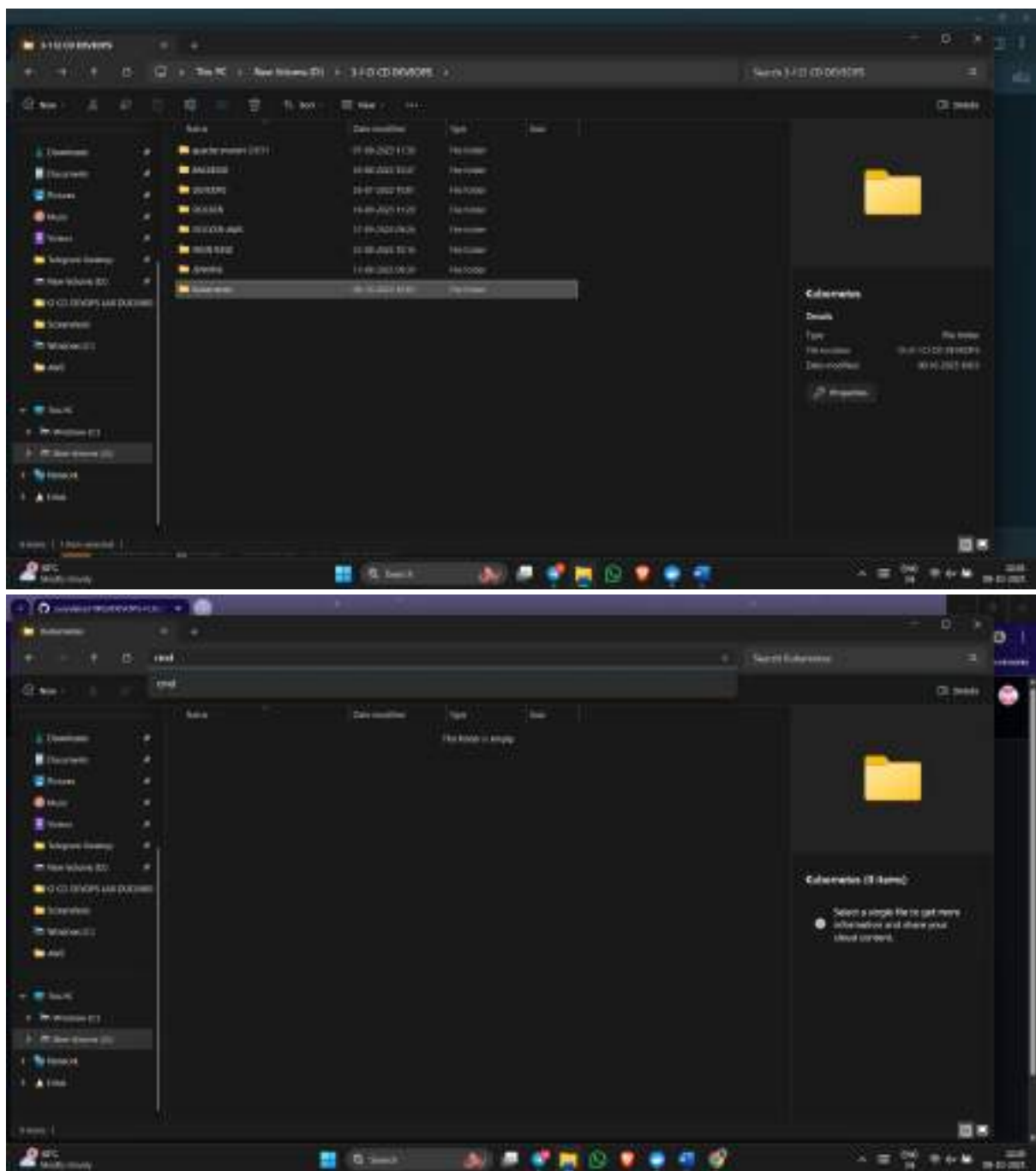
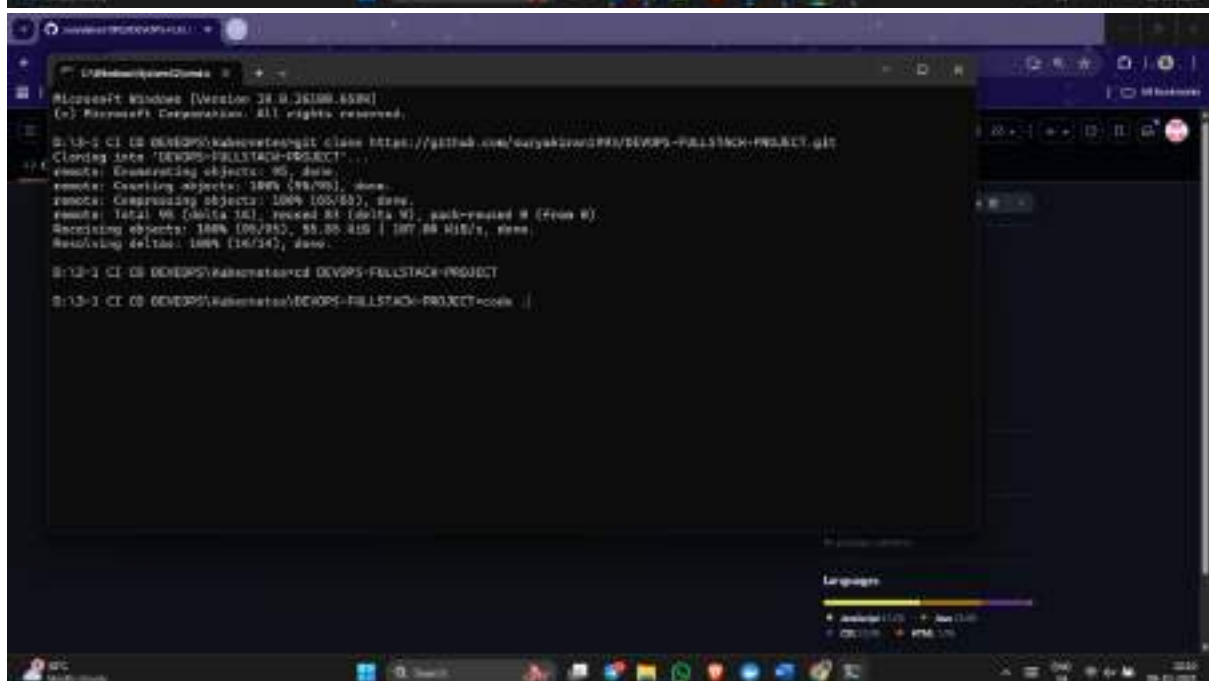
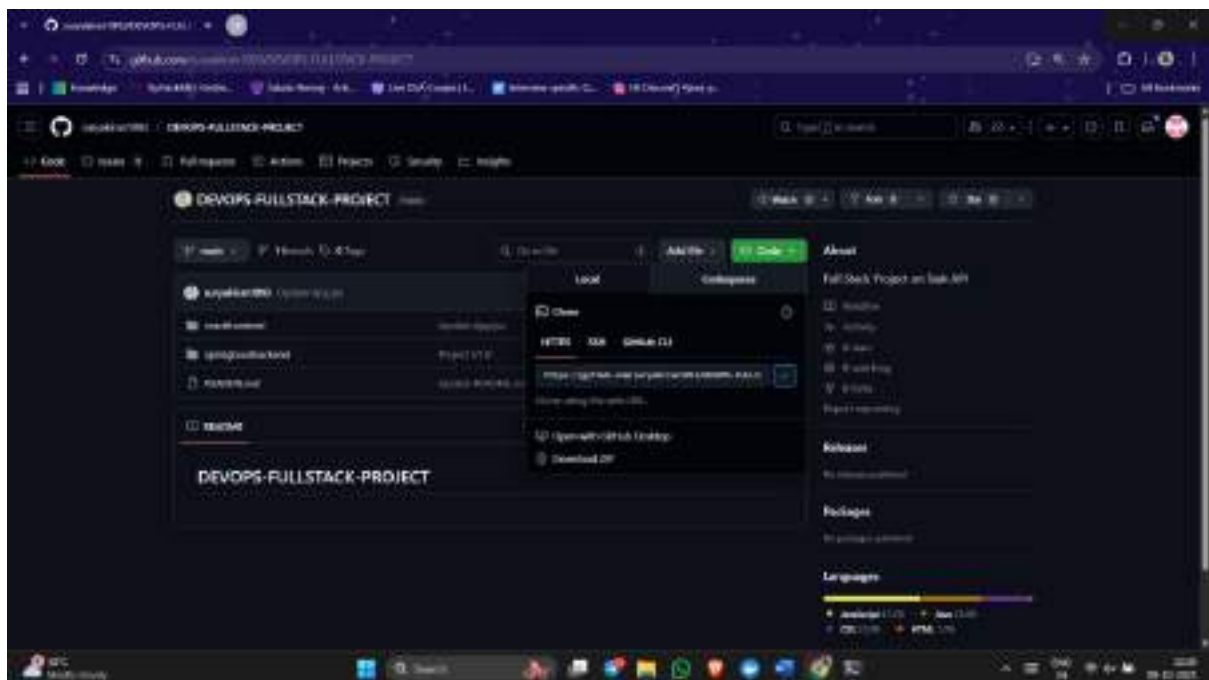
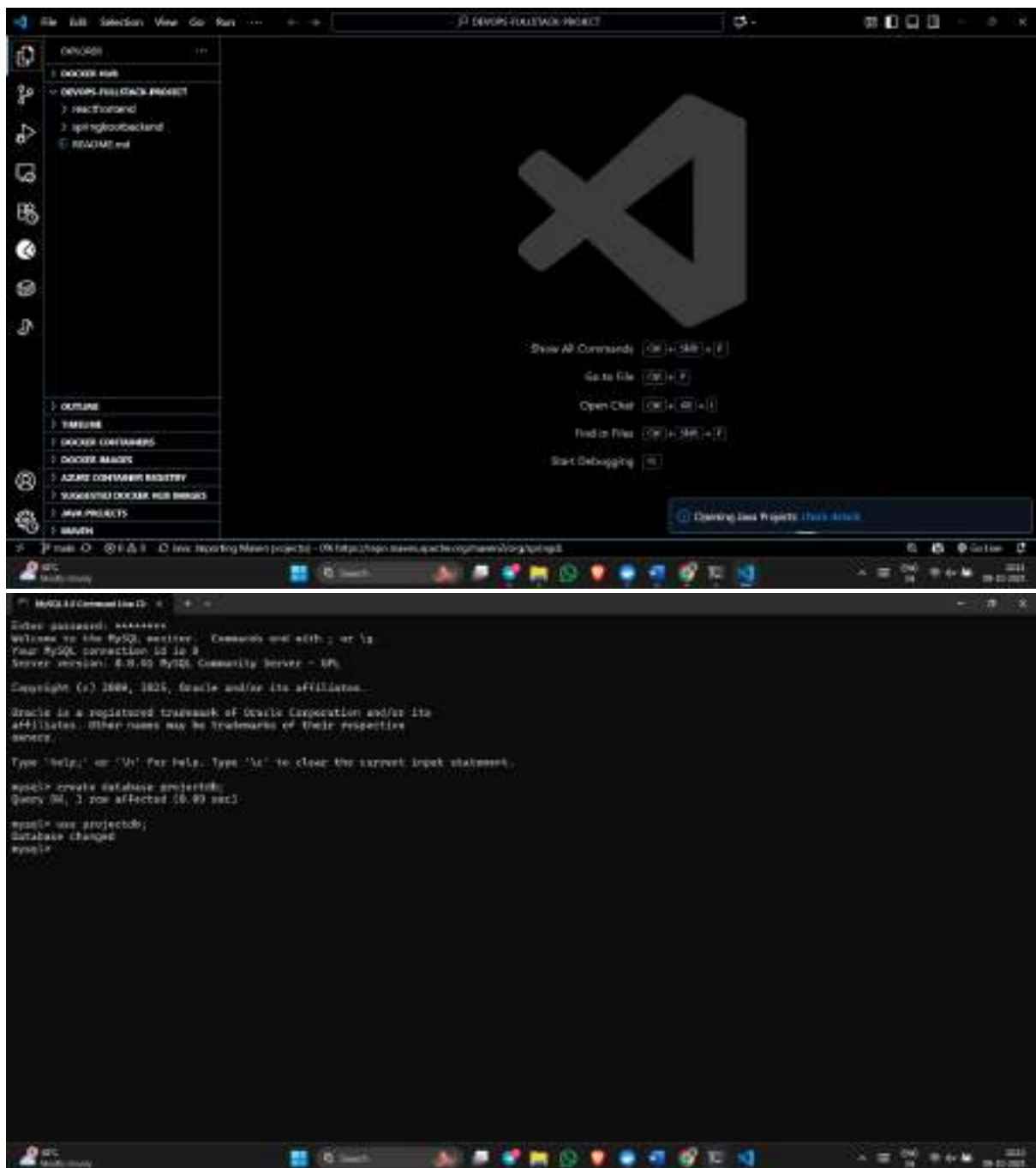
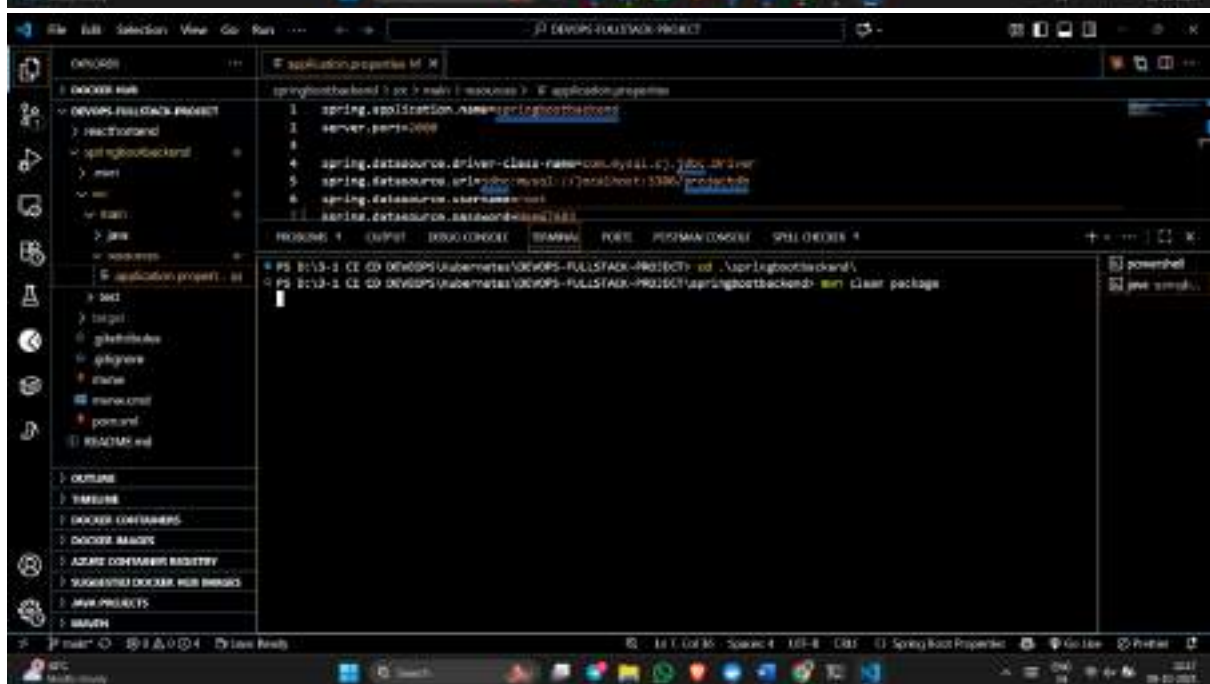
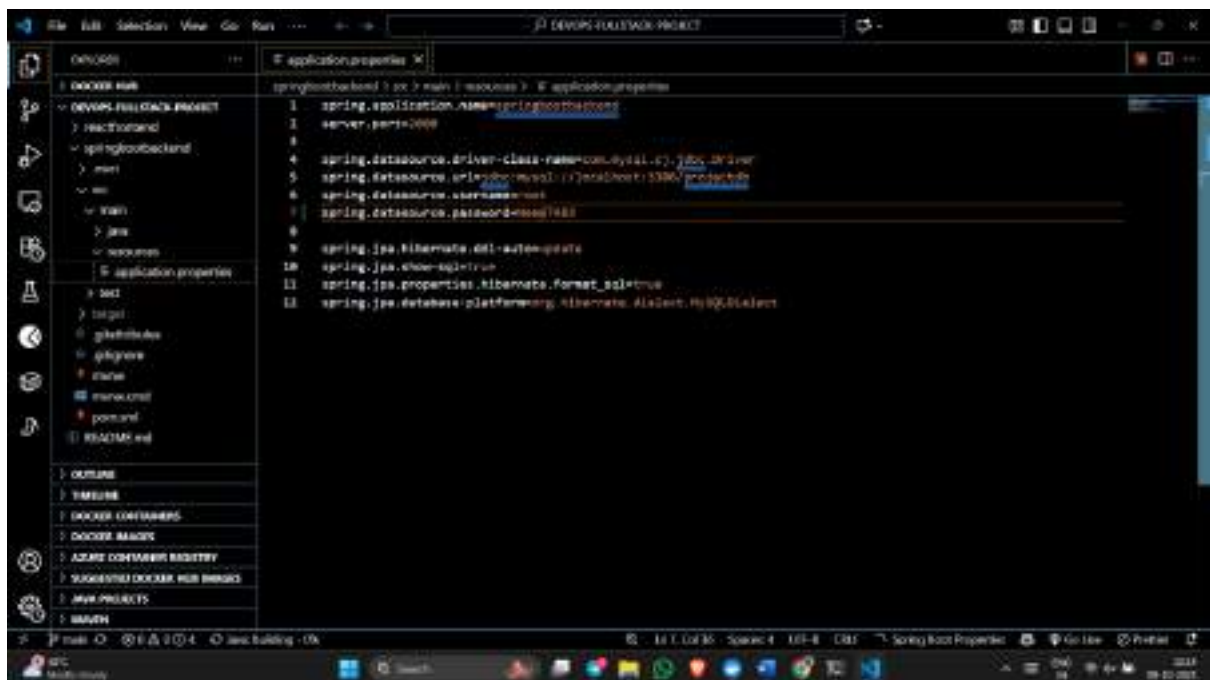


## LAB 12









```
File Edit Selection View Go Run ... DEVOPS-FULLSTACK-PROJECT
[application.properties]
springbootbackend { src > main > resources > application.properties
1 spring.application.name=springbootbackend
2 server.port=2000
3
4 spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver
