

THREE TIER ARCHITECTURE

General overview : Backend and DB → Frontend

Create an EC2 instance and connect the instance with an SSH client.

Clone the repo from github: <https://github.com/krishnaacharyaa/wanderlust>

- Command : git clone <https://github.com/krishnaacharyaa/wanderlust.git>
- Navigate to the backend directory and setup the project locally
 1. Navigate back to the home directory and install :
<https://nodejs.org/en/download/package-manager> and sudo reboot to apply the changes/installation.
 2. Now navigate to backend directory and “Install the required dependencies”
Command : npm i
- Setup mangodb
 1. Navigate to the home directory and Install mangodb :
<https://www.mongodb.com/docs/manual/tutorial/install-mongodb-on-ubuntu/>
 2. Navigate to backend and check the info from “env.sample” where the URL is present to connect the mongodb locally.
command : cat env.sample
 3. Configure Environment variables →
Command : cp .env.sample .env
 4. Start the back-end server → Command : npm start

```

ubuntu@ip-172-31-25-200:~/wanderlust/backend$ cat .env.sample
cat: .env: No such file or directory
cat: .sample: No such file or directory
ubuntu@ip-172-31-25-200:~/wanderlust/backend$ cat .env.sample
MONGODB_URI="mongodb://127.0.0.1/wanderlust"
REDIS_URL="redis://127.0.0.1:6379"
ubuntu@ip-172-31-25-200:~/wanderlust/backend$ cp .env.sample .env
ubuntu@ip-172-31-25-200:~/wanderlust/backend$ npm start

> start
> nodemon server.js

[nodemon] 3.0.1
[nodemon] to restart at any time, enter 'rs'
[nodemon] watching path(s): ***!
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting 'node server.js'
(node:2596) [DEP0040] DeprecationWarning: The 'punycode' module is deprecated. Please use a userland alternative instead.
(Use 'node --trace-deprecation ...` to show where the warning was created)
Server is running on port 5000
Error connecting to Redis: connect ECONNREFUSED 127.0.0.1:6379
Database connected: mongodb://127.0.0.1/wanderlust

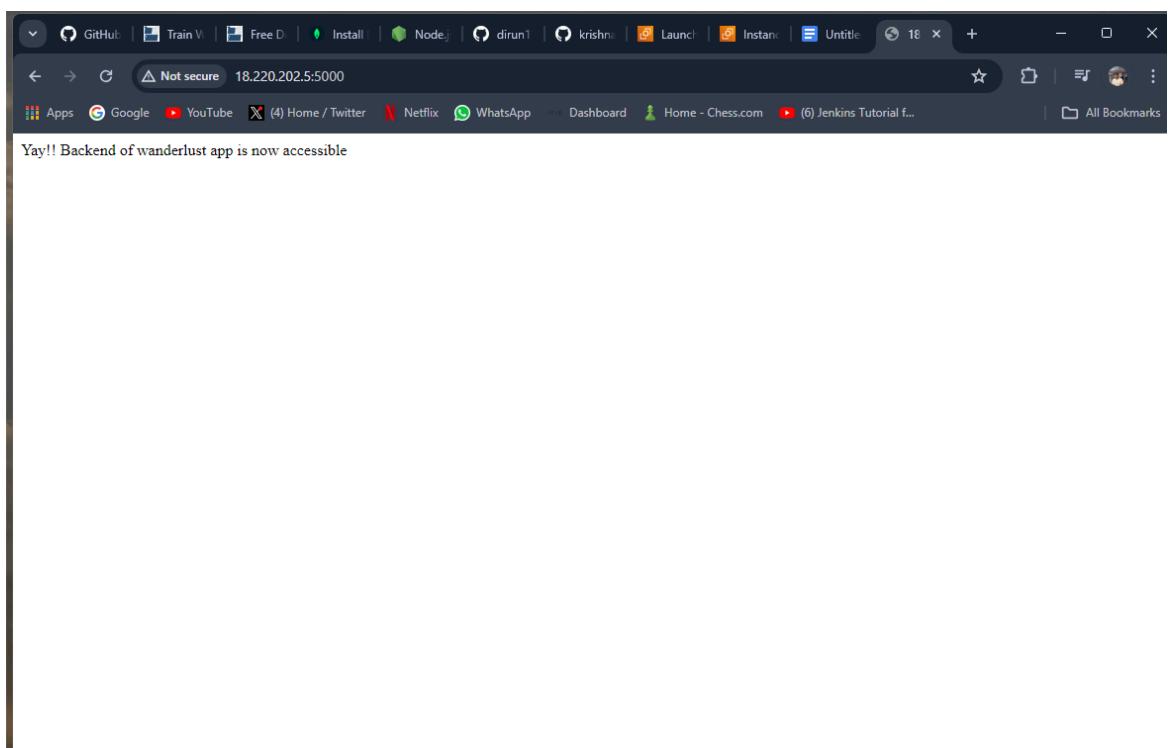
^C
ubuntu@ip-172-31-25-200:~/wanderlust/backend$ npm start

> start
> nodemon server.js

[nodemon] 3.0.1
[nodemon] to restart at any time, enter 'rs'
[nodemon] watching path(s): ***!
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting 'node server.js'
(node:2850) [DEP0040] DeprecationWarning: The 'punycode' module is deprecated. Please use a userland alternative instead.
(Use 'node --trace-deprecation ...` to show where the warning was created)
Server is running on port 5000
Error connecting to Redis: connect ECONNREFUSED 127.0.0.1:6379
Database connected: mongodb://127.0.0.1/wanderlust
|

