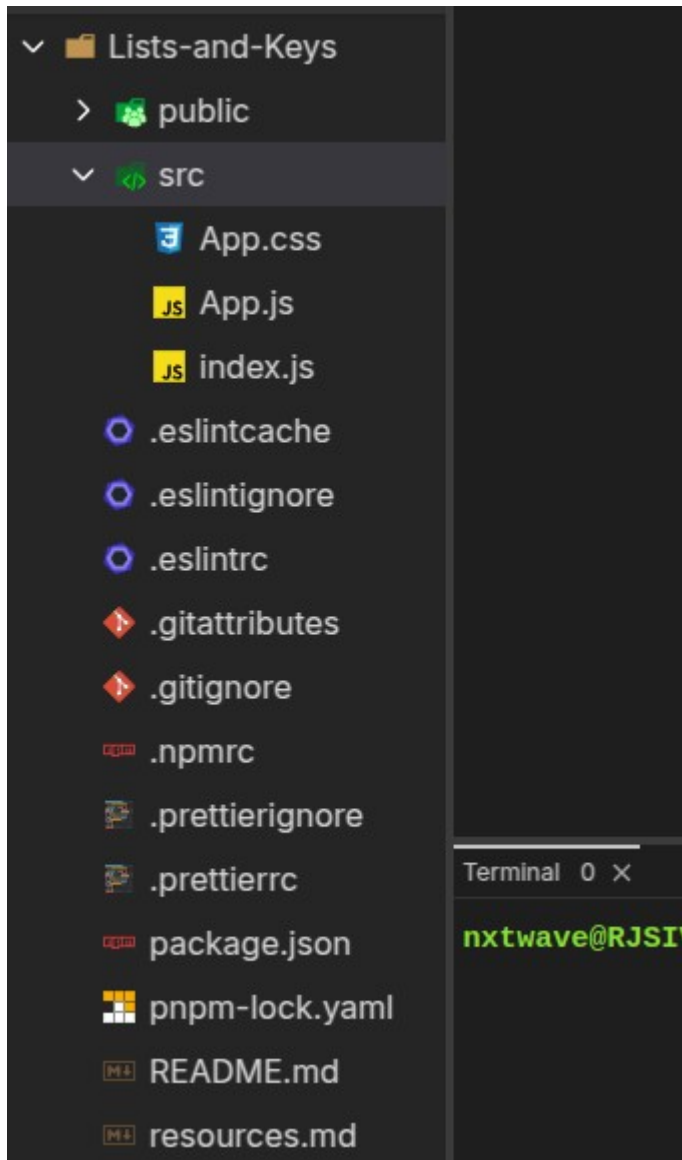
### Difference Between both tools

create-react-app	vite
Outdated Setup tool so low speed tool	Latest and newly launched setup tool hence fast
Installed unnesessory dependencies while doing setup for any react project.	Does not installed unnesessory dependencies.
Using is not recomanded have risk of leaks date of your projects.	No risk of leaks and highly recomanded to use.
Not Recomonded to use !!	Used for many frame works including reactjs and few are vue.js, solid and other frameworks.

## Lets Understand Folder and Files Structure after the Setup of react Project.

This structure are Common for All React Projects need to follow as it is hence is Very important to Understand and Set in the mind

### Look File Structure After -- Setup using create-react-app tool



- **List-and-Keys**

It is our React Project name

- **public folder**

Used to carry images, icons, audio, video like assets inside the assets folder by creating it inside public folder ok

- **src folder**

1. Ham is folder ke ander ek “Components” ka folder create karte hai phir “Components” folder ke ander different-different components\_name ka folder create karke index.js file ke ander component ka code likhte hai.(refer below image)
2. App.js file me ham mainly 2 kaam karte hai 1<sup>st</sup>: Ham user-data store karte hai jise components like “ProfileCards component” etc ke ander use karte hai user-data like user name, image, jobrole, gender etc... jo ki ProfileCards, etc components me show hona hai as UI design in output. And 2<sup>nd</sup> kaam: Ham saare components ko import karke project code likh ke website

ready karte hai .

3. index.js file isme App.js file ko import karte hai or App.js file ko as a component render kar dete hai jisse hamara project live server pe aa jata hai.