5 spring.datasource.url=jdbc:mysql://localhost:3306/projectdb
6 spring.datasource.username=root
7 spring.datasource.password=123456
PROBLEMS OUTPUT DEBUG CONSOLE WARNINGS ERRORS PERFORMANCE WARNINGS
PE 0:13-1 CE CD DEVOPS\user\devops\DEVOPS-FULLSTACK-PROJECT\springbootbackend > run class package
[INFO] Results:
[INFO] Tests run: 2, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- maven-compiler-plugin:3.10.1:compile (default-compile) @ springbootbackend ---
[INFO] Building jar: 0:13-1 CE CD DEVOPS\user\devops\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target\springbootbackend-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot-maven-plugin:3.0.1:repackage (repackage) @ springbootbackend ---
[INFO] Replicating main artifact 0:13-1 CE CD DEVOPS\user\devops\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target\springbootbackend-0.0.1-SNAPSHOT.jar with repackaged archive, adding nested dependencies in BOOT-INF/.
[INFO] The original artifact has been renamed to 0:13-1 CE CD DEVOPS\user\devops\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target\springbootbackend-0.0.1-SNAPSHOT.jar.original
[INFO]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 21.894 s
[INFO] Finished at: 2023-10-07 10:17:46 MSB
[INFO]
[INFO]
PE 0:13-1 CE CD DEVOPS\user\devops\DEVOPS-FULLSTACK-PROJECT\springbootbackend > run class package
```

```
File Edit Selection View Go Run ... DEVOPS-FULLSTACK-PROJECT
[application.properties]
springbootbackend { src > main > resources > application.properties
1 spring.application.name=springbootbackend
PROBLEMS OUTPUT DEBUG CONSOLE WARNINGS ERRORS PERFORMANCE WARNINGS
Microsoft Windows [Version 10.0.22H2.6594]
(c) Microsoft Corporation. All rights reserved.

