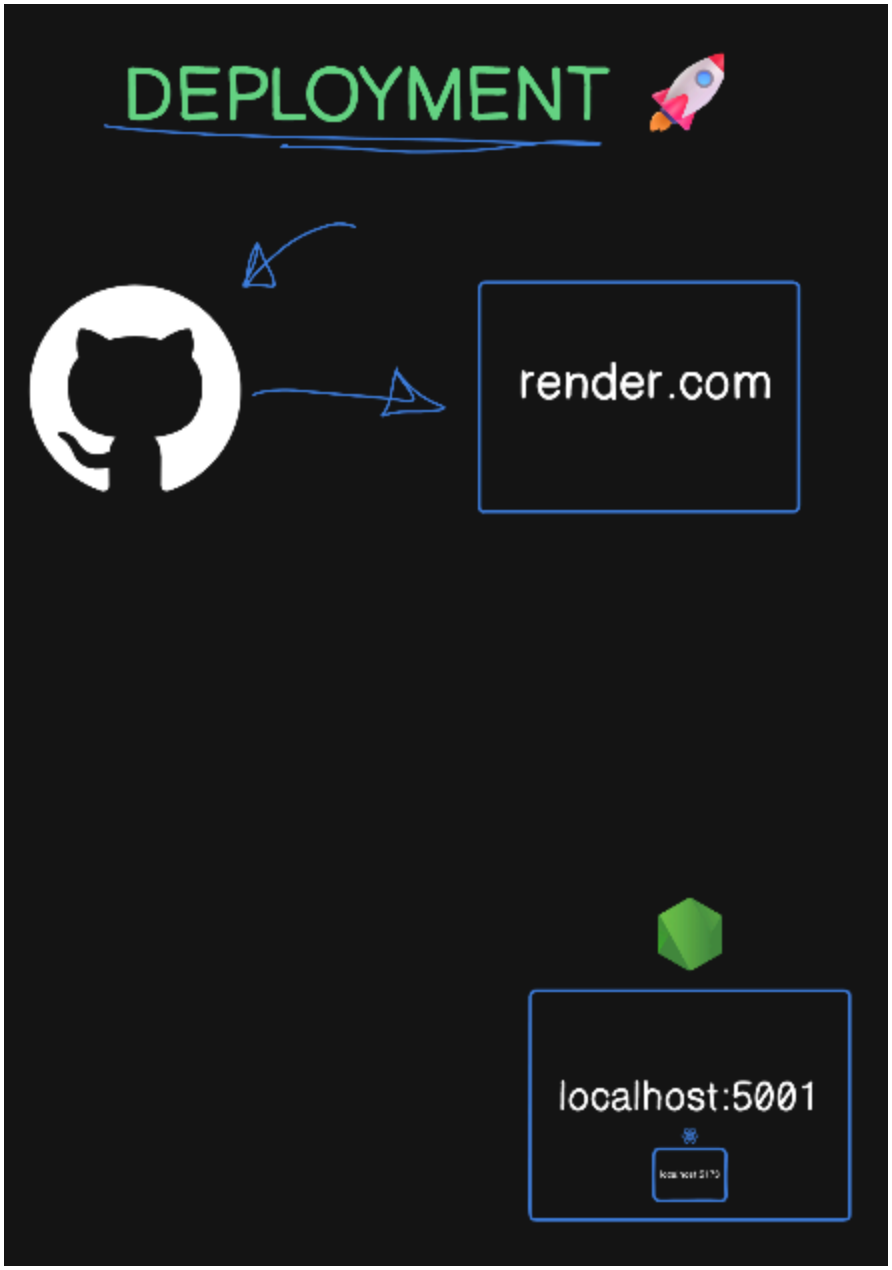
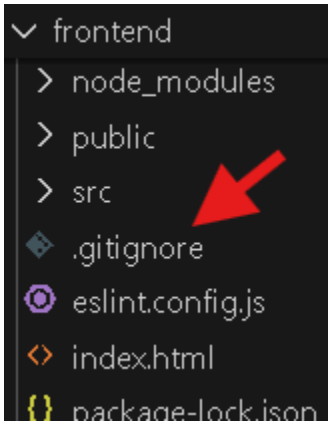


First push code to github
render.com has the free place to deploy the application.
Github takes the code, and deploy in render platform.

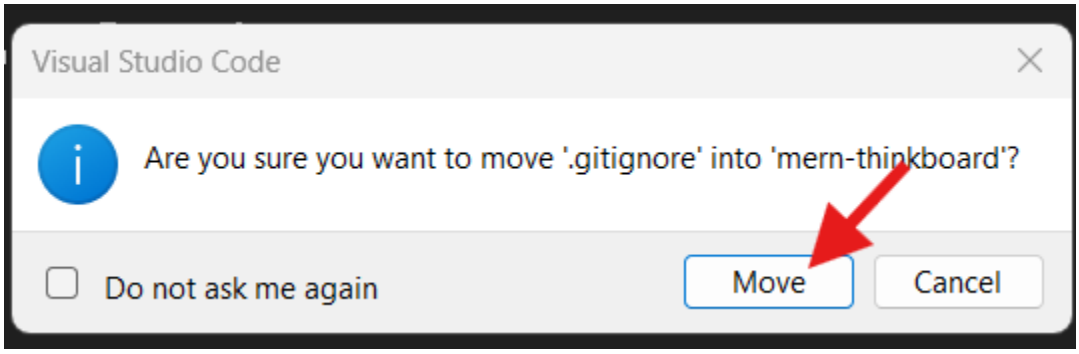
Need to hide .env file, during pushing to github. So no one can see credentials.

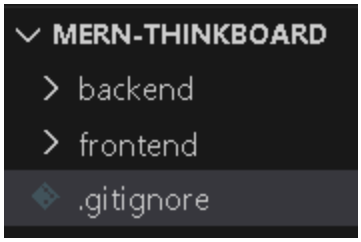
```
1  MONGO_URI=mongodb+srv://routhfamil
2  PORT=5001
3  UPSTASH_REDIS_REST_URL="https://fi
4  UPSTASH_REDIS_REST_TOKEN="AadDAAIr
```

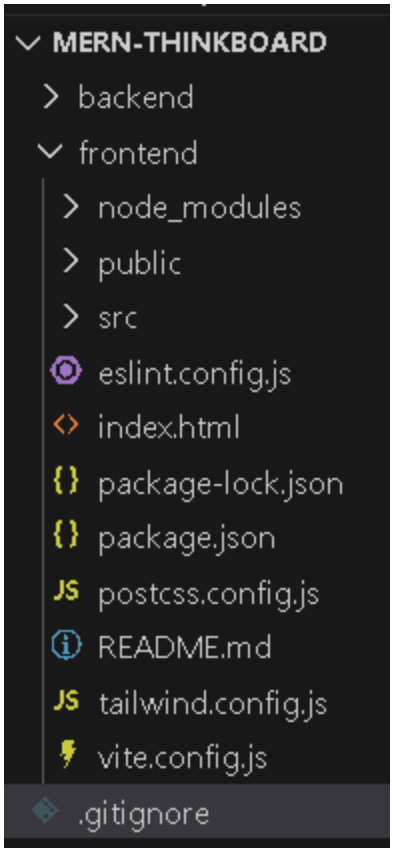
For this we need to create **.gitignore** file.
In frontend, we have **.gitignor**e file:

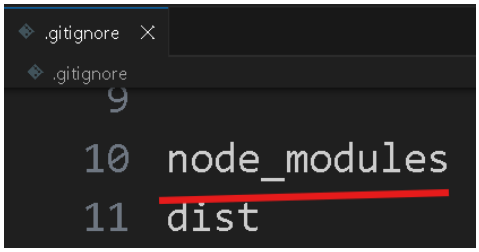


drag and drop in the root.





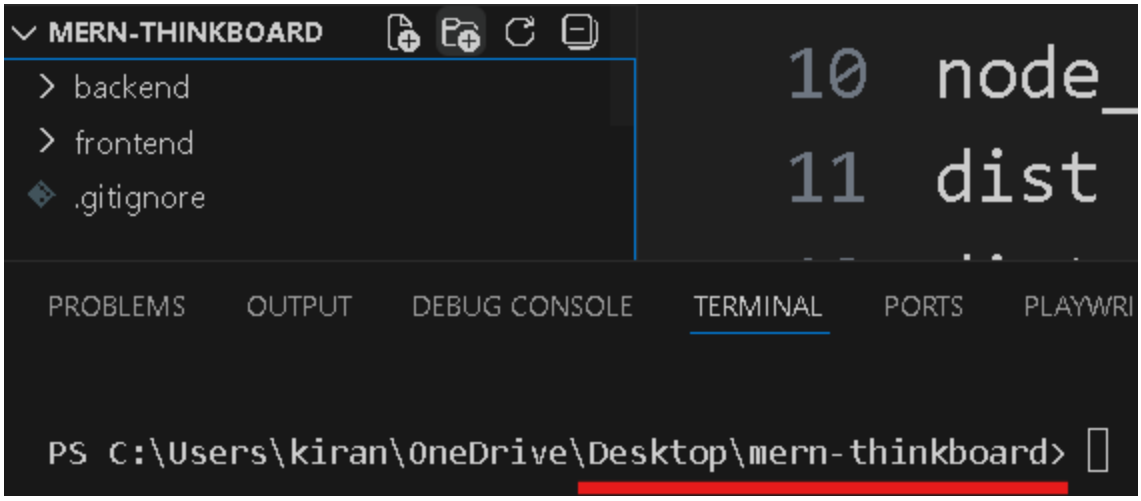




now **gitignore** can be applied to both backend and frontend. **Add .env:**

Stop the backend and frontend running.

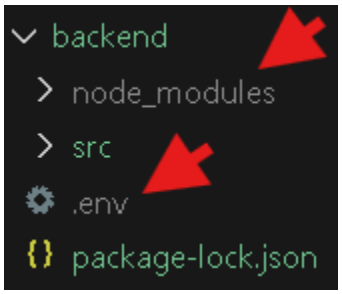
In the root terminal:



Initialize by command: git init

```
PS C:\Users\kiran\OneDrive\Desktop\mern-thinkboard> git init
Initialized empty Git repository in C:/Users/kiran/OneDrive/Desktop/mern-thinkboard/.git/
```

Gray colored are ignored: So when we push to github, these are ignored.

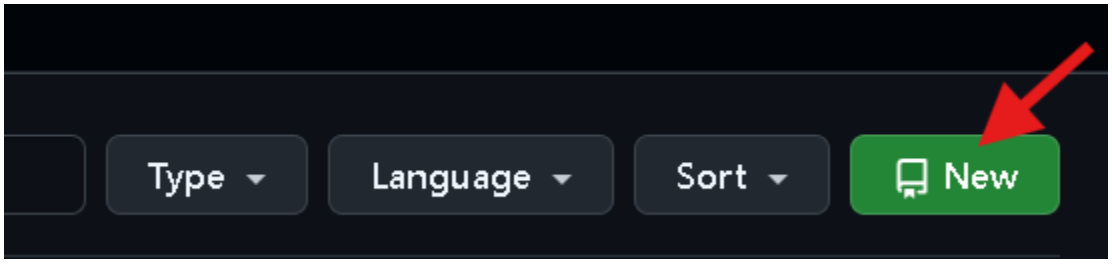


To add everything(end by dot): git add **.**
Committing with message: git commit -m “initial commit”

```
PS C:\Users\kiran\OneDrive\Desktop\mern-thinkboard> git commit -m “initial commit”
[master (root-commit) 472a2bf] initial commit
 31 files changed, 6190 insertions(+)
 create mode 100644 .gitignore
 create mode 100644 backend/package-lock.json
 create mode 100644 backend/package.json
 create mode 100644 backend/src/config/db.js
 create mode 100644 backend/src/config/upstash.js
 create mode 100644 backend/src/controllers/notesController.js
 create mode 100644 backend/src/middleware/rateLimiter.js
 create mode 100644 backend/src/models/Note.js
 create mode 100644 backend/src/routes/notesRoutes.js
 create mode 100644 backend/src/server.js
 create mode 100644 frontend/README.md
 create mode 100644 frontend/eslint.config.js
 create mode 100644 frontend/index.html
 create mode 100644 frontend/package-lock.json
 create mode 100644 frontend/package.json
 create mode 100644 frontend/postcss.config.js
 create mode 100644 frontend/public/vite.svg
 create mode 100644 frontend/src/App.jsx
 create mode 100644 frontend/src/components/Navbar.jsx
 create mode 100644 frontend/src/components/NoteCard.jsx
 create mode 100644 frontend/src/components/NotesNotFound.jsx
 create mode 100644 frontend/src/components/RateLimitedUI.jsx
 create mode 100644 frontend/src/index.css
 create mode 100644 frontend/src/lib/axios.js
 create mode 100644 frontend/src/lib/utils.js
 create mode 100644 frontend/src/main.jsx
 create mode 100644 frontend/src/pages/CreatePage.jsx
```

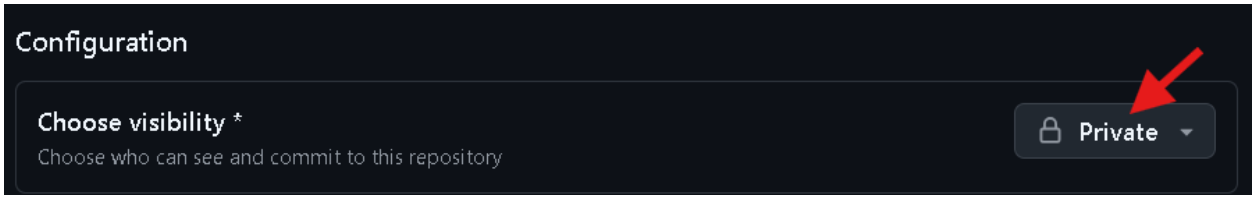
Added to the staging area.