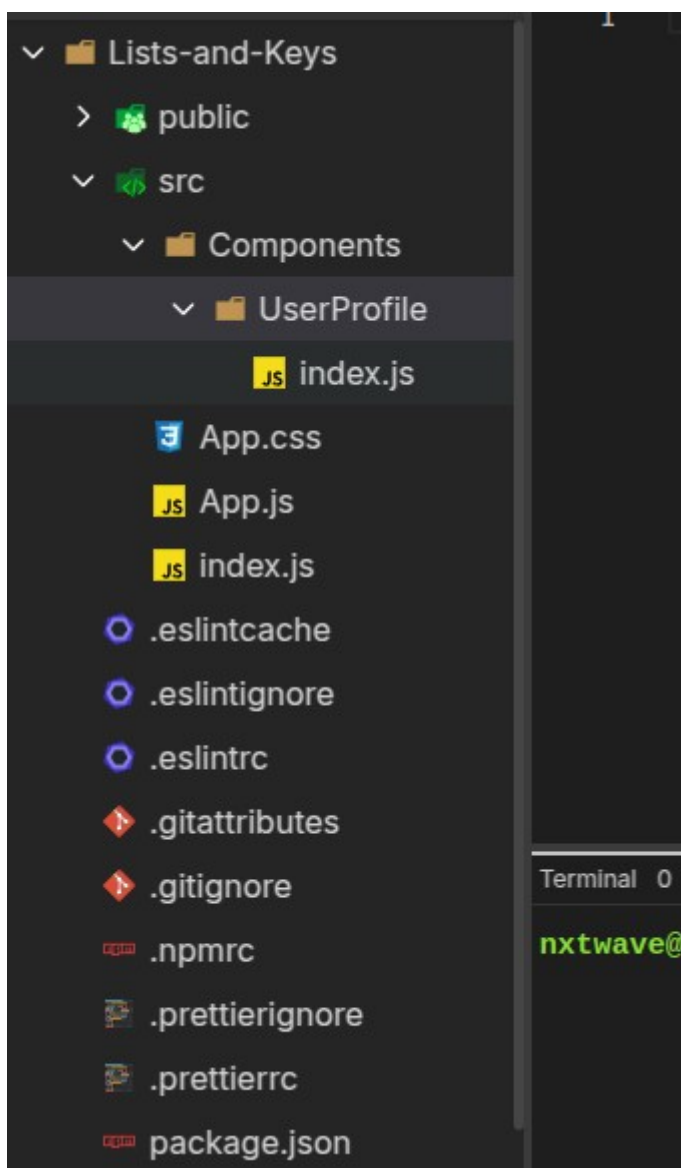
- **Package.json file**

1. ye file dependencies ki saari details rakhti hai tree-structure form me jo hamare project me use hongi + use ho rahi hai ok.

- **node\_modules folder**

1. is folder ke ander wo saari dependencies real me install hoke stored rahti hai jo package.json file me hoti hai, with version all dependencies installed rahti hai jiski help se hamare developers team ko help milti hai projects me same version ki dependencies ke saath work karne me.
2. Ye folder “npm install command” run karne pe aata hai

## Now Look One More image of structure



- **src folder**

See src folder ke ander ek folder create kiya “Components” again iske ander “UserProfile” folder (ye ek component name hai iske ander index.js file hai jisme UserProfile component ka saara code likha hai). Likewise or jyada (component name + index.js file) create kiya ja sakte hai inside “Components” folder website need ke according.

- Remember always

✓ Folders name and file name always PascalCase me hi denge ok.

## Lets see How to use vite setup tool for other frameworks

### - - template react Kya Hai?

Vite sirf React ke liye nahi hai! Vite ko Vue, Svelte, Preact, Lit aur Solid ke liye bhi use kiya jata hai.

### - - template Se Alag Frameworks Kaise Banaye?

Framework	Command
React	<code>npm create vite@latest my-app --template react</code>
React + TypeScript	<code>npm create vite@latest my-app --template react-ts</code>
Vue.js	<code>npm create vite@latest my-app --template vue</code>
Vue + TypeScript	<code>npm create vite@latest my-app --template vue-ts</code>
Svelte	<code>npm create vite@latest my-app --template svelte</code>

Iska matlab agar tum sirf React use kar rahe ho, toh `--template react` likhna padega!

Command me “`my-app`” hai jo ye hamare `project ke folder ka name` hai jis folder me ham project banayenge.