C:\Users\user> cd DEVOPS\user\devops\DEVOPS-FULLSTACK-PROJECT\reactfrontend
C:\Users\user\devops\DEVOPS-FULLSTACK-PROJECT\reactfrontend> npm install

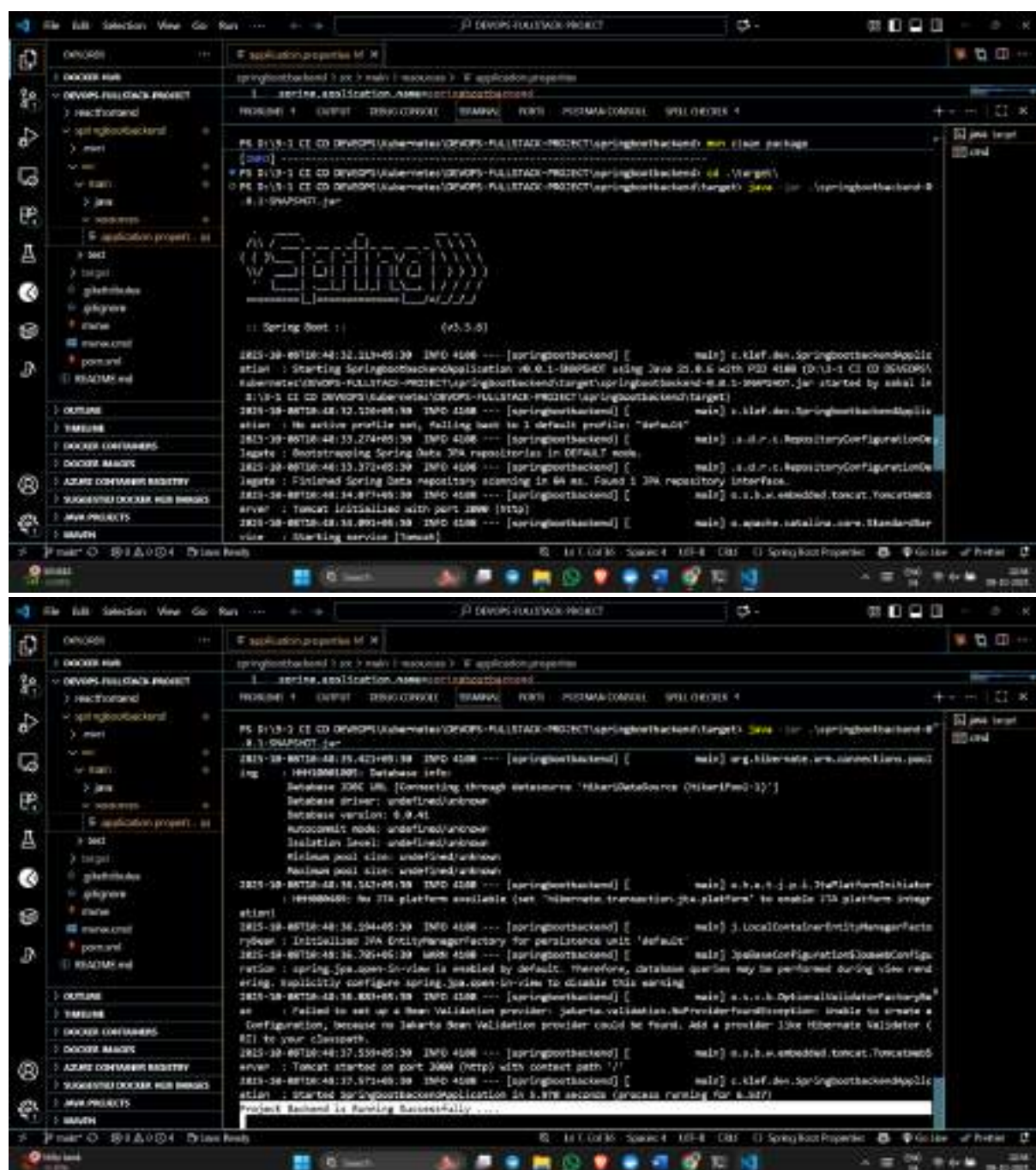