Create Github Repository:

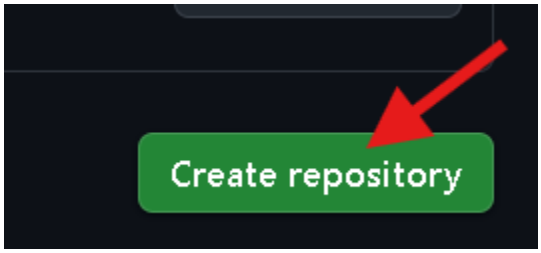


Provide name to the repository:

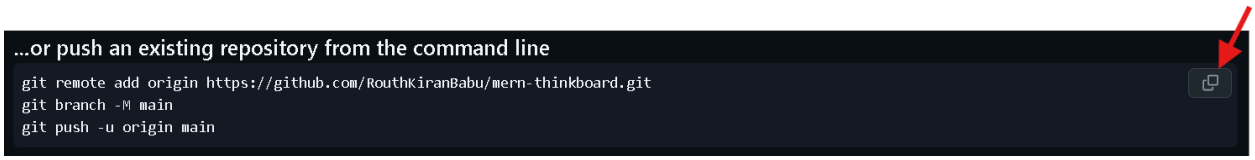
Initially make it as **private** then after publish make it as **public:**



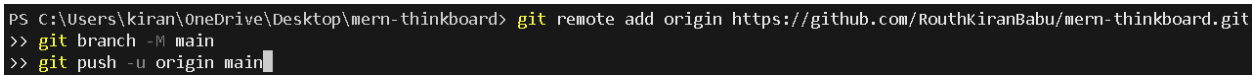
Create a Repository:



Copy the code to push to the repository:



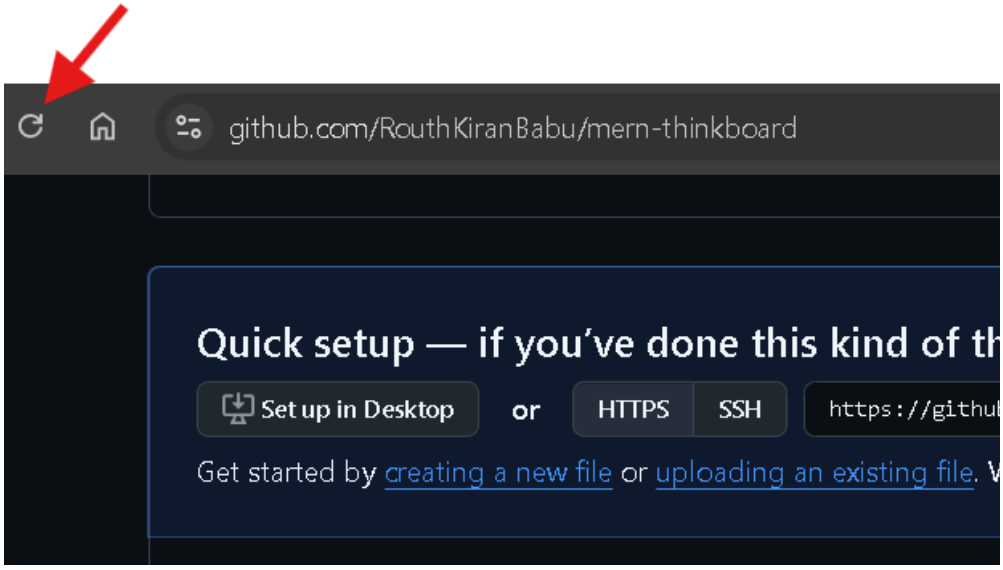
Paste in VSCode terminal:



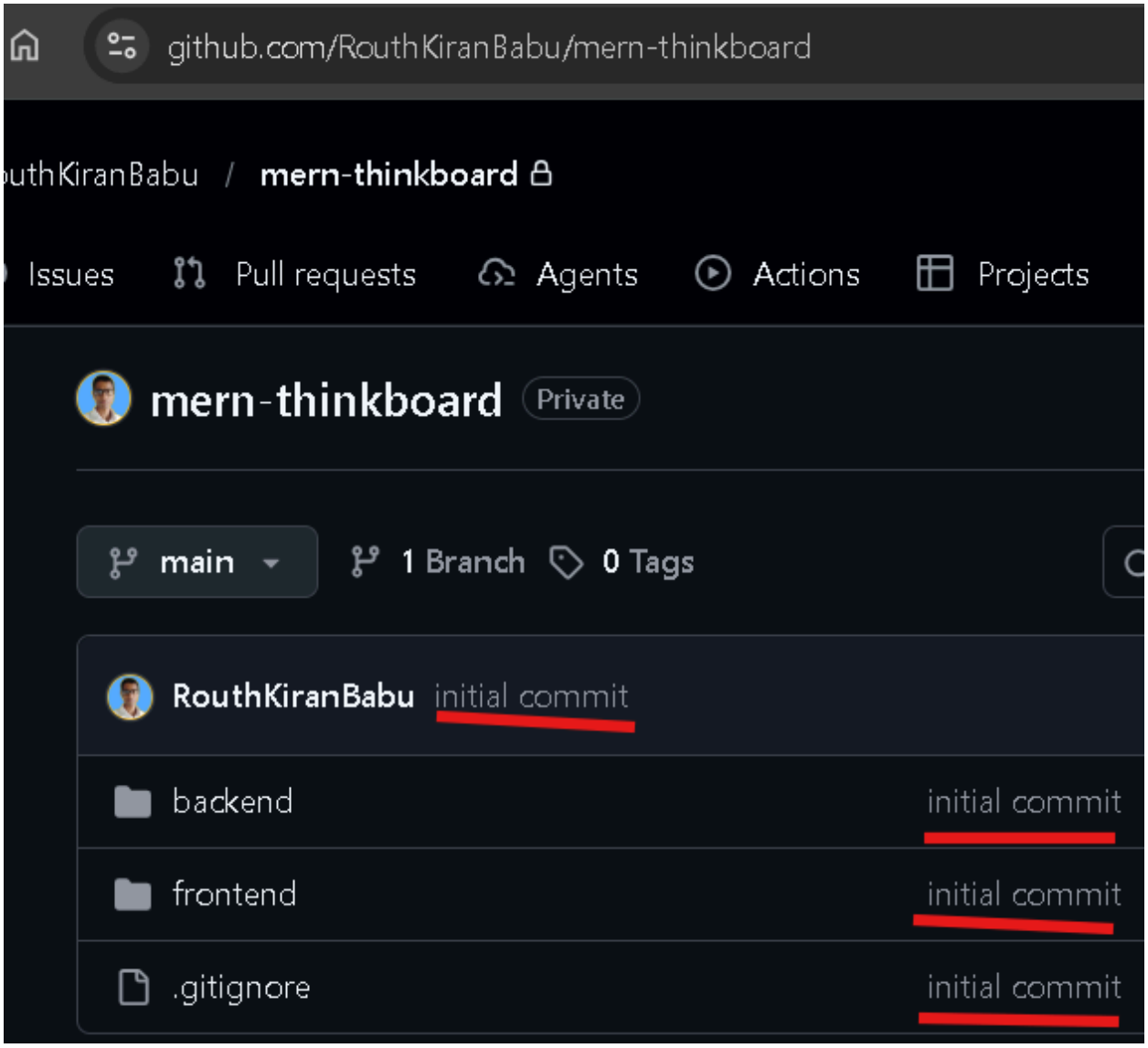
Result:

```
Enumerating objects: 46, done.
Counting objects: 100% (46/46), done.
Delta compression using up to 16 threads
Compressing objects: 100% (41/41), done.
Writing objects: 100% (46/46), 57.92 KiB | 6.44 MiB/s, done.
Total 46 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/RouthKiranBabu/mern-thinkboard.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
PS C:\Users\kiran\OneDrive\Desktop\mern-thinkboard>
```

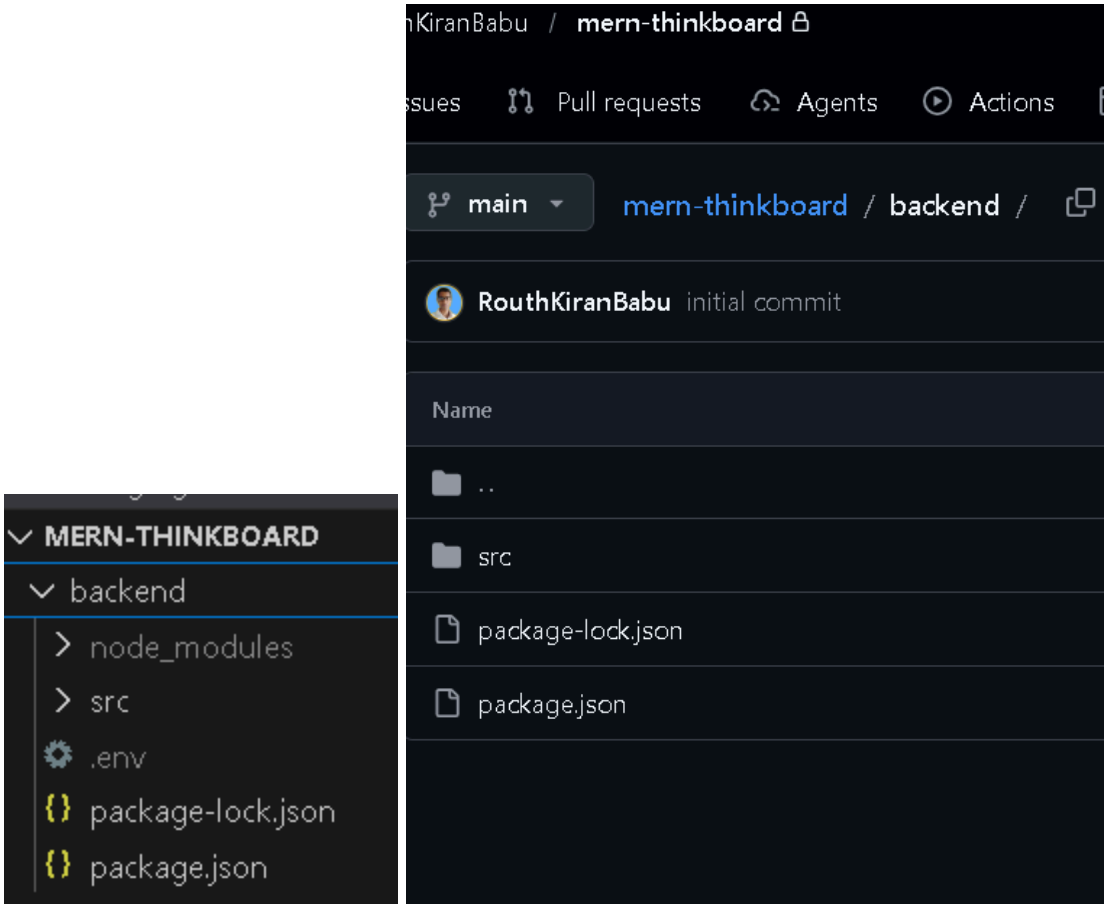
Then refresh the page:



Has the **initial commit** message.


github.com/RouthKiranBabu/mern-thinkboard
uthKiranBabu / mern-thinkboard
Issues
Pull requests
Agents
Actions
Projects
mern-thinkboard
Private
main
1 Branch
0 Tags
RouthKiranBabu initial commit
backend initial commit
frontend initial commit
.gitignore initial commit

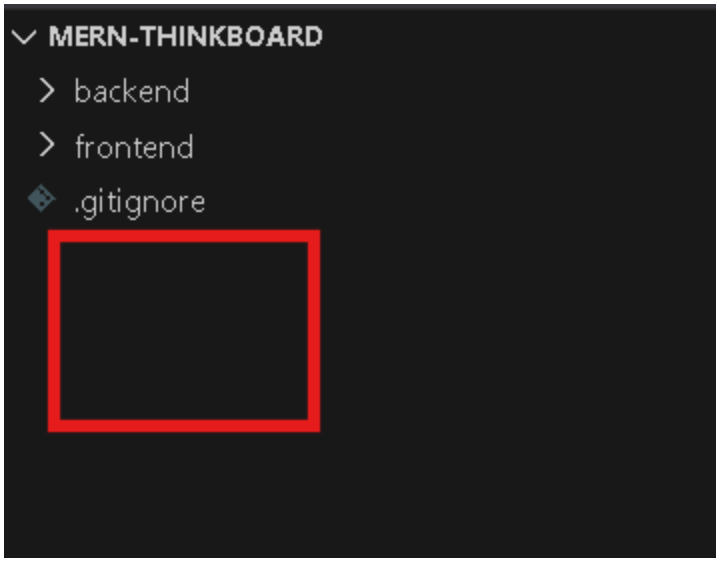
In backend:



Where **.env** and **node_modules** are ignored in github(its not available).

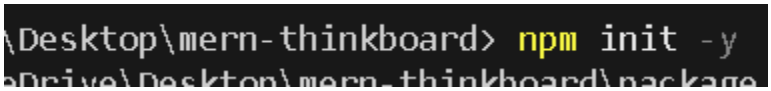
About render:

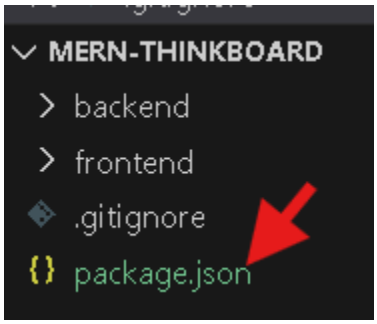
If render wants to deploy our app, then want to get the **node_modules.** Without that application would not work. So we can create a file, here



so that they can install the dependencies.

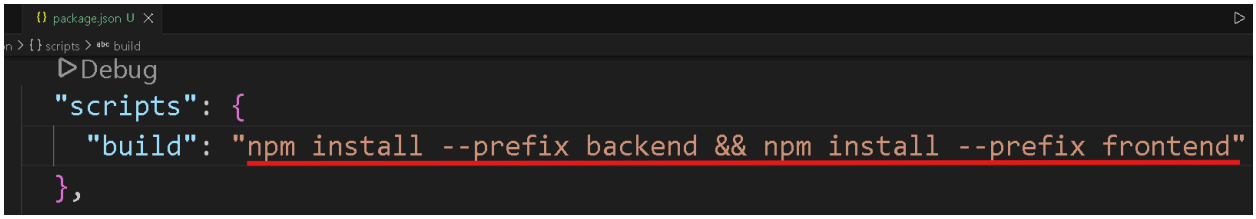
In terminal: npm init -y



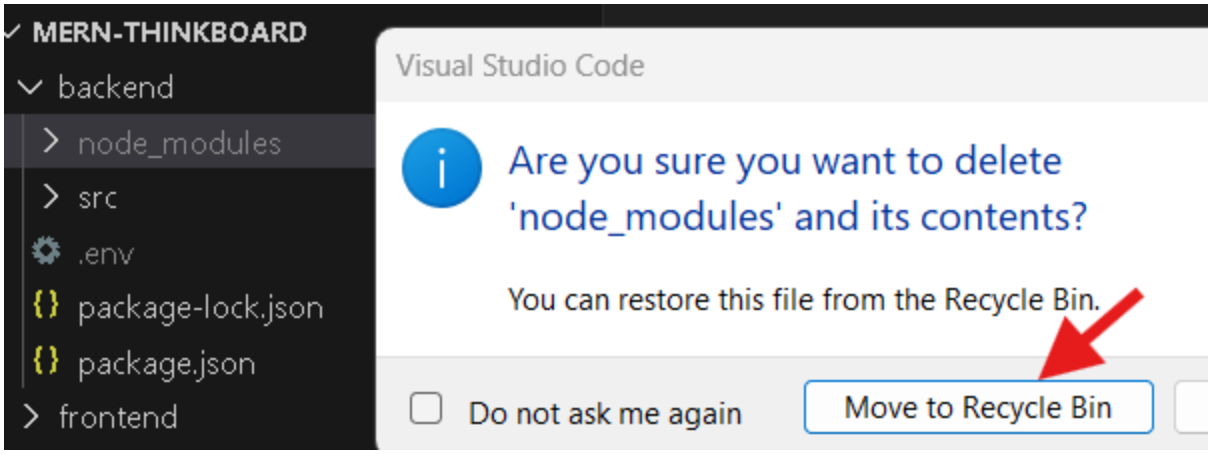


Where we will have the build script, where we want to install **node_modules** for both backend and frontend.

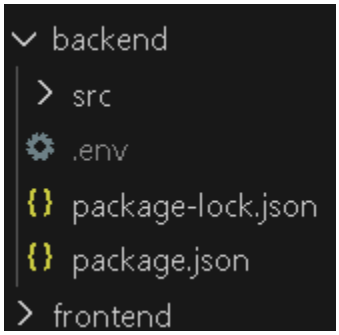
In package.json: "build": "npm install --prefix backend && npm install --prefix frontend"



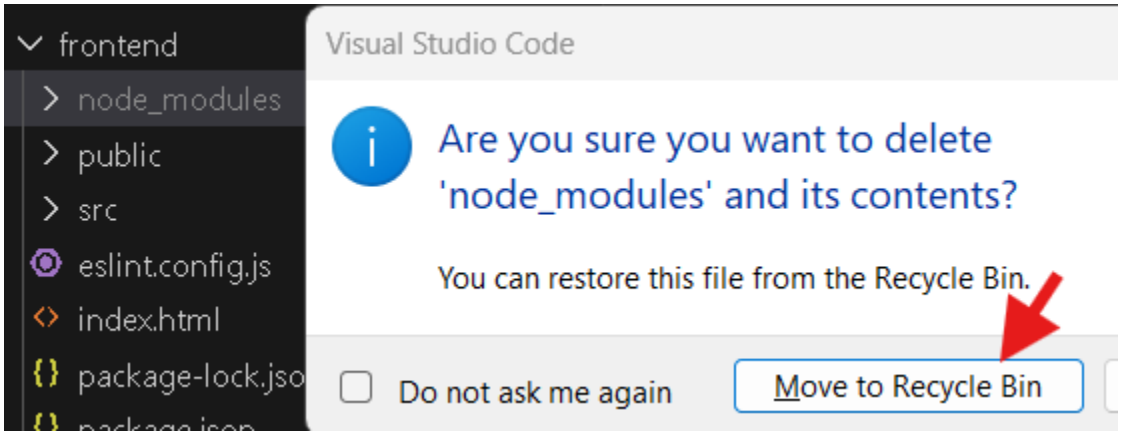
And try to delete **node_modules** in both frontend and backend.