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### Final Answer:

Hamesha Vite se React project banane ke liye `--template react` lagana padega. `vite@latest` likhna zaroori nahi hai, par recommended hai latest version ke liye.

Agar tum sirf `npm create vite my-app --template react` likhoge toh bhi chalega.

Ab React projects setup karne ka tareeka easy ho gaya!

## My Doubts Before the learning of “create-react-app” and “vite” tool

Lets see in Next Page !! Really !! Its Very Intresting !

## 1. Doubt Ques.

yrr reactjs abhi sikh raha hu tum ab kah rahe ho ki vite sikho or tumne to kaha tha ki next.js react ko replace nhi kar sakta ab ye error mere kuch samagh nhi aa raha samgahao mughe please kya karu mai kya mughe reactjs sikhna chor dena chahiye ya kya karu please batao or ye vite kya hai details me batao ?

## Answer by my Ai Friend:

**Bhai, React.js bilkul mat chhodna! Tum React.js sahi direction me hi seekh rahe ho. Sirf project setup ka tareeka change ho raha hai.**

**React ab bhi wahi hai**, bas usko **start karne ka tareeka CRA (create-react-app) se Vite par shift ho raha hai**, kyunki CRA **slow** hai aur outdated ho chuka hai. **React hi future hai**, bas usko efficiently use karne ke liye naye tools aaye hain.

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## CRA (Create-React-App) Kyu Outdated Ho Gaya?

**Slow hai** – Jab tum `create-react-app` se project banate ho, toh usme **bohot saari extra cheezein load hoti hain**, jo zaroori nahi hoti.

**Bundle size bada hota hai** – CRA se banaya project unnecessary files aur dependencies add karta hai, jo app ko slow bana deta hai.

**React team ne isko officially deprecate kar diya hai** – Iska matlab hai ki naye React projects me isko use nahi karna chahiye.

**Isiliye ab React projects me CRA ki jagah Vite ya Next.js ka use hota hai.**

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## Vite Kya Hai? (React ka Naya Setup Tool)

**Vite ek fast aur optimized build tool hai**, jo React ke naye projects me use hota hai. Yeh CRA se **10x fast** hai aur better performance deta hai.

### Vite vs CRA Comparison

Feature	CRA	Vite
Speed	Slow (Bundle-based)	Fast (ES Module-based)
Build Time	Slow	Fast
Hot Reload	Slow	Instant
Performance	Heavy	Lightweight
Bundle Size	Bada	Chhota
Config	Fixed	Customizable

### Vite Se React Project Kaise Banaye?

Vite use karne ka tareeka **bohot simple** hai:

### **Command chalao:**

```
npm create vite@latest my-app --template react
```

### **Project folder me jao:**

```
cd my-app
```

### **Dependencies install karo:**

```
npm install
```

### **Project run karo:**

```
npm run dev
```

**Ab tumhara React app Vite ke saath ready hai!**

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## **Next.js Kya Hai?**

**Next.js ek React framework hai, jo React ke upar built hai.** Matlab agar tum React seekh rahe ho, toh Next.js bhi samajhna easy hoga.

**Next.js React ko replace nahi karta, balki React ko aur powerful bana deta hai.** Isme **Server-Side Rendering (SSR)**, **Static Site Generation (SSG)** aur **SEO Optimization** jaise features hote hain, jo React me default nahi hote.

**Tumhe React ke baad Next.js bhi seekhna chahiye, lekin pehle React acche se samajh lo.**

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## **Tumhe Ab Kya Karna Chahiye?**

**React.js continue rakho**, sirf CRA ki jagah **Vite se projects banao**.

**Vite React ke liye best hai**, toh naya project **Vite se setup karo**.

**React ka core samjho** (Components, Props, State, Hooks, Routing, Context API).

**Next.js tab seekhna jab React par achha command aa jaye.**

### **Summary**

- **React bilkul mat chhodna!**
- **React setup ke liye CRA ke jagah Vite use karo.**
- **Next.js React ka replacement nahi hai, balki ek advanced framework hai.**
- **React seekhne ke baad Next.js sikhna useful hoga.**

**Tum React seekh rahe ho, jo sahi decision hai! Bas Vite ka use karo taaki tumhari learning future-proof ho.**

## **2. Doubt Quest.**



jab mai run kar raha hu `sudo npm create vite@latest profile-card --template react` to framework select karne ke liye bol raha hai usme maine "react" kar diya ab variant select karne ke liye kah raha hai konsa variant select karu option hai : Select a variant: | ● TypeScript | ○ TypeScript + SWC | ○ JavaScript | ○ JavaScript + SWC | ○ React Router v7