added 216 packages, and audited 217 packages in 2s

18 packages are looking for funding
  run `npm fund` for details

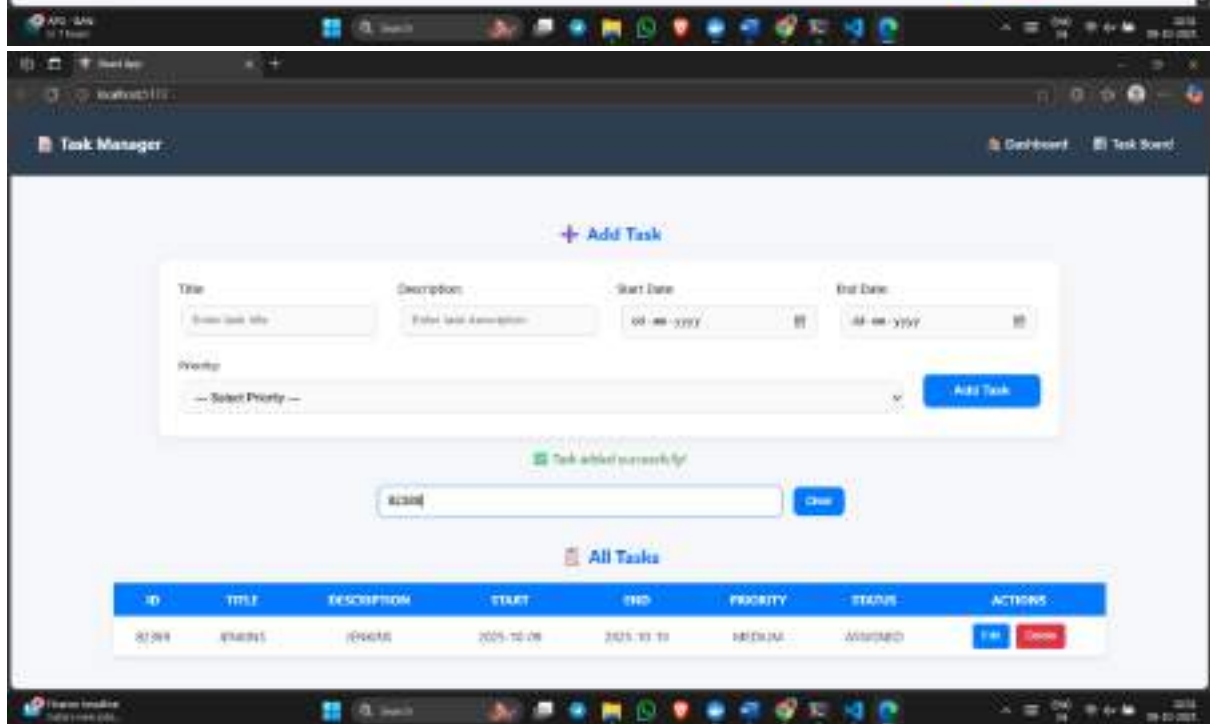
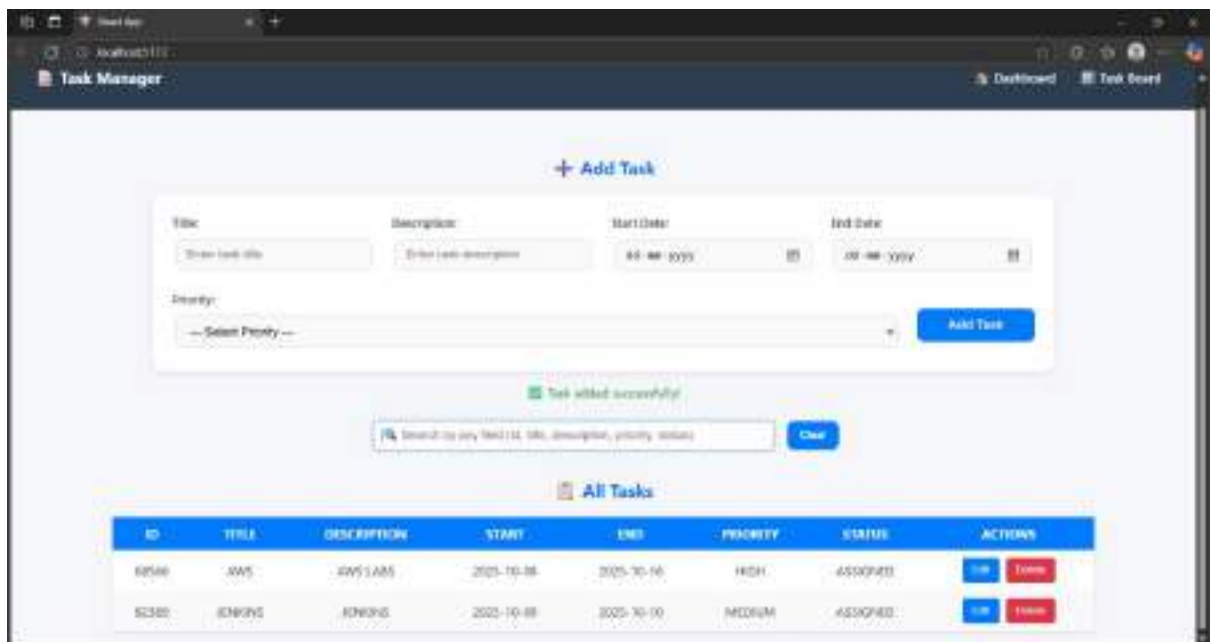
found 0 vulnerabilities