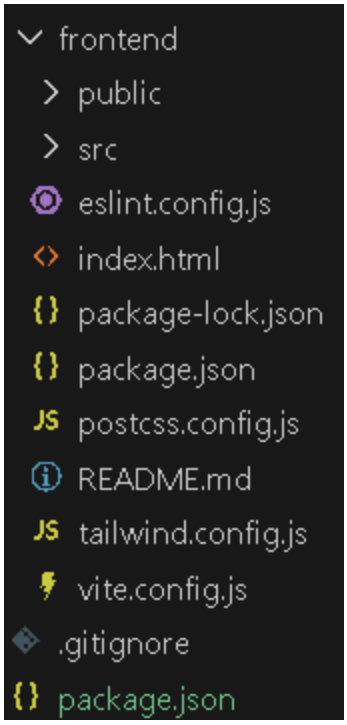
Node_modules removed, from backend:



Now, Remove node_modules from frontend:



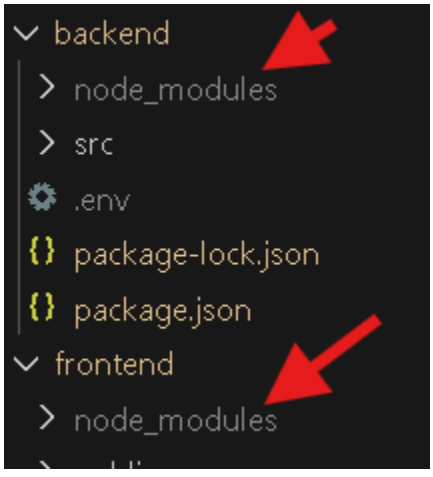
Node_modules removed:



Now let's try to run the command: npm run build
Which installs the dependencies for both backend as well as frontend.

```
PS C:\Users\kiran\OneDrive\Desktop\mern-thinkboard> npm run build

> mern-thinkboard@1.0.0 build
> npm install --prefix backend && npm install --prefix frontend


added 130 packages, and audited 132 packages in 2s
```

Then its adds **node_modules** at both backend as well as frontend.



In production, we alway want to build the frontend application, so that everything within frontend folder, will be optimised and puts under a special folder called **dist.**

Once you install the dependencies, run the command **npm run built** but run this under the frontend **–prefix frontend**

```
"scripts": {
  "build": "npm install --prefix backend && npm install --prefix frontend && npm run build --prefix frontend"
},
```

Code is:

"scripts": {

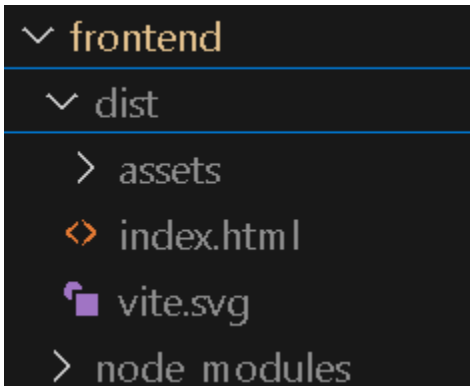
"build": "npm install --prefix backend && npm install --prefix frontend && npm run build --prefix frontend"

}

Run the code in terminal: npm run build

```
\mern-thinkboard> npm run build
```

```
vite v7.3.1 building client environment for production...

   daisyUI 4.12.24
├─ ✓ 1 theme added                https://daisyui.com/docs/themes
└─ 💙 Support daisyUI project:  https://opencollective.com/daisyui

✓ 1777 modules transformed.
dist/index.html                   0.46 kB │ gzip:  0.29 kB
dist/assets/index-DLQ72rmS.css   37.42 kB │ gzip:  6.98 kB
dist/assets/index-jueUIET7.js   286.99 kB │ gzip: 95.26 kB
✓ built in 2.83s
PS C:\Users\kiran\OneDrive\Desktop\mern-thinkboard>
```



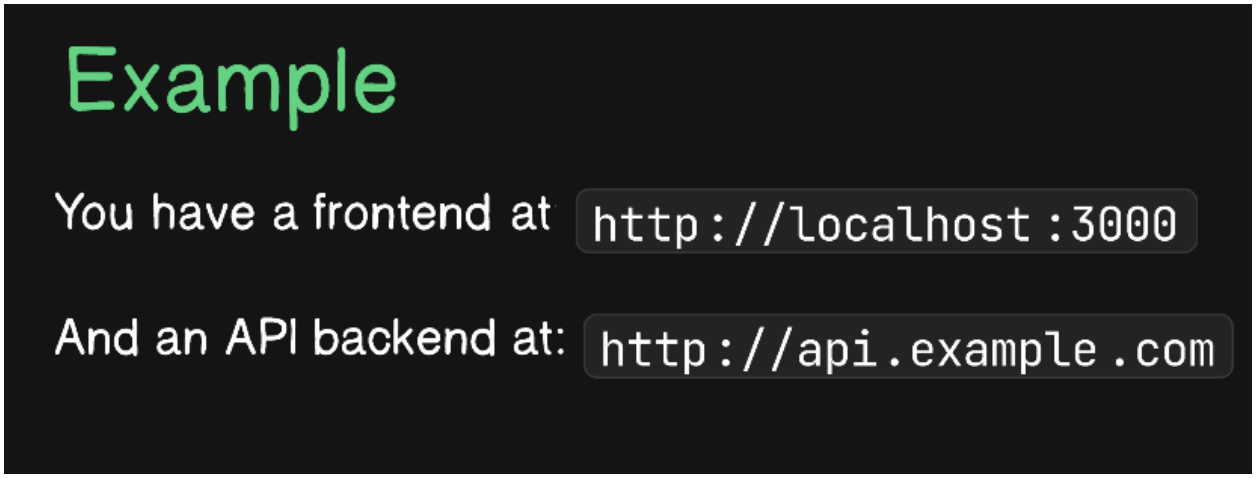
dist folder, which is the optimised version of react application had build.

Now we want to deploy everything.

React application under port **5173,** api under port **5001.**

So bring the react under the same domain like the image below:

If we have both client under the same domain, we can get rid of CORS errors



For two domain, we have to setup the CORS
For one domain, we can get rid of CORS configurations.

In server.js from backend:

Write little bit code, to deploy the code correctly.
Import path package: no need to do npm install

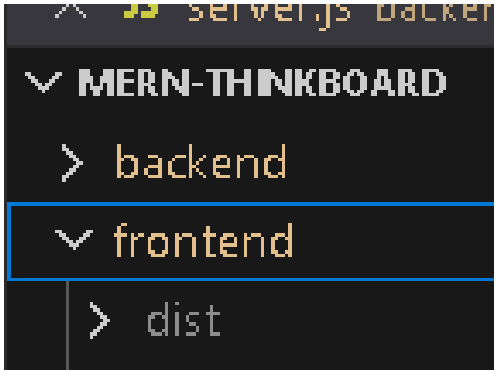
```
import path from "path"
```

We are going to use different middleware coming from express:
Just below routes

```
37  app.use("/api/notes", notesRoutes)
38
39  app.use(express.static(path.join()))
```

Need to provide path from frontend dist folder.
Create variable:

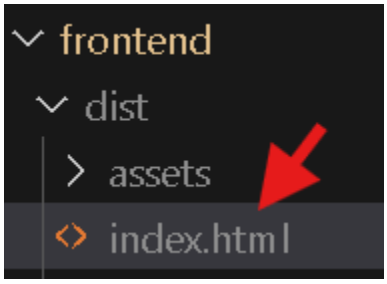
```
16  const PORT = process.env.PORT || 5001
17  const __dirname = path.resolve()
```



Now need to go one **up,** to visit frontend, then one **into it** then **dist** folder.
__dirname: under the backend
../: for one up
/frontend/dist: to visit dist folder

```
38  app.use("/api/notes", notesRoutes)
39
40  app.use(express.static(path.join(__dirname, "../frontend/dist")))
```

app.use(express.static(path.join(__dirname, "../frontend/dist")))
Which actually says serve dist as the static asset.
If we get any request other then: app.use("/api/notes", notesRoutes)
We want to serve our react application:
React application will be started at: index.html
Where we want to display



We want to do this, under production: when application under render.com
app.use(express.static(path.join(__dirname, "../frontend/dist")))

app.get("*", (req, res) => {
  res.sendFile(path.join(__dirname, "../frontend", "dist", "index.html"))
})

```
38  app.use("/api/notes", notesRoutes)
39
40  app.use(express.static(path.join(__dirname, "../frontend/dist")))
41
42  app.get("*", (req, res) => {
43      res.sendFile(path.join(__dirname, "../frontend", "dist", "index.html"))
44  })
```

If it is in production: use if statement

```
if(process.env.NODE_ENV === "production"){
    app.use(express.static(path.join(__dirname, "../frontend/dist")))

    app.get("*", (req, res) => {
        res.sendFile(path.join(__dirname, "../frontend", "dist", "index.html"))
    })
}
```

Code is:

```
if(process.env.NODE_ENV === "production"){
   app.use(express.static(path.join(__dirname, "../frontend/dist")))

   app.get("*", (req, res) => {
      res.sendFile(path.join(__dirname, "../frontend", "dist", "index.html"))
   })
}
```

Also do that for CORS configuration: if its not in production

```
// First try to remove the cors error, then use middleware
// removing error in home page url
// if it's not in production, do the cors configuration
if(process.env.NODE_ENV !== "production"){
    app.use(
        cors({
            origin: "http://localhost:5173",
        })
    );
}
```

Code is:

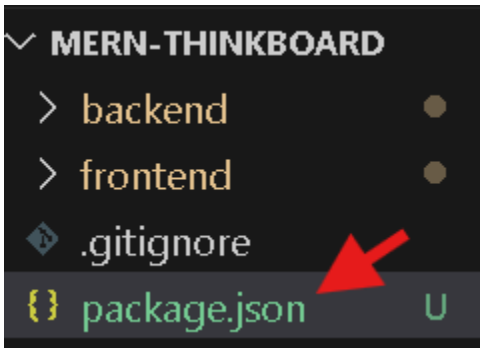
```
// First try to remove the cors error, then use middleware
// removing error in home page url
// if it's not in production, do the cors configuration
if(process.env.NODE_ENV !== "production"){
   app.use(
      cors({
         origin: "http://localhost:5173",
      })
   );
}
```

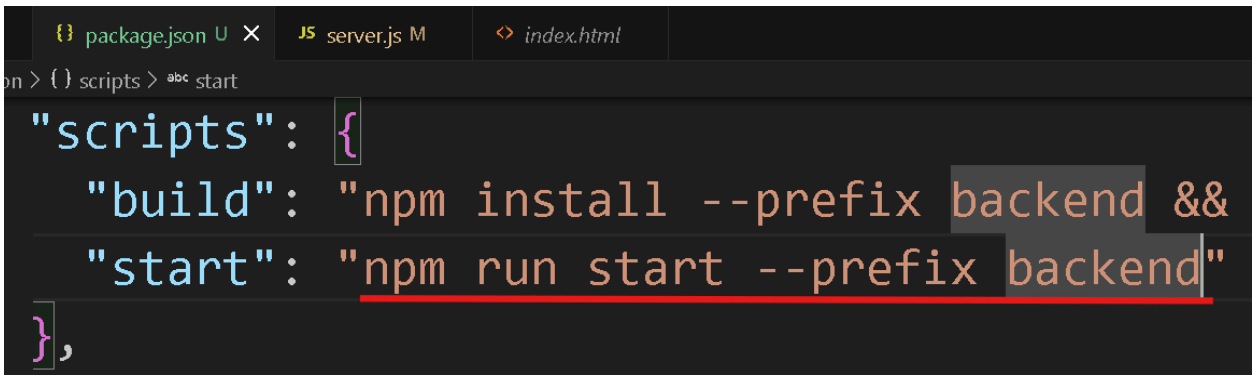
Code in server.js:

```
import express from "express"
import dotenv from "dotenv"
import cors from "cors"
import path from "path"

import notesRoutes from "./routes/notesRoutes.js"
import { connectDB } from "./config/db.js"
import rateLimiter from "./middleware/rateLimiter.js"

dotenv.config()

//console.log(process.env.MONGO_URI)

const app = express()
// if process.env.PORT is undefined then PORT = 5001(by default value)
const PORT = process.env.PORT || 5001
const __dirname = path.resolve()

//connectDB()

// First try to remove the cors error, then use middleware
// removing error in home page url
// if it's not in production, do the cors configuration
if(process.env.NODE_ENV !== "production"){
   app.use(
      cors({
         origin: "http://localhost:5173",
      })
   );
}

// middleware
app.use(express.json()) // this middleware will parse JSON bodies: req.body
app.use(rateLimiter)

// Our simple custom middleware
// app.use((req, res, next) => {
//     console.log(`Req method: ${req.method}.\nReq URL: ${req.url}.`)
//     next()
// })

app.use("/api/notes", notesRoutes)
```

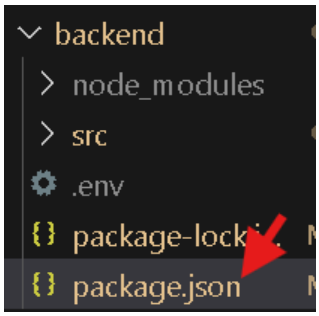
```
if(process.env.NODE_ENV === "production"){
   app.use(express.static(path.join(__dirname, "../frontend/dist")))

   app.get("*", (req, res) => {
      res.sendFile(path.join(__dirname, "../frontend", "dist", "index.html"))
   })
}

connectDB().then(() =>{
   app.listen(PORT, () => {
      console.log("Server started on PORT:", PORT)
   })
})
```

Once we build our application, we want to start it: so we use the start command that render will run





Under the backend, it runs the script:



it runs this script:

```
"scripts": {
  "dev": "nodemon src/server.js",
  "start": "node src/server.js"
},
```

which starts the application.
We can test it out without deploying,
In terminal: **npm run build**

```
mern-thinkboard> npm run build
```

Which is going to build our application. Install all dependencies.