```

5. In the above image we can see that the mongodb is connected on port 5000
“Server is running on port 5000” → So will configure the inbound rules in AWS for port 5000
6. After configuring the port, try refreshing the webpage along with the public-ip and port number (This is my public-ip at the time of performing this project : <http://18.220.202.5:5000>)



- Setup frontend

```
ubuntu@ip-172-31-25-200:~$ cd frontend
-bash: cd: frontend: No such file or directory
ubuntu@ip-172-31-25-200:~$ ls
wanderlust
ubuntu@ip-172-31-25-200:~$ cd wanderlust
ubuntu@ip-172-31-25-200:~/wanderlust$ cd frontend
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ ls
README.md      package.json      tsconfig.json
components.json postcss.config.js tsconfig.node.json
index.html      public           tsconfig.prod.json
jest.config.ts  src              vercel.json
package-lock.json tailwind.config.js vite.config.ts
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ npm i
(          ) reify:@esbuild/android-arm: timing reif
npm WARN deprecated abab@0.0.6: Use your platform's native atob() and btoa() methods instead
npm WARN deprecated domexception@4.0.0: Use your platform's native DOMException instead

added 700 packages, and audited 701 packages in 19s

118 packages are looking for funding
  run 'npm fund' for details

2 vulnerabilities (1 moderate, 1 high)

To address all issues, run:
  npm audit fix

Run 'npm audit' for details.
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ ls -a
.
..          README.md      src
.babelrc     components.json  tailwind.config.js
.env.sample   index.html      tsconfig.json
.eslintrc    jest.config.ts  tsconfig.node.json
.eslintrc.cjs node_modules    tsconfig.prod.json
.eslintrc.js  package-lock.json  vercel.json
.gitignore    package.json    vite.config.ts
.prettierignore postcss.config.js
.prettierrc   public
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cat .env.sample
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cat .env.sample
VITE_API_PATH="http://localhost:5000"ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ |
```

Configure Environment variables(below image) → Command : cp .env.sample .env.local

```
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ ls -a
.
..          README.md      src
.babelrc     components.json  tailwind.config.js
.env.sample   index.html      tsconfig.json
.eslintrc    jest.config.ts  tsconfig.node.json
.eslintrc.cjs node_modules    tsconfig.prod.json
.eslintrc.js  package-lock.json  vercel.json
.gitignore    package.json    vite.config.ts
.prettierignore postcss.config.js
.prettierrc   public
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cat .env.sample
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cat .env.sample
VITE_API_PATH="http://localhost:5000"ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cp .env.sample .env.local
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ npm run dev
> frontend@0.0.0 dev
> vite
VITE v4.5.0 ready in 487 ms
+ Local: http://localhost:5173/
+ Network: use --host to expose
+ press h to show help
```