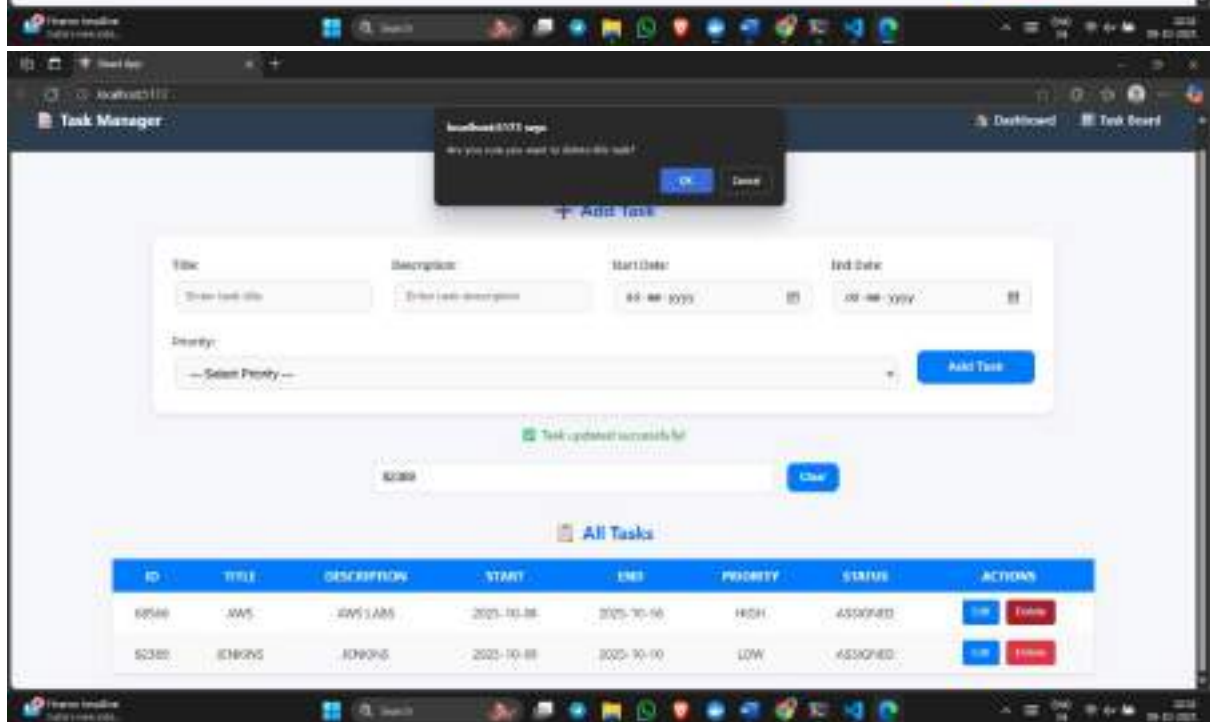
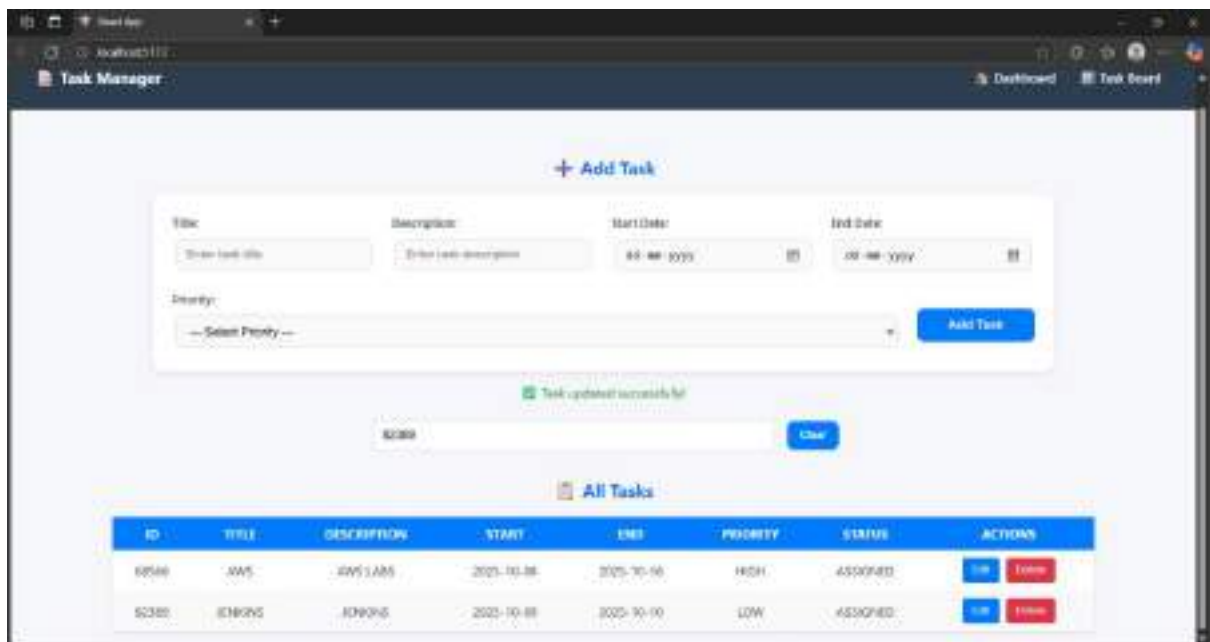
npm notice New major version of npm available! 11.6.0 -> 11.6.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v11.6.1