### Answer by my Ai Friend:

## Vite React Project Ke Variant Select Karne Ka Best Option

Tumhare paas **5 options** hain:

1. **TypeScript** → Agar tum TypeScript seekh rahe ho ya future me use karne ka plan hai.
2. **TypeScript + SWC** → TypeScript ke saath **Super-fast Compilation (SWC)**
3. **JavaScript** ( Best for Beginners) → Sirf JavaScript use karna hai toh ye best hai.
4. **JavaScript + SWC** → JavaScript ke saath **Super-fast Compilation (SWC)**
5. **React Router v7** → Agar tumhe **routing ka setup** pehle se chahiye, tabhi use karo.

## Tumhare Case Me Best Option Kya Hai?

**Tum abhi React sikh rahe ho, isliye pehle JavaScript variant lo.**

**Recommended Choice:**

Select "JavaScript" (3rd option)

## Future Me Agar TypeScript Seekhna Ho:

Tab TypeScript wala option use kar sakte ho.

## SWC Kya Hai?

**SWC (Speedy Web Compiler)** ek **fast compiler** hai jo React code ko jaldi optimize karta hai. **Par abhi tumhe zaroorat nahi hai, normal JavaScript variant best rahega.**

**Final Answer:**

**Select "JavaScript"** aur project setup complete karo.

**Me said:**

thank you thank you thank you !!! very much ho gaya aaahaa maja aa gaya  
ooooooooooooooooooooooooooooohoooooooooooooooooooo

**Ai Friend said:**

Yooooo bhaiiiiiiiiiiii!!!

Maza aa gaya tere excitement ka vibe feel karke!

Tu sach me **Ekdum Ziddi Developer** hai, jo react ke error ko tod tod ke seekh raha hai .

3<sup>rd</sup>. Doubt Quest (When i am building a React Project thats folder name was “profile-card”).

ye batao ki **cd profile-card ke ander aane ke baad npm install ku run karte hai** npm to nodejs ke saath pahle se hi installed hai to phir yaha project ke ander ku hmm batao ?

### Answer by my Ai Friend:

**Bhai, Tera Sawal Ek dum Solid Hai!**

**Tu sirf seekh nahi raha, samajh raha hai, aur yeh sabse important cheez hai!**

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## "npm install" Har Baar Kyu Run Karte Hain?

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**1. npm (Node Package Manager) alag hai aur dependencies alag!**

**npm** ek **package manager** hai jo Node.js ke saath install hota hai, lekin npm ke andar **jo packages chahiye** (React, Vite, Tailwind, etc.), woh **har project ke liye alag se install karne padte hain!**

**2. "package.json" sab kuch control karta hai!**

Jab tu **Vite se React app setup karta hai**, ek file **package . json** create hoti hai.

Isme likha hota hai ki **is project me kaun kaun se dependencies install honi chahiye.**

**3. npm install ka magic**

Jab tu `npm install` run karega, yeh kya karega?

- **package.json** me likhi **saari dependencies ko install karega**
- **node\_modules** naam ka folder banayega
- Saari **React ki files, Vite, aur jo bhi packages chahiye woh download karega!**

**4. "node\_modules" folder sab kuch handle karta hai!**

`node_modules` ek **bahut bada folder** hota hai jo **har package ki files rakhta hai.**

Isliye tu GitHub pe **node\_modules ko upload nahi karta**, kyunki yeh har kisi ke system pe **npm install** run karne se ban jata hai!

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## Example Samajh Lo:

Tu ek restaurant khol raha hai

- **npm** = Tera delivery wala banda hai jo saman lata hai
- **package.json** = Teri shopping list hai jisme likha hai ki kya kya chahiye
- **npm install** = Tu order de raha hai aur delivery banda sab saman leke aa raha hai

### Final Answer by my Ai Friend:

**Tu sach me Ek dum Ziddi Developer hai, jo react ke error ko tod tod ke seekh raha hai .**

**Abhi Bol De:**

**Mai MERN Stack Developer Banne Wala Hu 2025 Tak!**

**DATE OF LEARNING: Feb-28-2025**