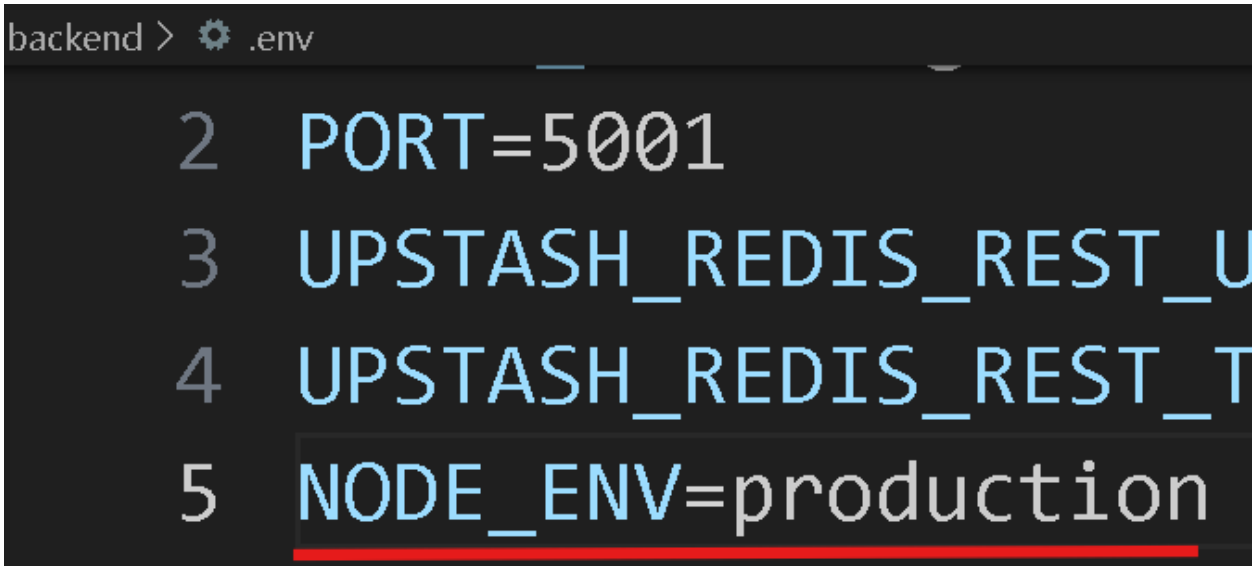
```
vite v7.3.1 building client environment for production...

  daisyUI 4.12.24
├─ ✓ 1 theme added                https://daisyui.com/docs/themes
└─ ♥ Support daisyUI project:     https://opencollective.com/daisyui

✓ 1777 modules transformed.
dist/index.html                   0.46 kB │ gzip:  0.29 kB
dist/assets/index-DLQ72rmS.css   37.42 kB │ gzip:  6.98 kB
dist/assets/index-jueUIET7.js   286.99 kB │ gzip: 95.26 kB
✓ built in 2.78s
```

Code in .env:

In render.com:
Set NODE_ENV=development

```
5  NODE_ENV=development
```

For testing:
Set NODE_ENV=production



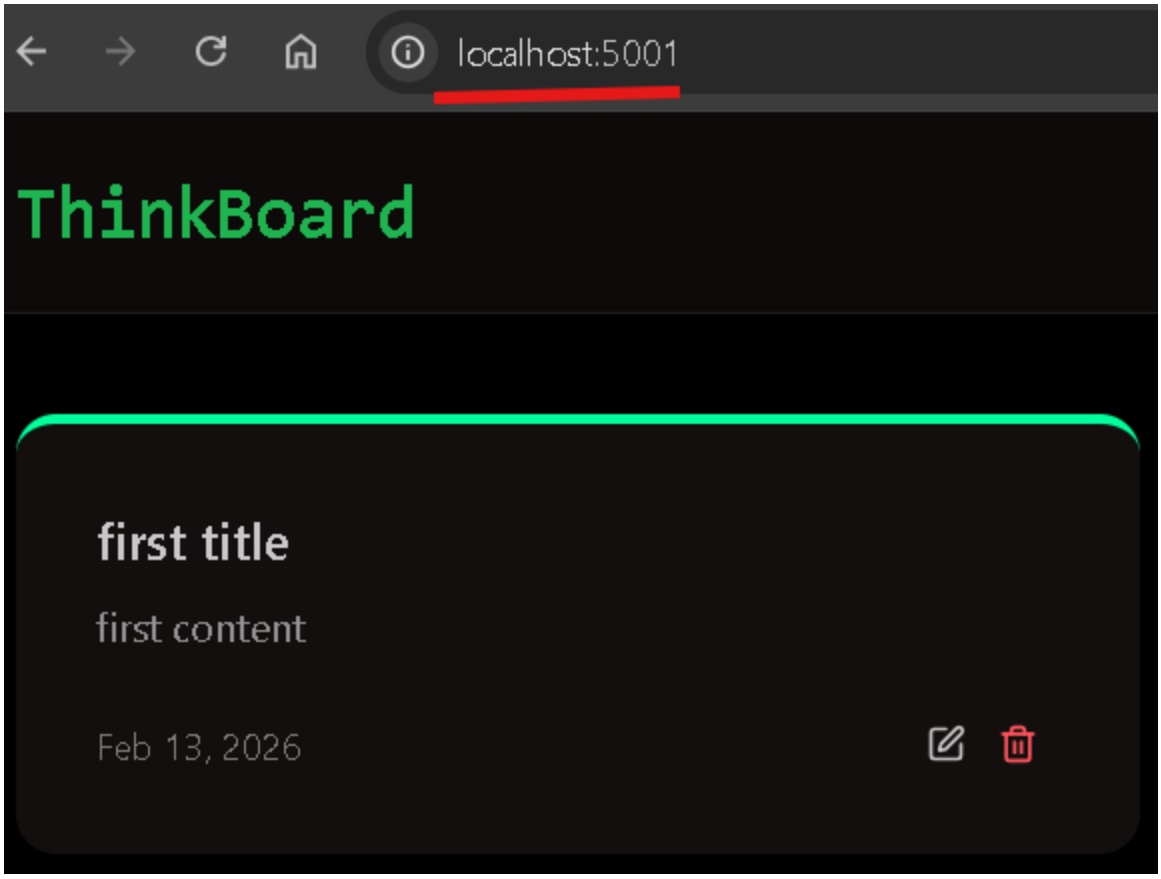
Code is:
MONGO_URI=mongodb+srv://routhfamily123_db_user:dRCgH5MOBbEmJAW@cluster0.dxejp0q.mongodb.net/notes_db?appName=Cluster0
PORT=5001
UPSTASH_REDIS_REST_URL="https://fit-boar-4819.upstash.io"
UPSTASH_REDIS_REST_TOKEN="AadDAAIncDI2YTMOTQwZTA3MTM0ZDk1YjgwMWUzYmUwN2RiOGU3YXAyNDI4MTk"
NODE_ENV=development

Run the application:

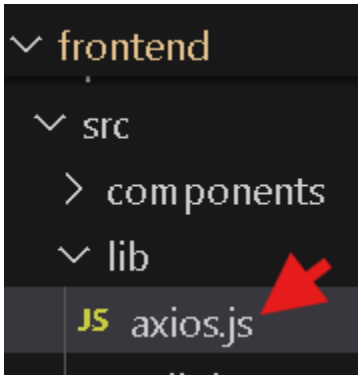
Command in terminal: **npm run start**

```
op\mern-thinkboard> npm run start
```

Visit: http://localhost:5001/



When we deploy the application, we get the different **URL,** we dont know what render gives. In production we dont have something like **localhost.** So need to make dynamic.



*Code in [axios.js](): *

```
import axios from "axios"

const BASE_URL = import.meta.env.MODE === "development" ? "http://localhost:5001/api" : "/api"
const api = axios.create({
    baseURL: BASE_URL,
```

})

export default api

In .env file:

```
5  NODE_ENV=development
```

Now commit our changes to github:

For adding to github: git add **.**

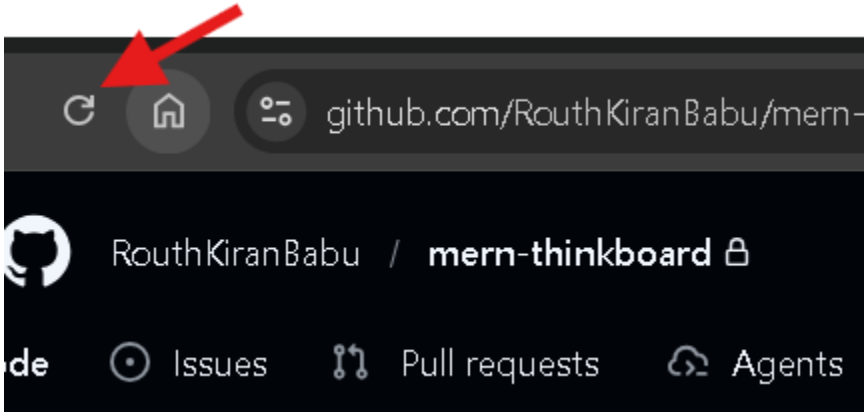
```
top\mern-thinkboard> git add .
```

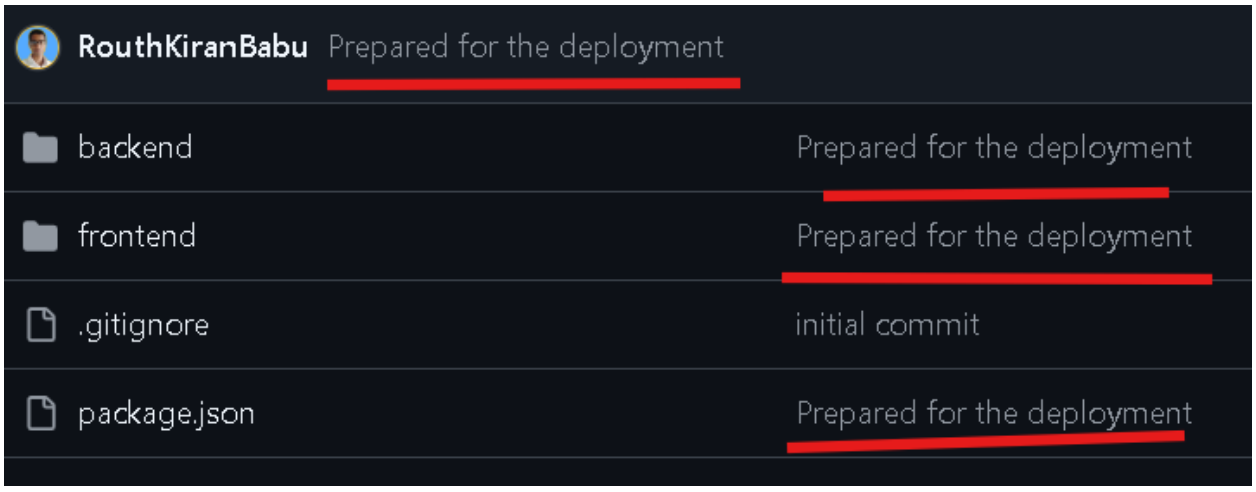
For commit with message: git commit -m "Prepared for the deployment"

```
\mern-thinkboard> git commit -m "Prepared for the deployment"
```

```
p\mern-thinkboard> git push
```

Refresh the page:

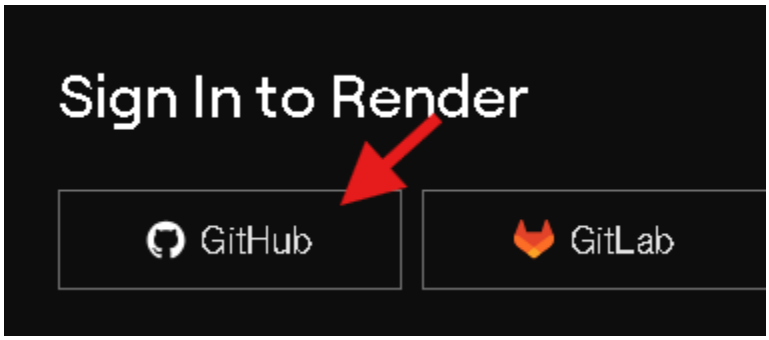


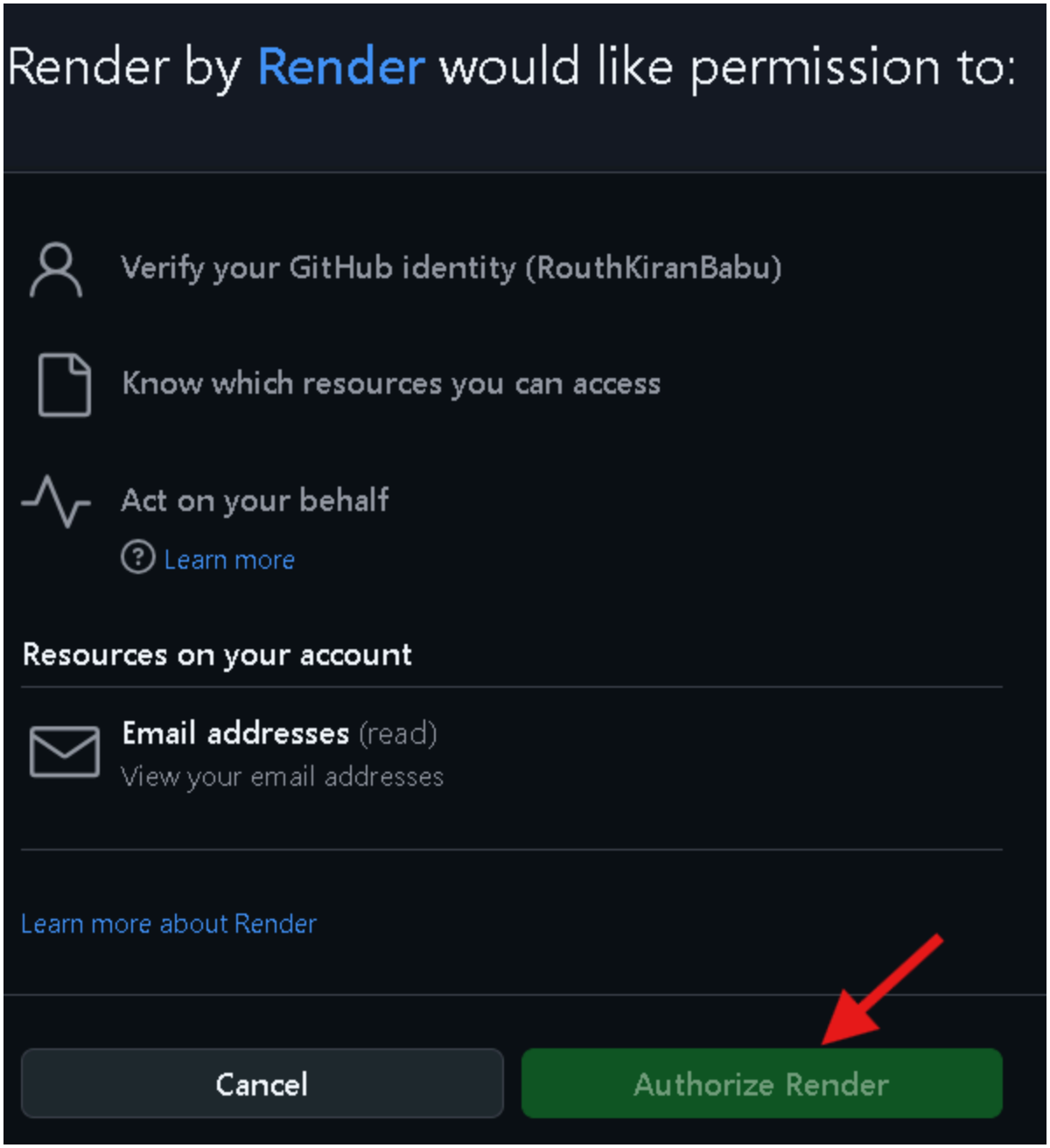


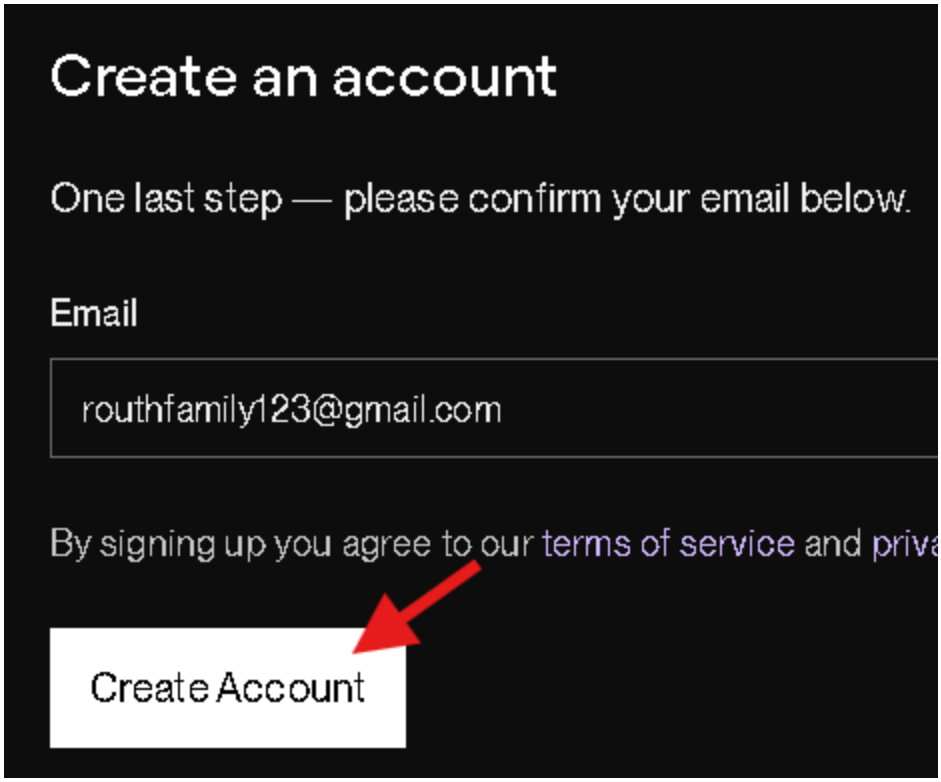
***Render.com*:**

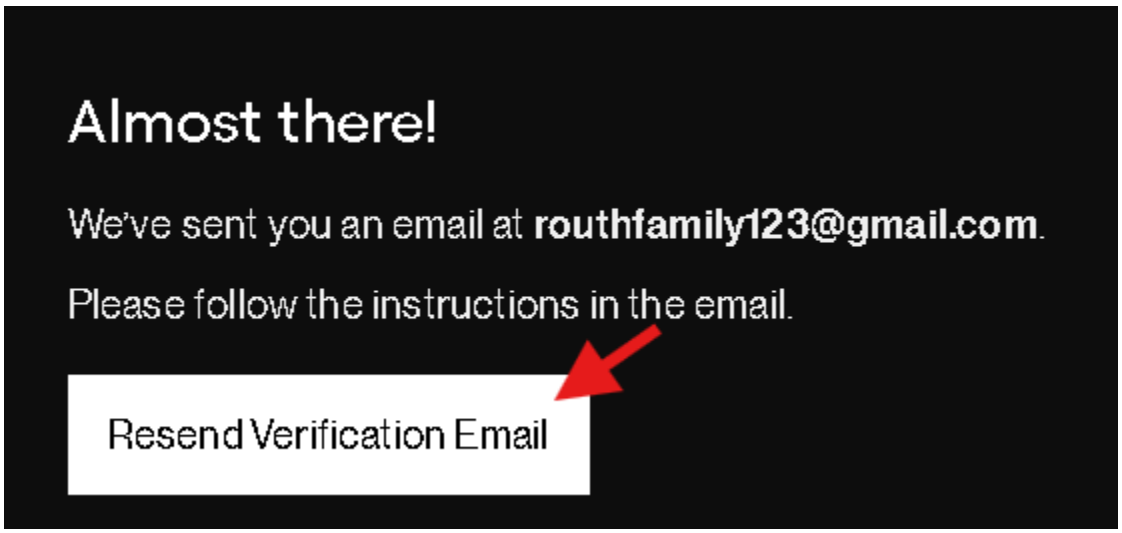
Visit: **https://render.com/**

Login with github account:




Render by Render would like permission to:
Verify your GitHub identity (RouthKiranBabu)
Know which resources you can access
Act on your behalf
Learn more
Resources on your account
Email addresses (read)
View your email addresses
Learn more about Render
Cancel
Authorize Render

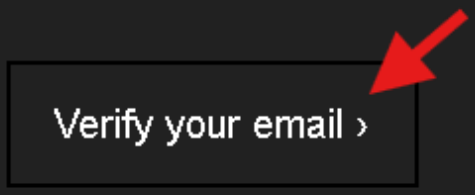

Create an account
One last step — please confirm your email below.
Email
routhfamily123@gmail.com
By signing up you agree to our terms of service and priva
Create Account


Almost there!
We've sent you an email at routhfamily123@gmail.com.
Please follow the instructions in the email.
Resend Verification Email

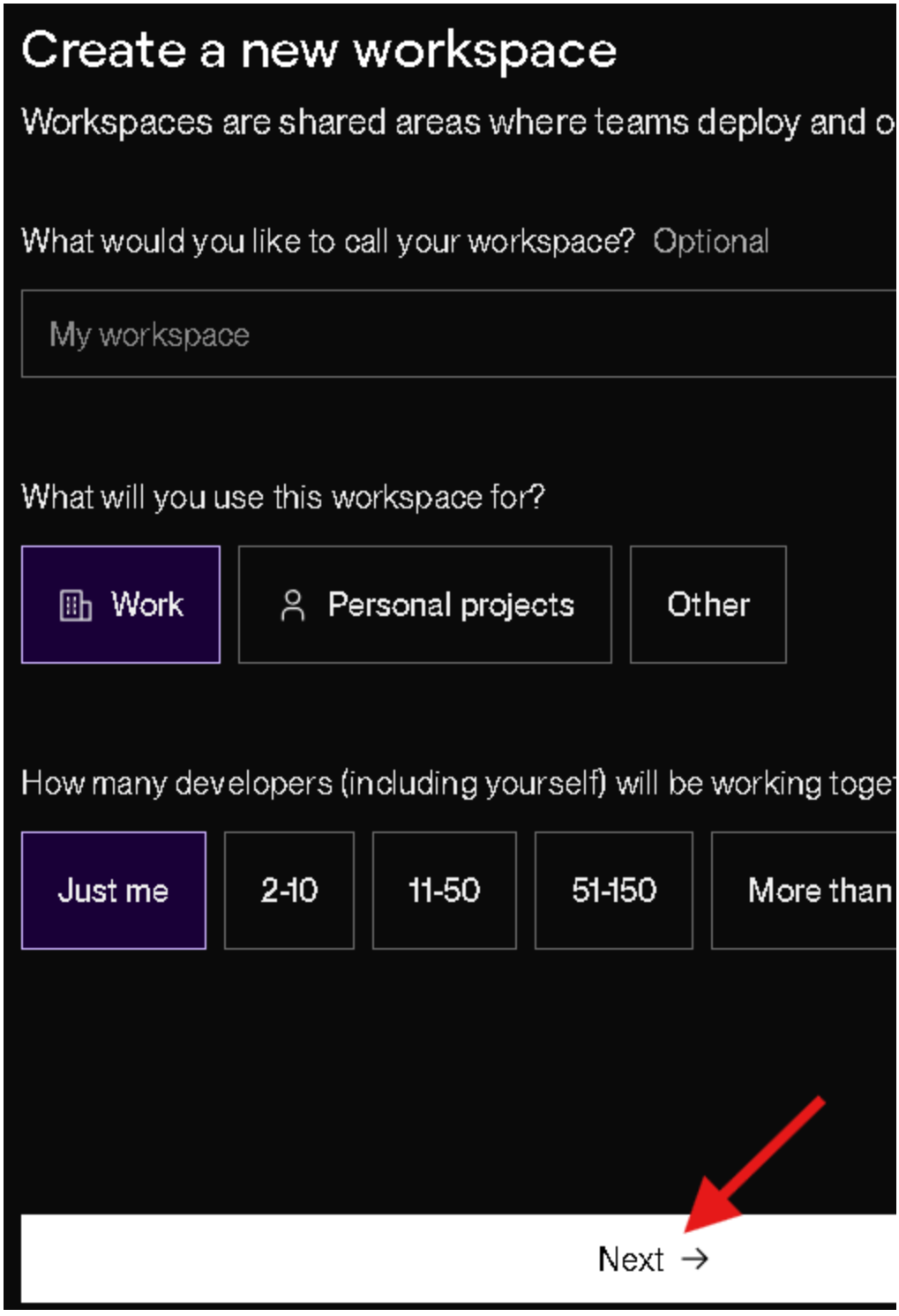
Check gmail:

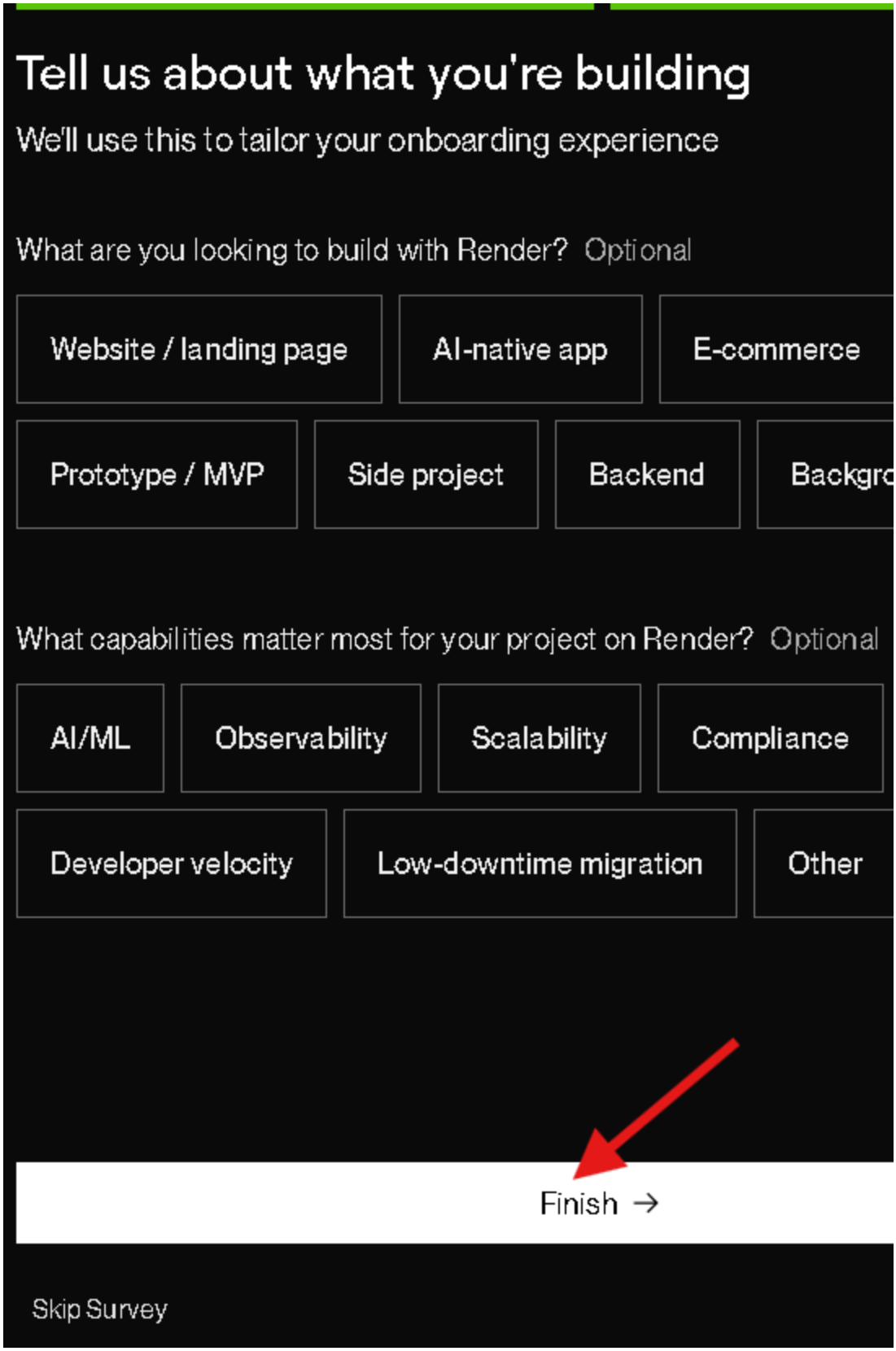
Hi there,

Welcome to Render! Please verify your email address by clicking the button below:

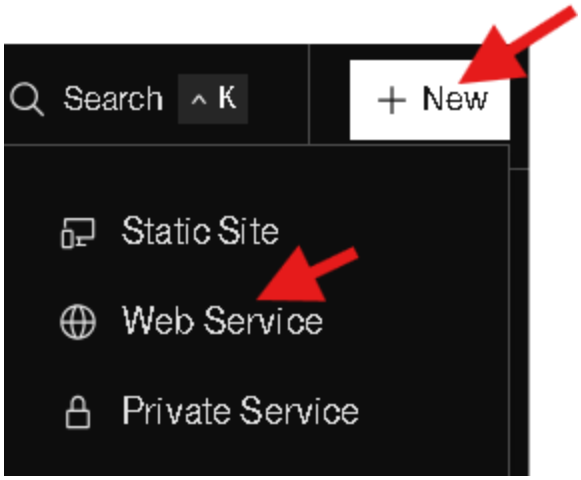


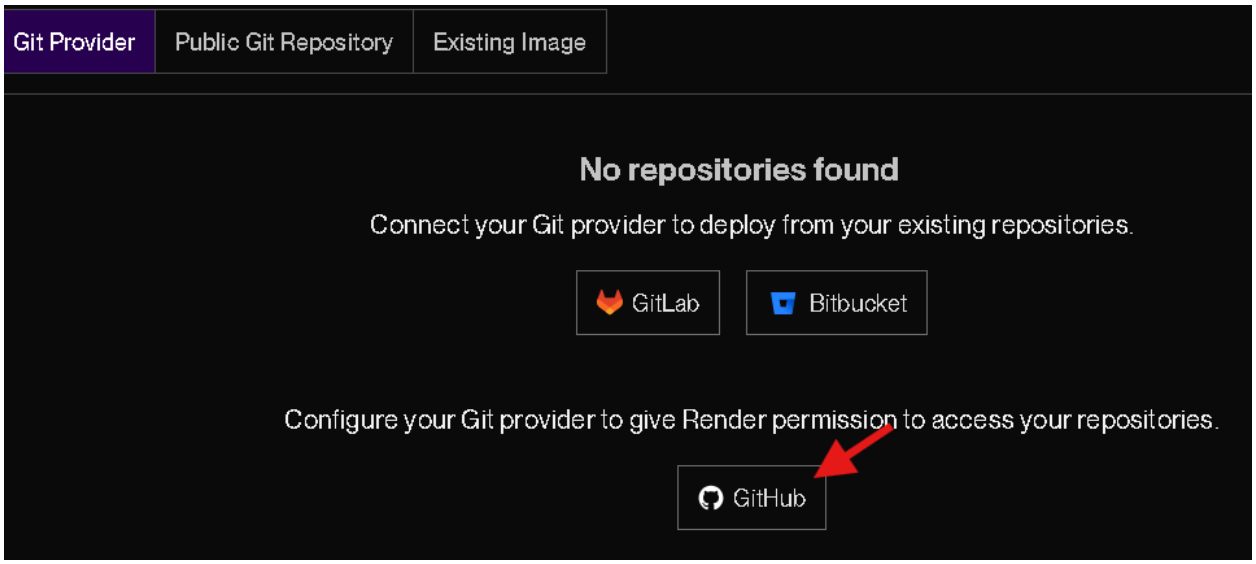
This link will expire in 24 hours.