Now open the port 5173 in inbound rules and run the command “npm run dev – –host” so that the URL is exposed to the public and Local is anyway open from the above image.

```
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cat .env.sample
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cat .env.sample
VITE_API_PATH="http://localhost:5000"ubuntu@ip-172-31-25-ubuntu@ip-172
-31-25-200:~/wanderlust/frontend$ cp .env.sample .env.local
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ npm run dev

> frontend@0.0.0 dev
> vite

VITE v4.5.0 ready in 487 ms

→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h to show help

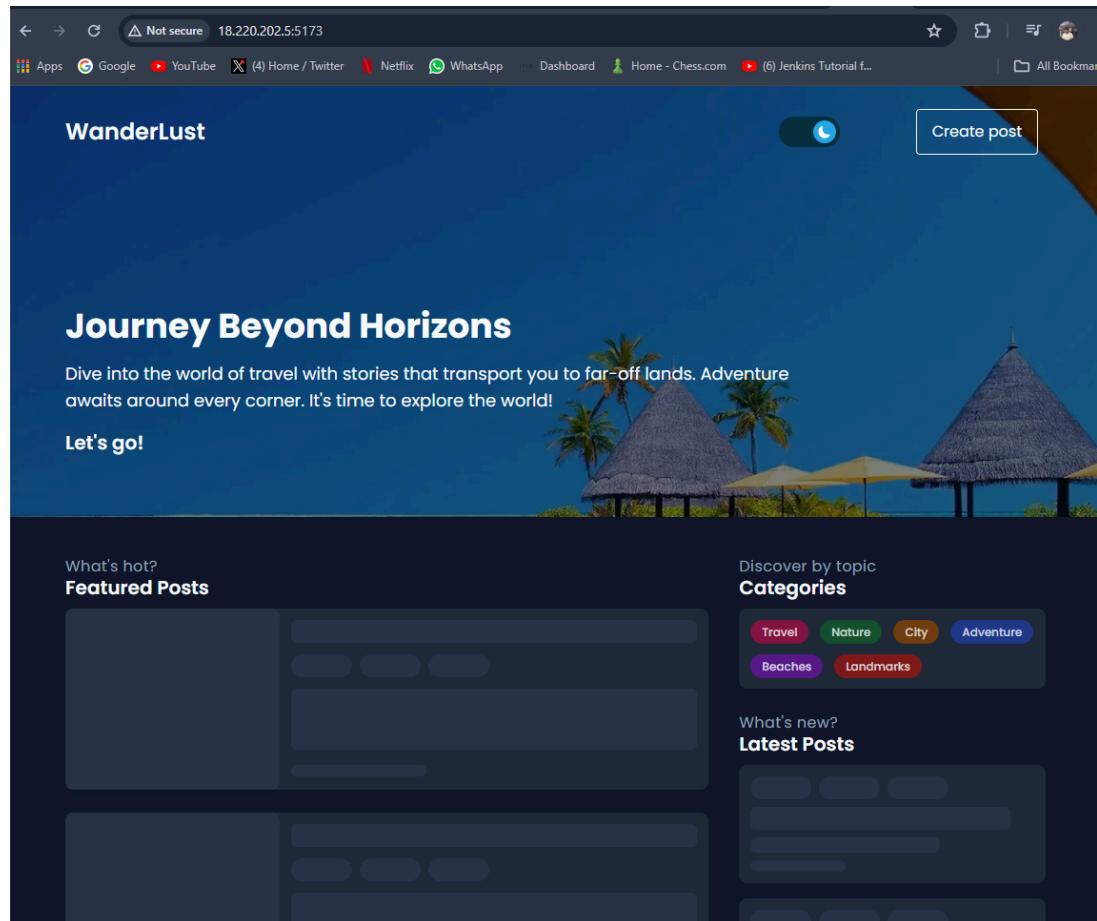
Shortcuts
press r to restart the server
press u to show server url
press o to open in browser
press c to clear console
press q to quit
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ npm run dev -- --host

> frontend@0.0.0 dev
> vite --host

VITE v4.5.0 ready in 308 ms

→ Local: http://localhost:5173/
→ Network: http://172.31.25.200:5173/
→ press h to show help
```

After running <http://18.220.202.5:5173/> below is the O/P



- Looks like the info/images in the website have some problem as they are not displaying the content.

Inspect the webpage (“npm run dev – –host” must be running) → Network(reload the webpage) → and few field are not able to request to the IP addr as it pointing to localhost

Request URL:

```
http://localhost:5000/api/posts/latest
```

Referrer Policy:

```
strict-origin-when-cross-origin
```

```
Request URL:  
http://localhost:5000/api/posts  
Referrer Policy:  
strict-origin-when-cross-origin
```

```
Request URL:  
http://localhost:5000/api/posts/featured  
Referrer Policy:  
strict-origin-when-cross-origin
```

Solution : change info of .env.sample → VITE_API_PATH="<http://18.220.202.5:5000>" by using vim and now "cp .env.sample .env.local"

- Now run the frontend at the background → nohup helps to collect logs and runs the command in background
Command : nohup npm run dev -- --host &

And start the backend(where the mangodb is connected as well) using npm start

```

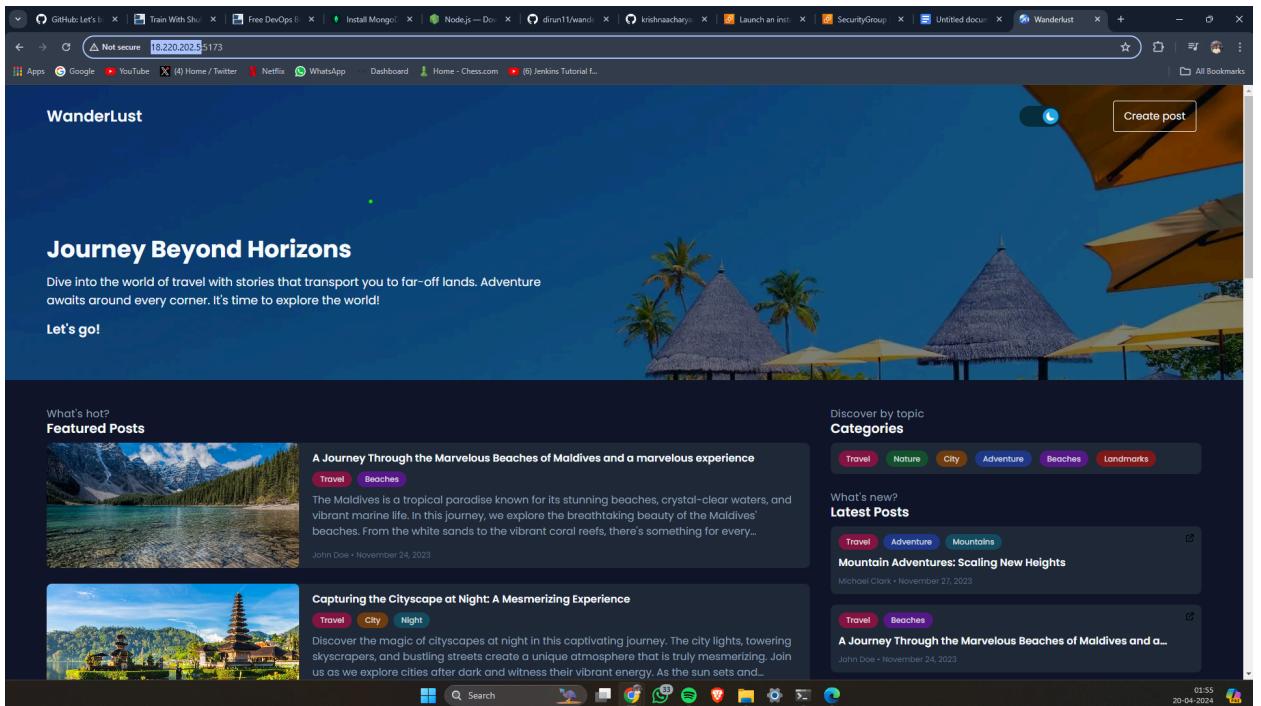
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cat .env.sample
VITE_API_PATH="http://18.220.202.5:5000"
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ ^C
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cp .env.sample .env.local
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ nohup npm run dev -- --host &
[3] 3063
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ nohup: ignoring input and appending output to 'nohup.out'

ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cd..
cd.: command not found
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cd
ubuntu@ip-172-31-25-200:~$ cd wanderlust/frontend
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ npm start
npm ERR! Missing script: "start"
npm ERR!
npm ERR! Did you mean one of these?
npm ERR!   npm star # Mark your favorite packages
npm ERR!   npm stars # View packages marked as favorites
npm ERR!
npm ERR! To see a list of scripts, run:  ^Z
npm ERR!   npm run

npm ERR! A complete log of this run can be found in: /home/ubuntu/.npm/_logs/2024-04-19T20_19_39_852Z-debug-0.log
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cd .
ubuntu@ip-172-31-25-200:~/wanderlust/frontend$ cd
ubuntu@ip-172-31-25-200:~$ cd wanderlust/backend
ubuntu@ip-172-31-25-200:~/wanderlust/backend$ npm start

> start
> nodemon server.js

[nodemon] 3.0.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): ***!
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node server.js`
(node:3138) [DEP0040] DeprecationWarning: The 'punycode' module is deprecated. Please use a userland alternative instead.
(Use 'node --trace-deprecation ...' to show where the warning was created)
Server is running on port 5000
Error connecting to Redis: connect ECONNREFUSED 127.0.0.1:6379
Database connected: mongodb://127.0.0.1/wanderlust
|
```