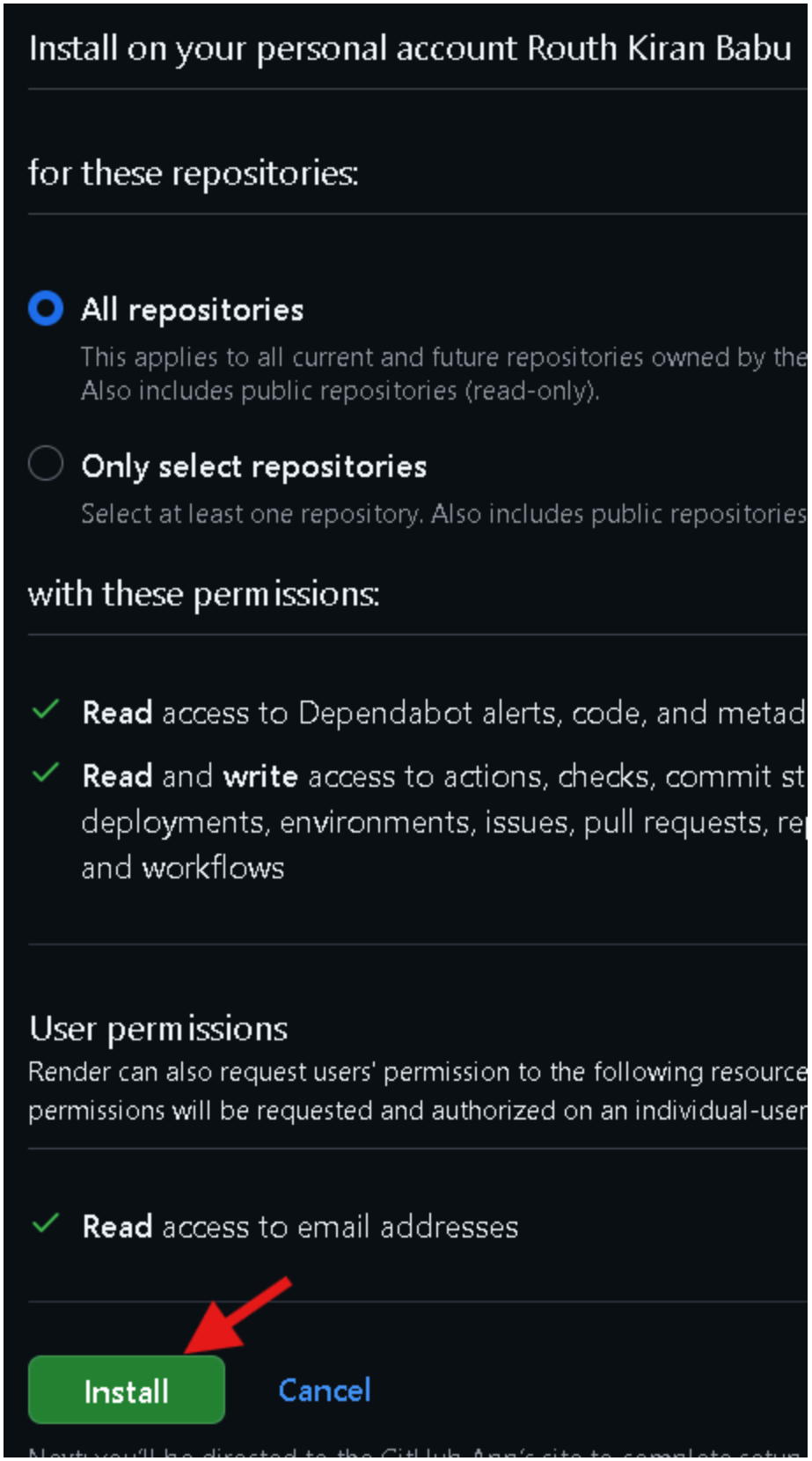

Create a new workspace
Workspaces are shared areas where teams deploy and o
What would you like to call your workspace? Optional
My workspace
What will you use this workspace for?
Work
Personal projects
Other
How many developers (including yourself) will be working toge
Just me
2-10
11-50
51-150
More than
Next →

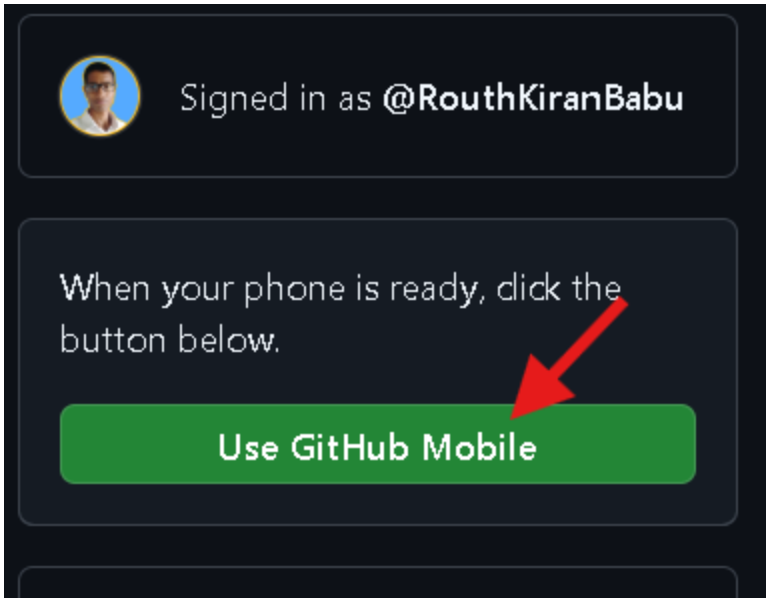


Now lets deploy the repository:

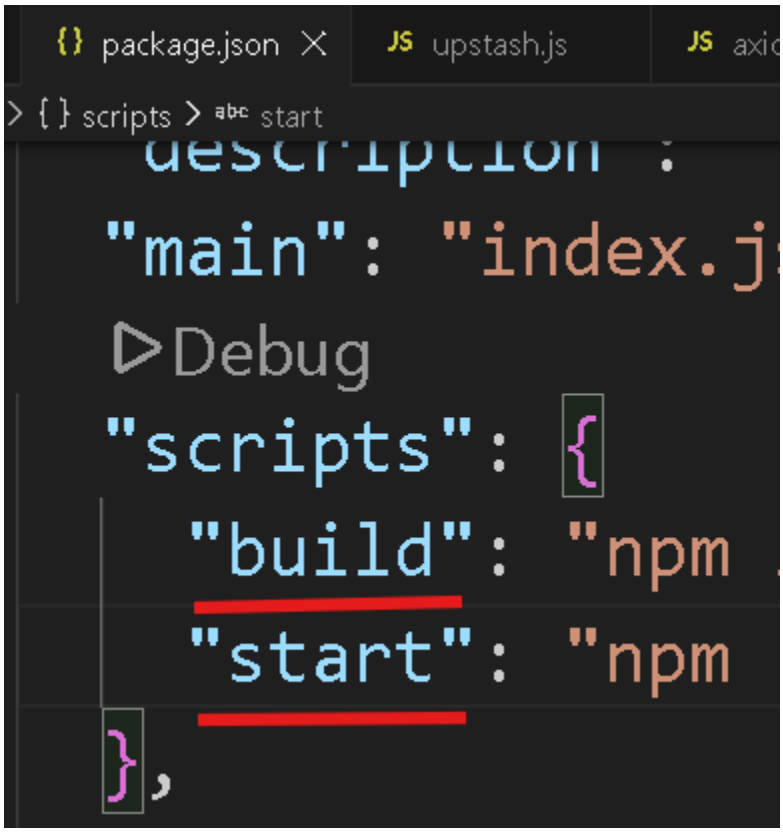

Search
K
New
Static Site
Web Service
Private Service


Git Provider
Public Git Repository
Existing Image
No repositories found
Connect your Git provider to deploy from your existing repositories.
GitLab
Bitbucket
Configure your Git provider to give Render permission to access your repositories.
GitHub

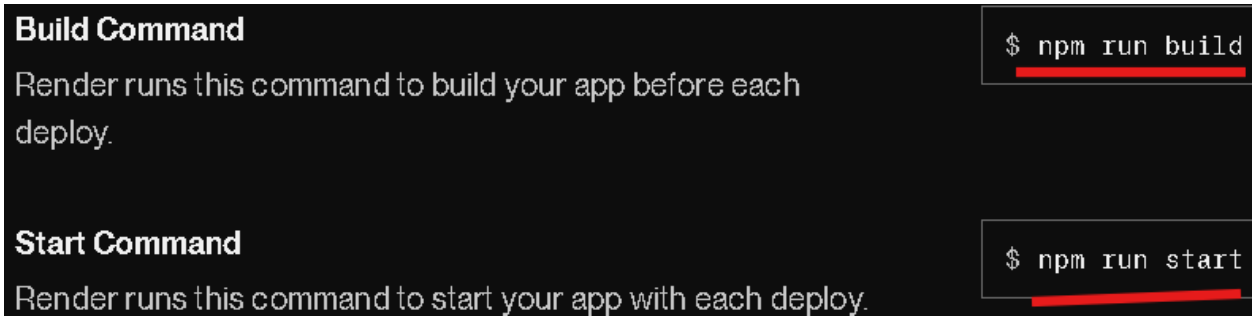

Install on your personal account Routh Kiran Babu
for these repositories:
All repositories
This applies to all current and future repositories owned by the
Also includes public repositories (read-only).
Only select repositories
Select at least one repository. Also includes public repositories
with these permissions:
Read access to Dependabot alerts, code, and metad
Read and write access to actions, checks, commit st
deployments, environments, issues, pull requests, re
and workflows
User permissions
Render can also request users' permission to the following resource
permissions will be requested and authorized on an individual-user
Read access to email addresses
Install
Cancel

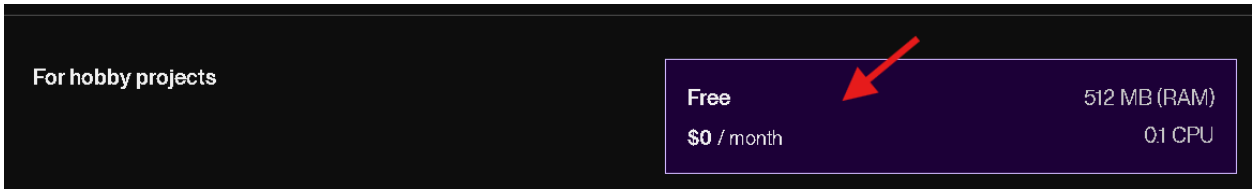


Install github in mobile, open with internet connection



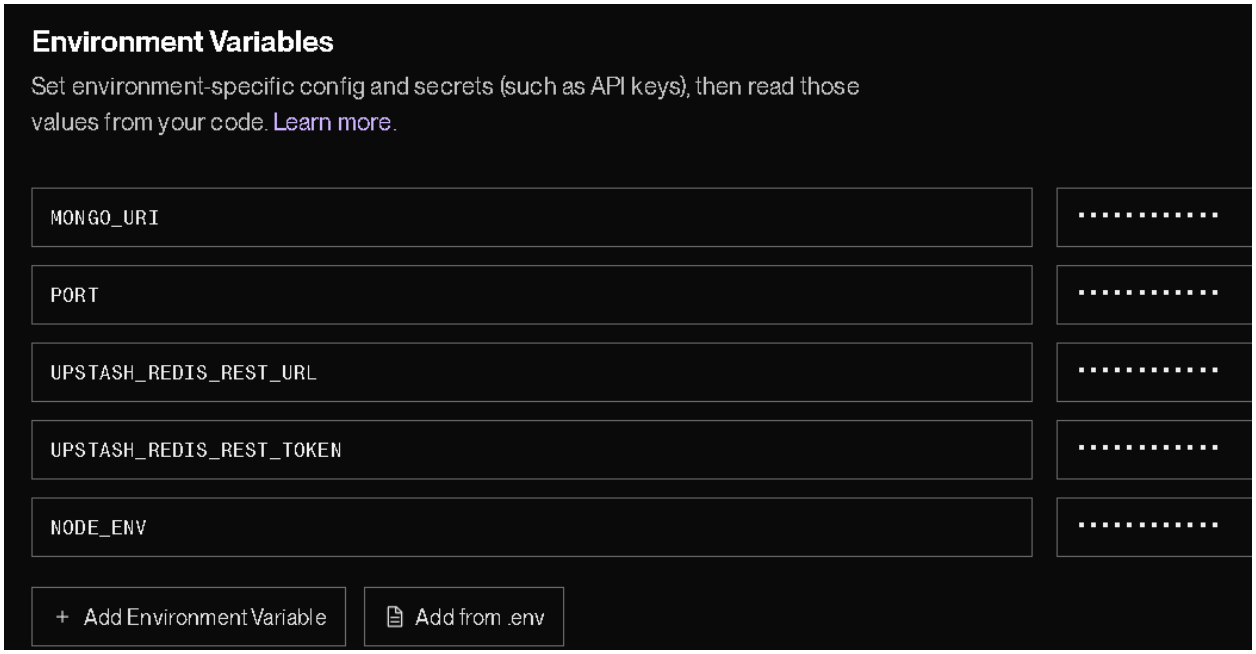
So, make



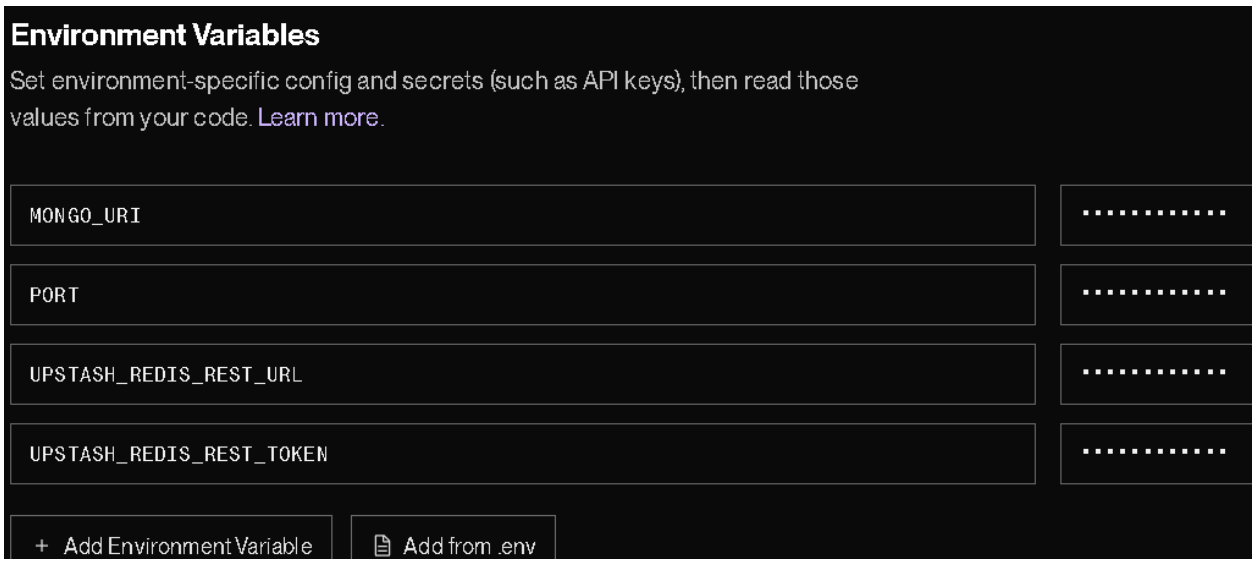


Copy everything from .env file:

Paste it in:

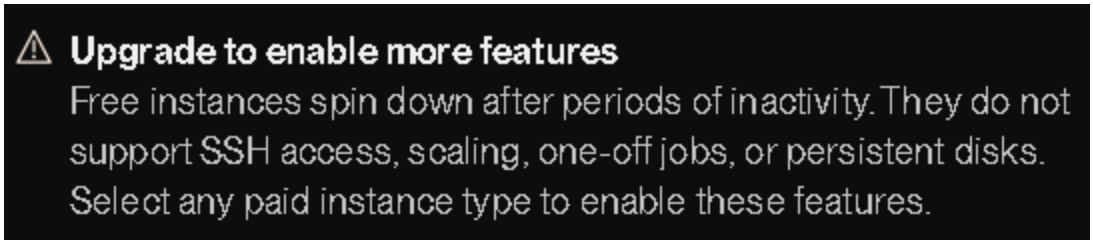


No need to provide NODE_ENV:

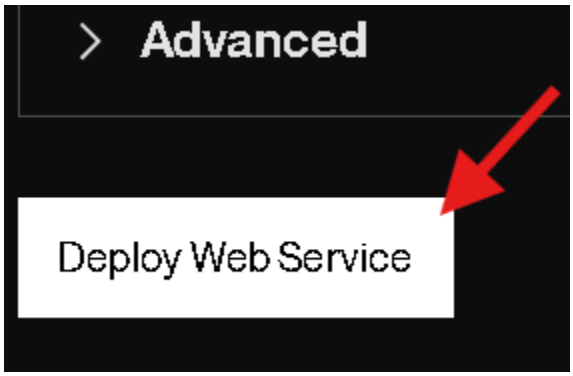


For free plan:

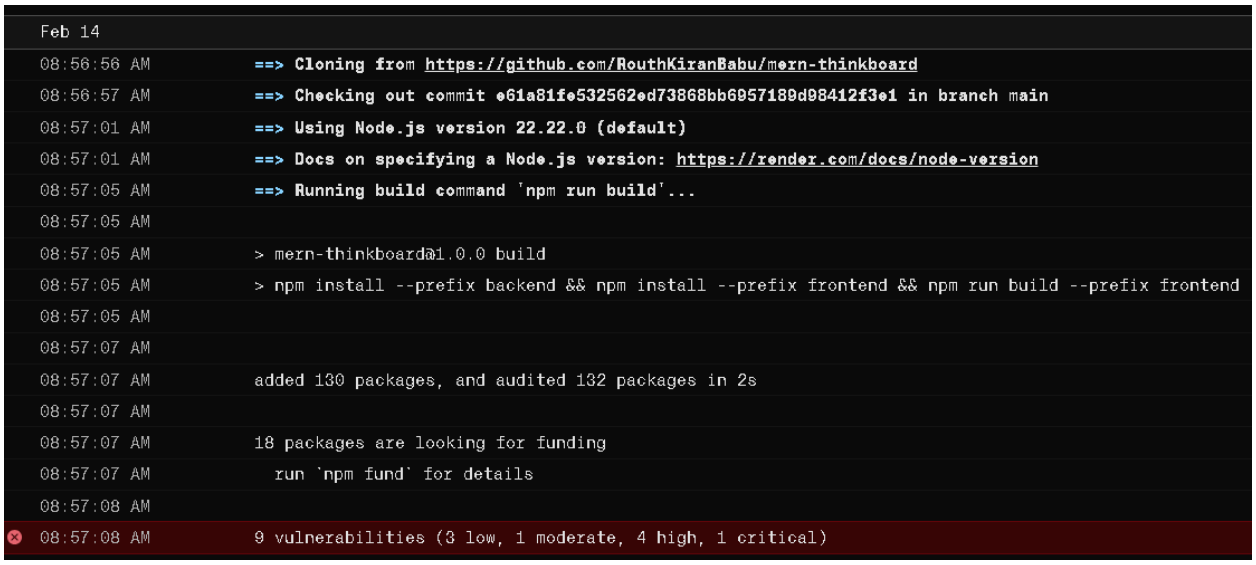
It becomes inactive after 15 minutes, eg: you deployed the application, but didn't visited the application. It will go inactive, if you visit the application it will take about 1 minute to load.



Then deploy the web service:



Will take around 2 minutes:

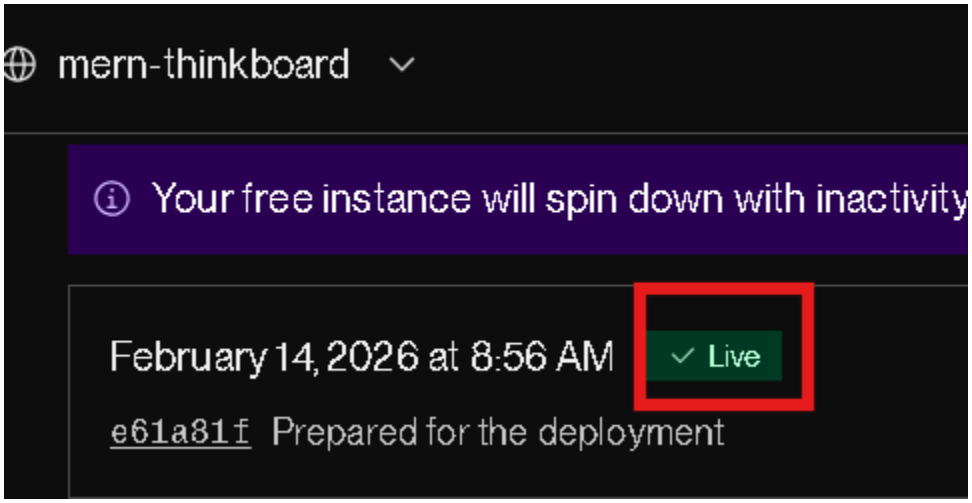


```
08:57:08 AM            npm audit fix
08:57:08 AM
08:57:08 AM          Run `npm audit` for details.
08:57:13 AM
08:57:13 AM          added 251 packages, and audited 253 packages in 5s
08:57:13 AM
08:57:13 AM          56 packages are looking for funding
08:57:13 AM            run `npm fund` for details
08:57:13 AM
08:57:13 AM          1 high severity vulnerability
08:57:13 AM
08:57:13 AM          To address all issues, run:
08:57:13 AM            npm audit fix
08:57:13 AM
08:57:13 AM          Run `npm audit` for details.
08:57:13 AM
```

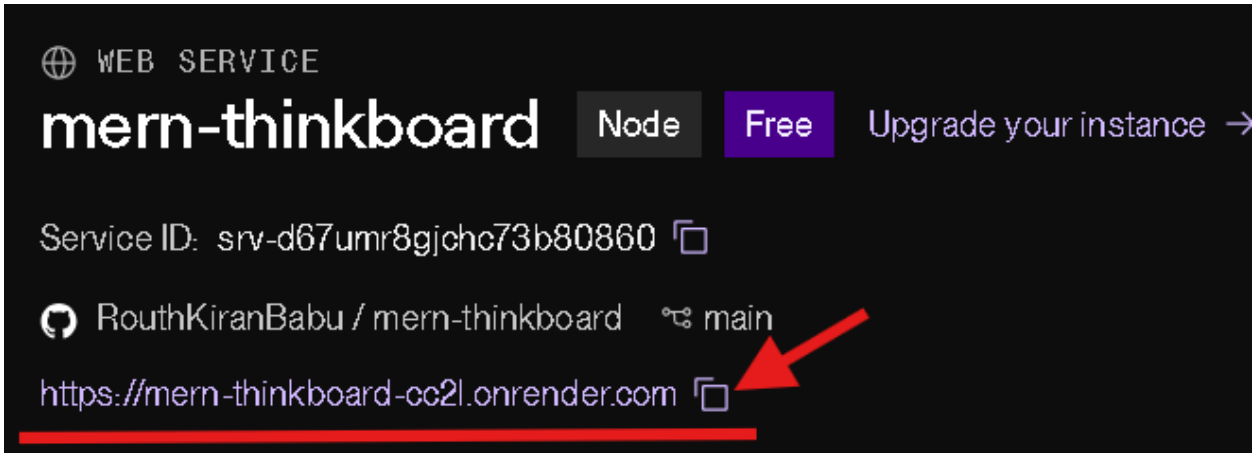
```
Feb 14
08:57:13 AM          🌼   daisyUI 4.12.24
08:57:14 AM          ├─ ✓ 1 theme added      https://daisyui.com/docs/themes
08:57:14 AM          └─ ★ Star daisyUI on GitHub https://github.com/saadeghi/daisyui
08:57:14 AM
08:57:16 AM          ✓ 1777 modules transformed.
08:57:16 AM          rendering chunks...
08:57:16 AM          computing gzip size...
08:57:16 AM          dist/index.html                   0.46 kB | gzip:  0.29 kB
08:57:16 AM          dist/assets/index-DLQ72rmS.css   37.42 kB | gzip:  6.98 kB
08:57:16 AM          dist/assets/index-B4u-Tkeg.js   286.98 kB | gzip: 95.25 kB
08:57:16 AM          ✓ built in 3.00s
08:57:42 AM          ==> Uploading build...
08:57:49 AM          ==> Uploaded in 4.1s. Compression took 2.3s
08:57:49 AM          ==> Build successful 🎉
08:58:03 AM          ==> Deploying...
08:58:03 AM          ==> Setting WEB_CONCURRENCY=1 by default, based on available CPU
```

```
08:58:16 AM  [wfk4c]  ==> Running 'npm run start'
08:58:17 AM  [wfk4c]
08:58:17 AM  [wfk4c]  > mern-thinkboard@1.0.0 start
08:58:17 AM  [wfk4c]  > npm run start --prefix backend
08:58:17 AM  [wfk4c]
08:58:18 AM  [wfk4c]
08:58:18 AM  [wfk4c]  > backend@1.0.0 start
08:58:18 AM  [wfk4c]  > node src/server.js
08:58:18 AM  [wfk4c]
08:58:24 AM  [wfk4c]  MongoDB connected Successfully...
08:58:24 AM  [wfk4c]  Server started on PORT: 5001
08:58:34 AM           ==> Your service is live 🎉
08:58:34 AM           ==>
08:58:34 AM           ==> ////////////////////////////////////////////////////////////
```

```
08:58:34 AM  ==> Your service is live 🎉
08:58:34 AM  ==>
08:58:34 AM  ==> ////////////////////////////////////////////////////////////
08:58:34 AM  ==>
08:58:34 AM  ==> Available at your primary URL https://mern-thinkboard-cc2l.onrender.com
08:58:34 AM  ==>
08:58:34 AM  ==> ////////////////////////////////////////////////////////////
```



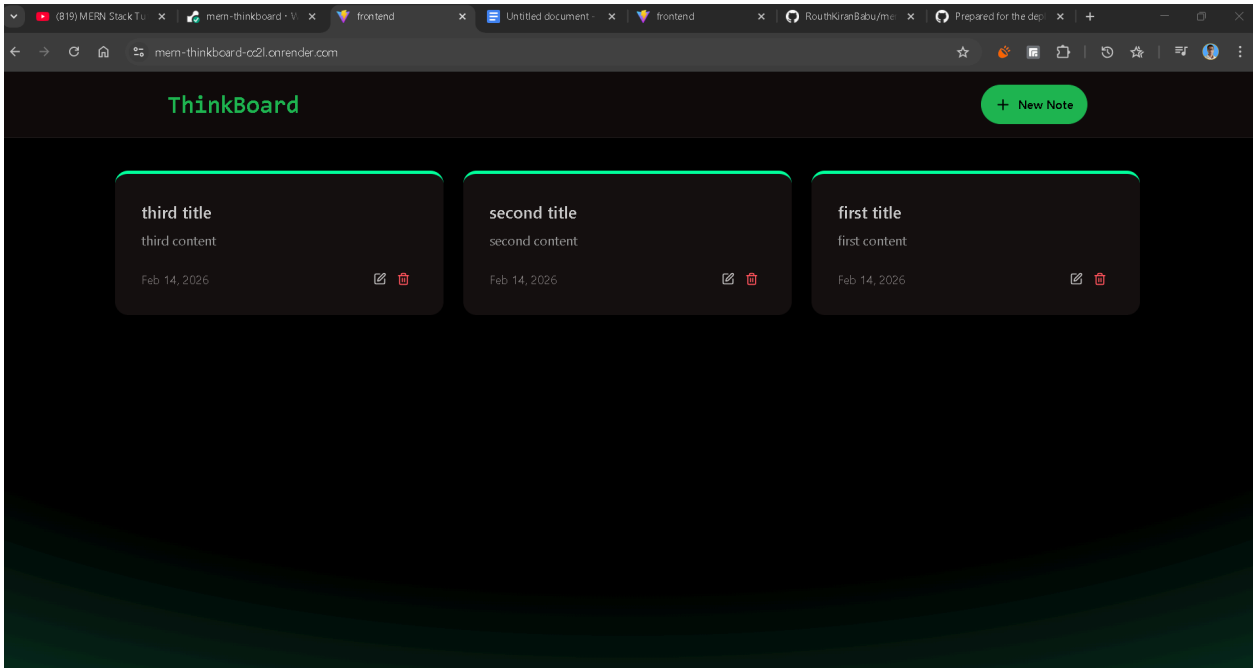
Got a Link:



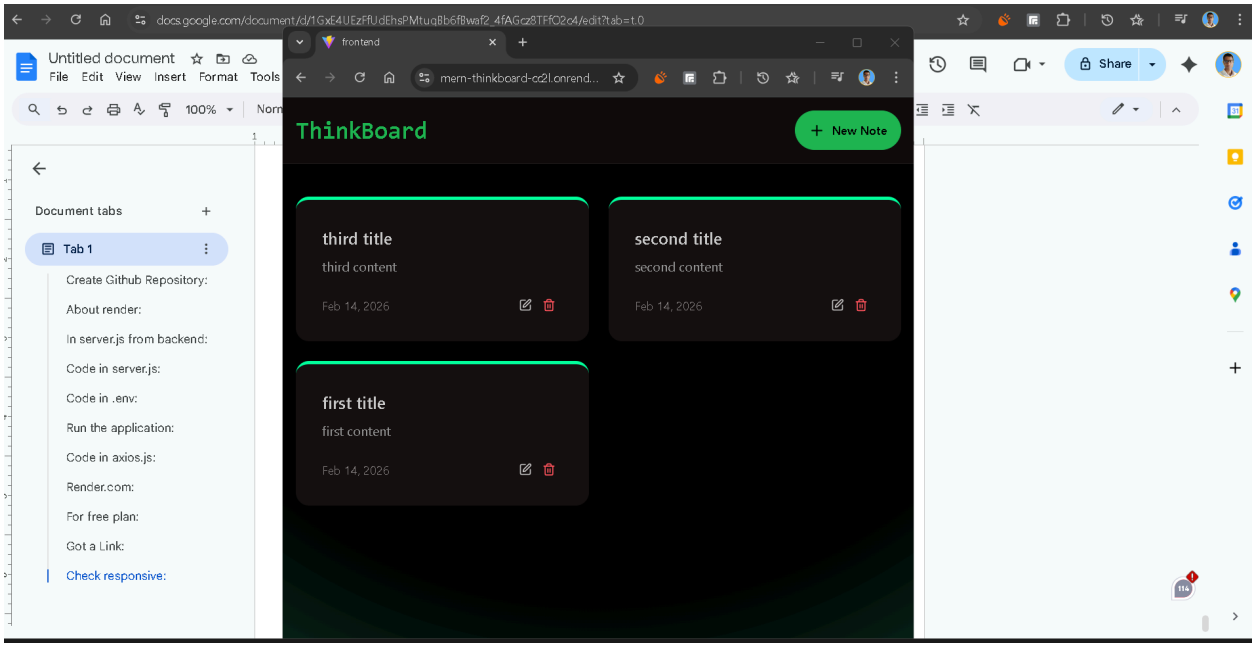
React Applicatin is live at given link below, and Opens live:

Check responsive:

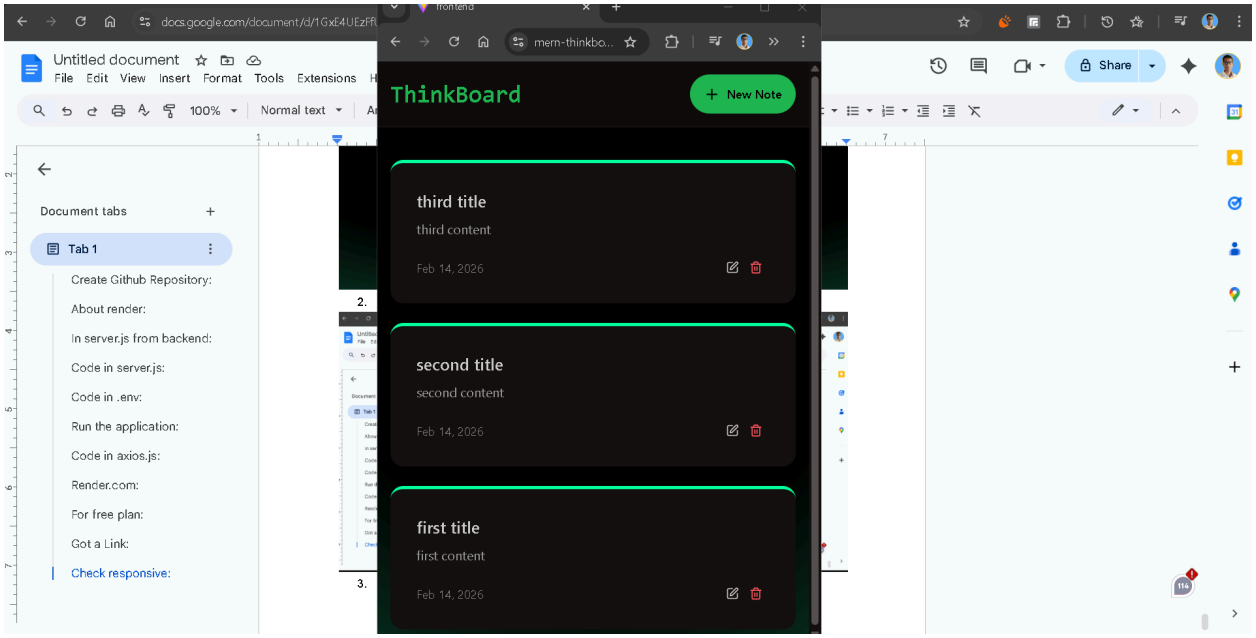
1. Full width



2. Medium Width



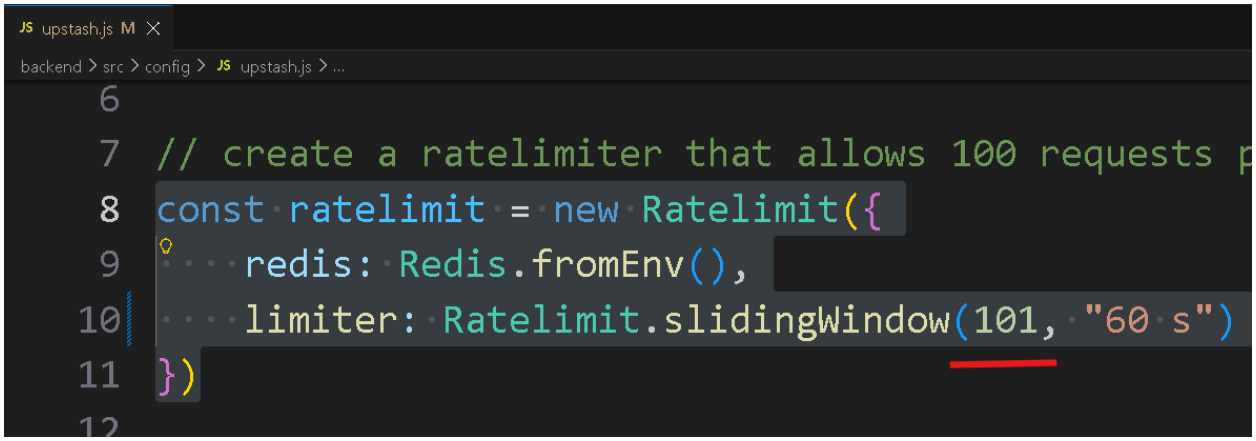
3. Minimum width



Change in Code: Does Effects render

In upstash.js, changing the rate limiter.

```
const ratelimit = new Ratelimit({
    redis: Redis.fromEnv(),
    limiter: Ratelimit.slidingWindow(101, "60 s")
})
```



Now to upload to github:

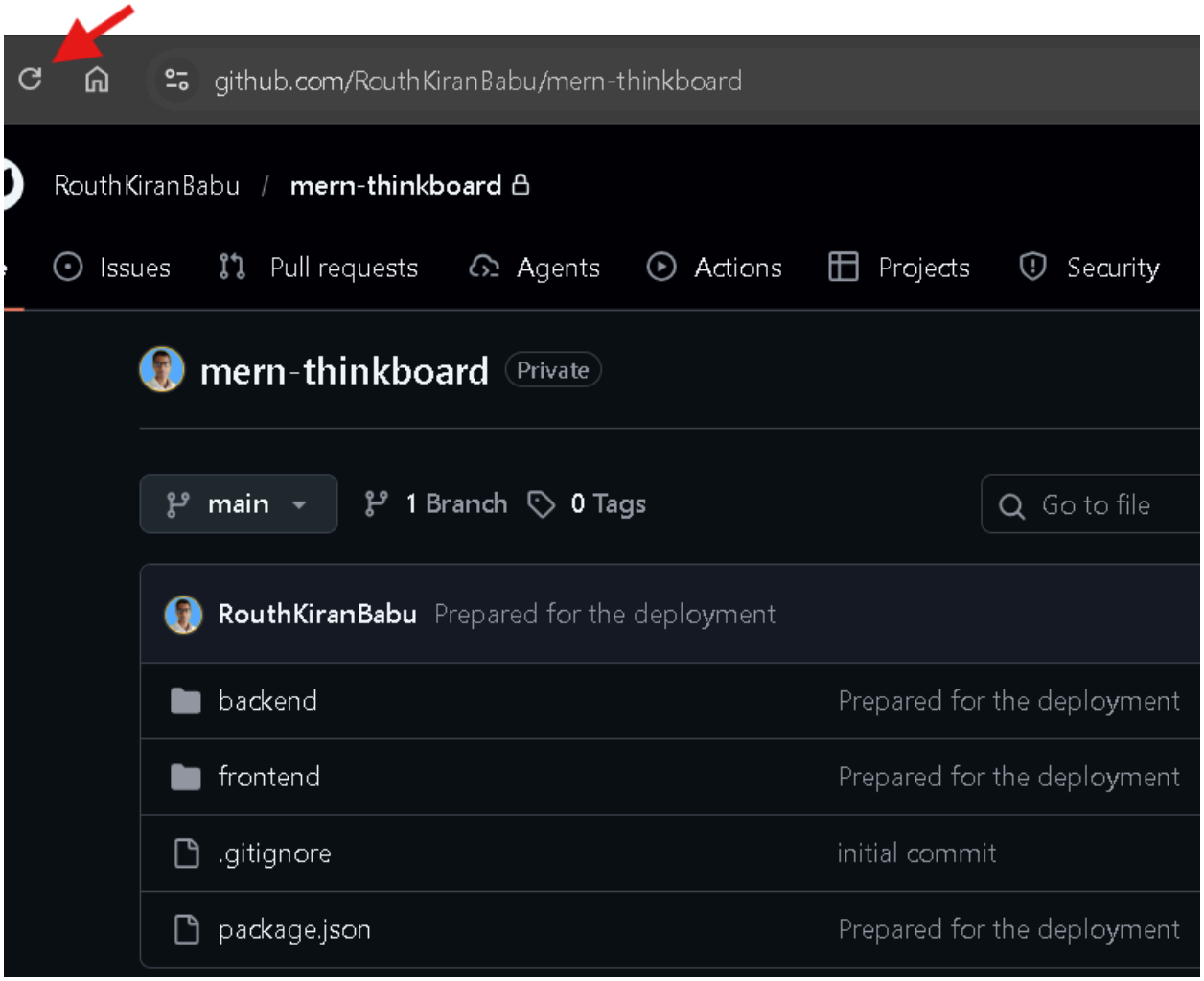
Code in terminal:

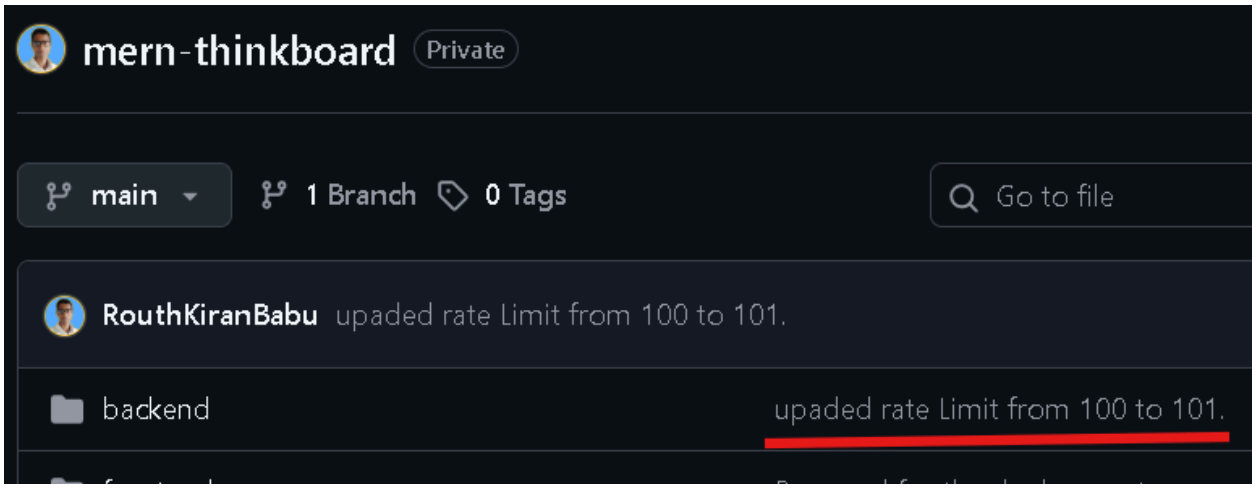
```
\mern-thinkboard> git add .
\mern-thinkboard> git commit -m "upaded rate Limit from 100 to 101."
\mern-thinkboard> git push
```

Result:

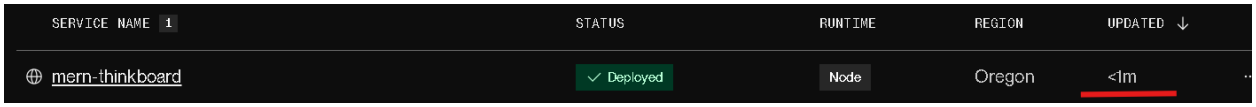
```
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 16 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 518 bytes | 518.00 KiB/s, done.
Total 6 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 4 local objects.
To https://github.com/RouthKiranBabu/mern-thinkboard.git
   e61a81f..253a0d4  main -> main
PS C:\Users\kiran\OneDrive\Desktop\mern-thinkboard>
```

When you make any changes, render see those changes from github account,
Refresh the page to see changes:



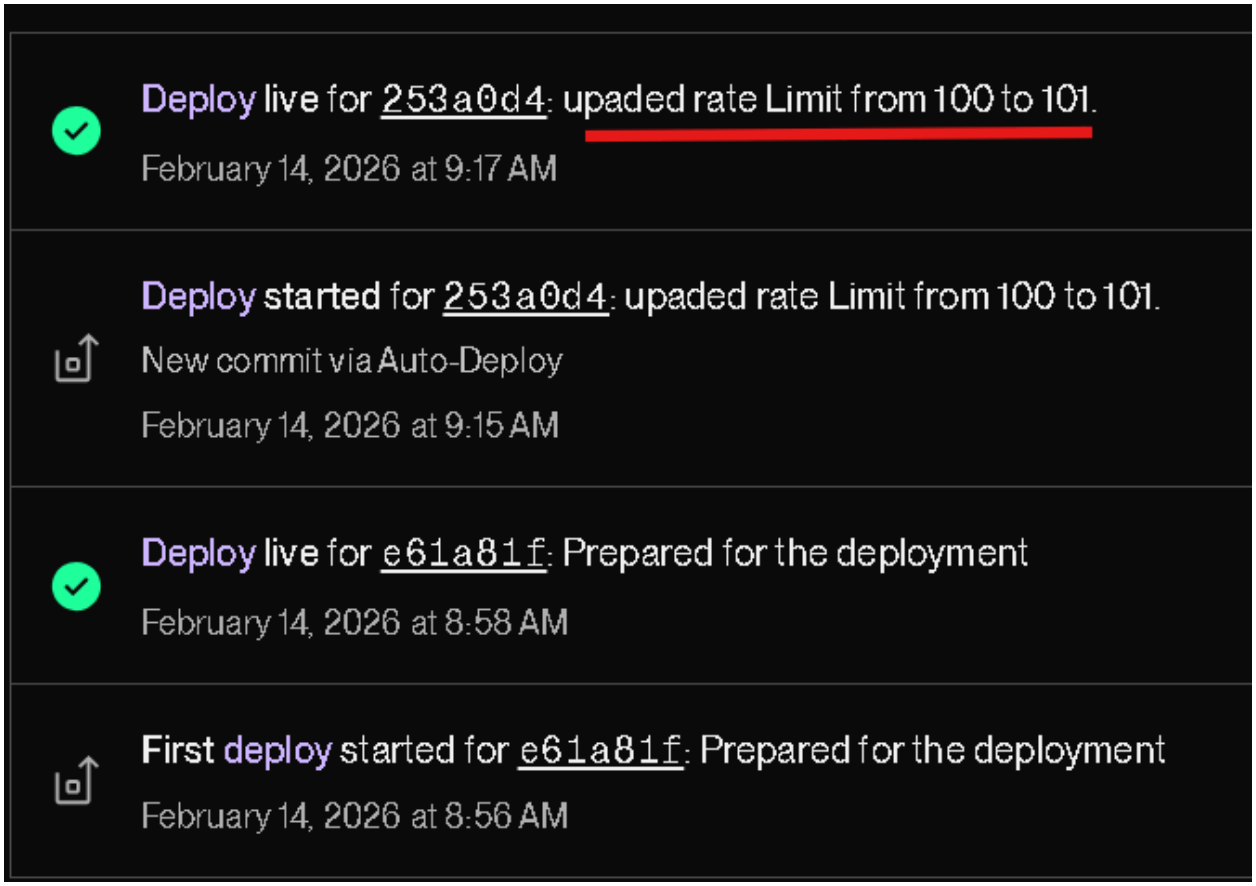


So it wil try to deploy it, load it



To get latest version.

Logs available in it:


Deploy live for 253a0d4: upaded rate Limit from 100 to 101.
February 14, 2026 at 9:17 AM
Deploy started for 253a0d4: upaded rate Limit from 100 to 101.
New commit via Auto-Deploy
February 14, 2026 at 9:15 AM
Deploy live for e61a81f: Prepared for the deployment
February 14, 2026 at 8:58 AM
First deploy started for e61a81f: Prepared for the deployment
February 14, 2026 at 8:56 AM