Above image is the final demo of the website running with the help of EC2 instance.

Created a blog posted to check if the db connection is active

← Create Blog

Is this a featured blog?

Blog title *

Dirun 3-Tier

Blog content *

Dirun's demo for 3-Tier Architecture

Author name *

Dirun

Blog cover image (jpg/png/webp) *

<https://i.ibb.co/y8vQnDc/c4fedab1-4041-4db5-9245-97439472cf2c.webp>

Pick image

Categories (max 3 categories) *

Travel Nature City Adventure Beaches Landmarks

Post blog

Info has been created and O/P is in the below image

The screenshot shows a travel blog homepage with a dark blue header and a large, scenic image of a tropical beach with umbrellas.

Header: Journey Beyond Horizons

Header Subtext: Dive into the world of travel with stories that transport you to far-off lands. Adventure awaits around every corner. It's time to explore the world!

Call-to-action: Let's go!

Left Sidebar: What's hot? Featured Posts

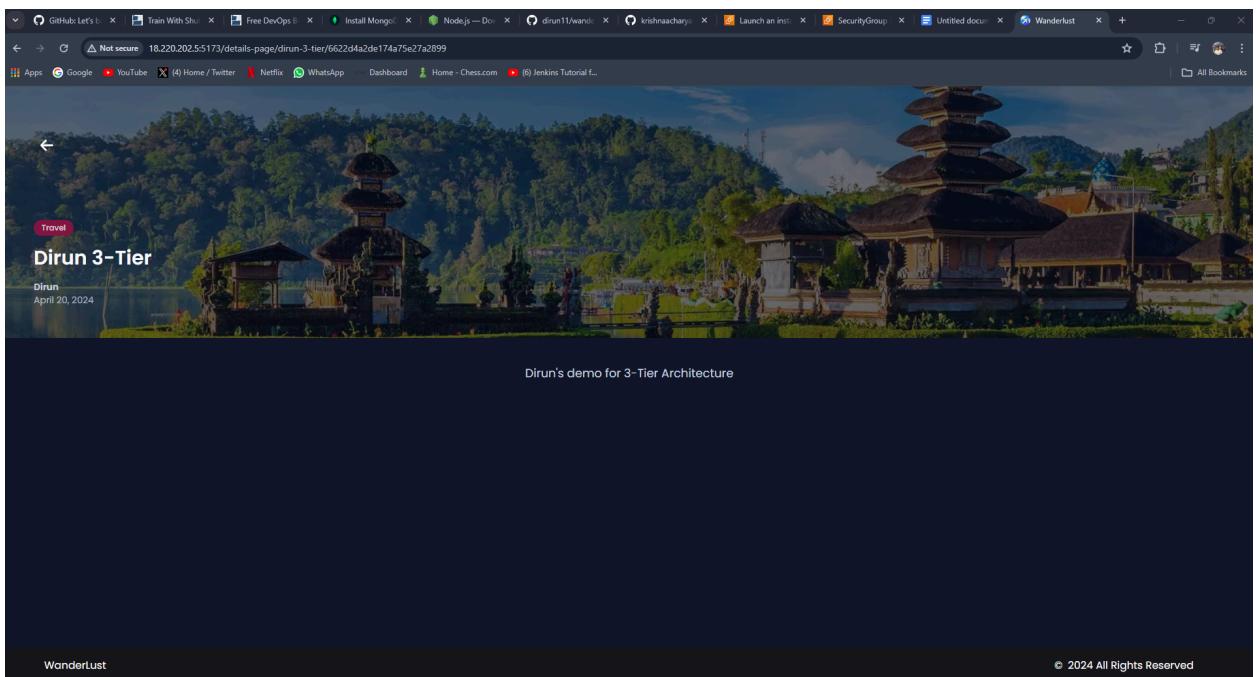
- A Journey Through the Marvelous Beaches of Maldives and a marvelous experience**
Travel Beaches
The Maldives is a tropical paradise known for its stunning beaches, crystal-clear waters, and vibrant marine life. In this journey, we explore the breathtaking beauty of the Maldives' beaches. From the white sands to the vibrant coral reefs, there's something for everyone...
- Capturing the Cityscape at Night: A Mesmerizing Experience**
Travel City Night
Discover the magic of cityscapes at night in this captivating journey. The city lights, towering skyscrapers, and bustling streets create a unique atmosphere that is truly mesmerizing. Join us as we explore cities after dark and witness their vibrant energy. As the sun sets and...
- Embracing Adventure: Exploring the Great Outdoors**
Travel Adventure Nature

Right Sidebar: Discover by topic Categories

Travel Nature City Adventure Beaches Landmarks

Latest Posts:

- Dirun 3-Tier** ✓
Dirun • April 20, 2024
- Mountain Adventures: Scaling New Heights**
Michael Clark • November 27, 2023
- A Journey Through the Marvelous Beaches of Maldives and a...**
John Doe • November 24, 2023



Commands :

```
1 git clone https://github.com/krishnaacharyaa/wanderlust.git
2 ls
3 cd wanderlust
4 ls
5 cd backend
6 cd
7 curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.39.7/install.sh | bash
8 sudo reboot
9 nvm install 20
10 nvm install 21
11 node -v
12 npm =v
13 npm -v
14 cd backend
15 ls
16 cd wanderlust/ backend
17 cd wanderlust/backend
18 npm i
19 cd
20 sudo apt-get install gnupg curl
```

```
21 curl -fsSL https://www.mongodb.org/static/pgp/server-7.0.asc | sudo gpg -o /usr/share/keyrings/mongodb-server-7.0.gpg --dearmor
22 echo "deb [ arch=amd64,arm64
signed-by=/usr/share/keyrings/mongodb-server-7.0.gpg ]
https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/7.0 multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-7.0.list
23 sudo apt-get update
24 sudo apt-get install -y mongodb-org
25 sudo systemctl start mongod
26 mongosh
27 cd wanderlust/backend
28 mongoimport --db wanderlust --collection posts --file ./data/sample_posts.json
--jsonArray
29 cat cp .env.sample .env
30 ls -s
31 ls -a
32 cat .env .sample
33 cat .env.sample
34 cp .env.sample .env
35 npm start
36 cd
37 cd frontend
38 ls
39 cd wanderlust
40 cd frontend
41 ls
42 npm i
43 ls -a
44 cat .env.sample
45 cp .env.sample .env.local
46 npm run dev
47 npm run dev -- --host
48 vim env.sample
49 ls
50 vim .env.sample
51 cat .env.sample
52 vim .env.sample
53 cat .env.sample
54 cp .env.sample .env.local
55 nohup npm run dev -- --host &
56 cd..
57 cd
58 cd wanderlust/frontend
59 npm start
```

60 cd .
61 cd
62 cd wanderlust/backend
63 npm start
64 history