npm notice To update run: npm install -g npm@11.6.1
npm notice

C:\Users\user\devops\DEVOPS-FULLSTACK-PROJECT\reactfrontend>
```

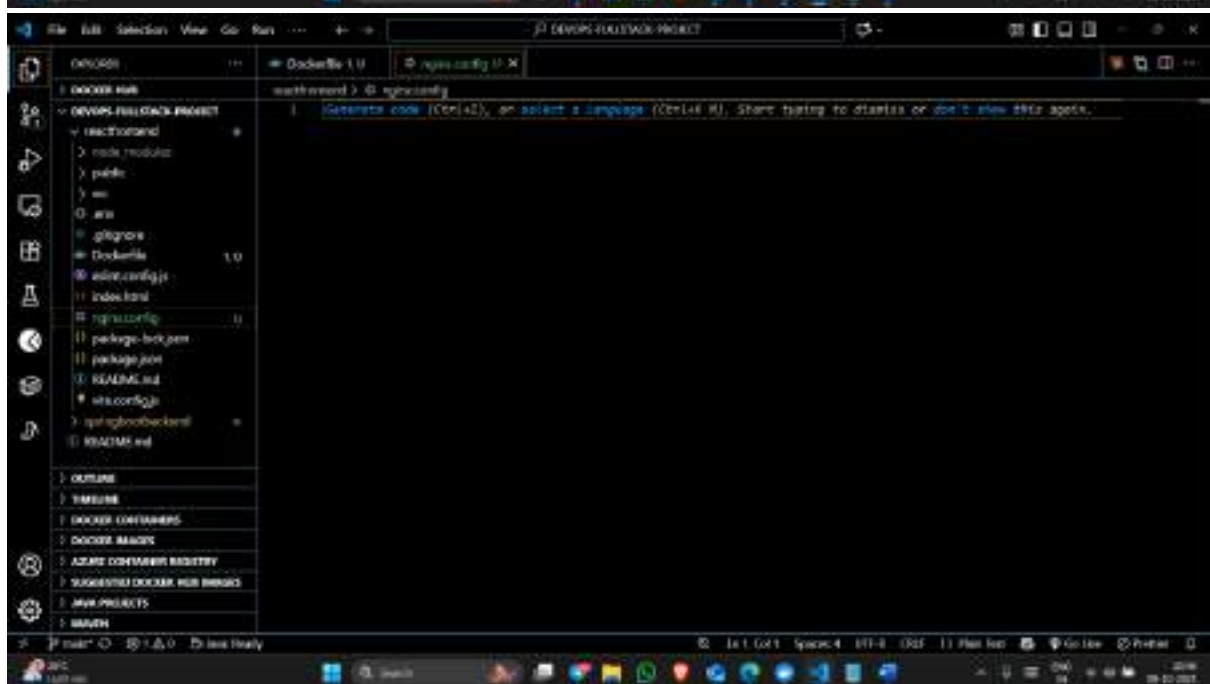
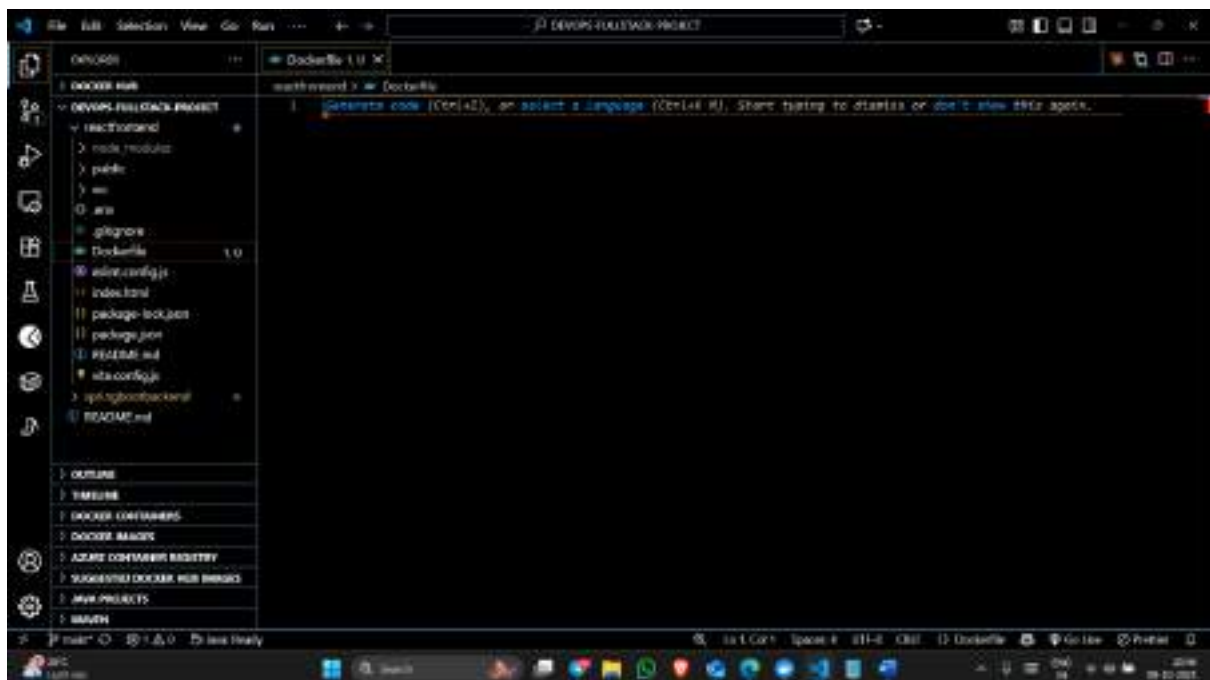


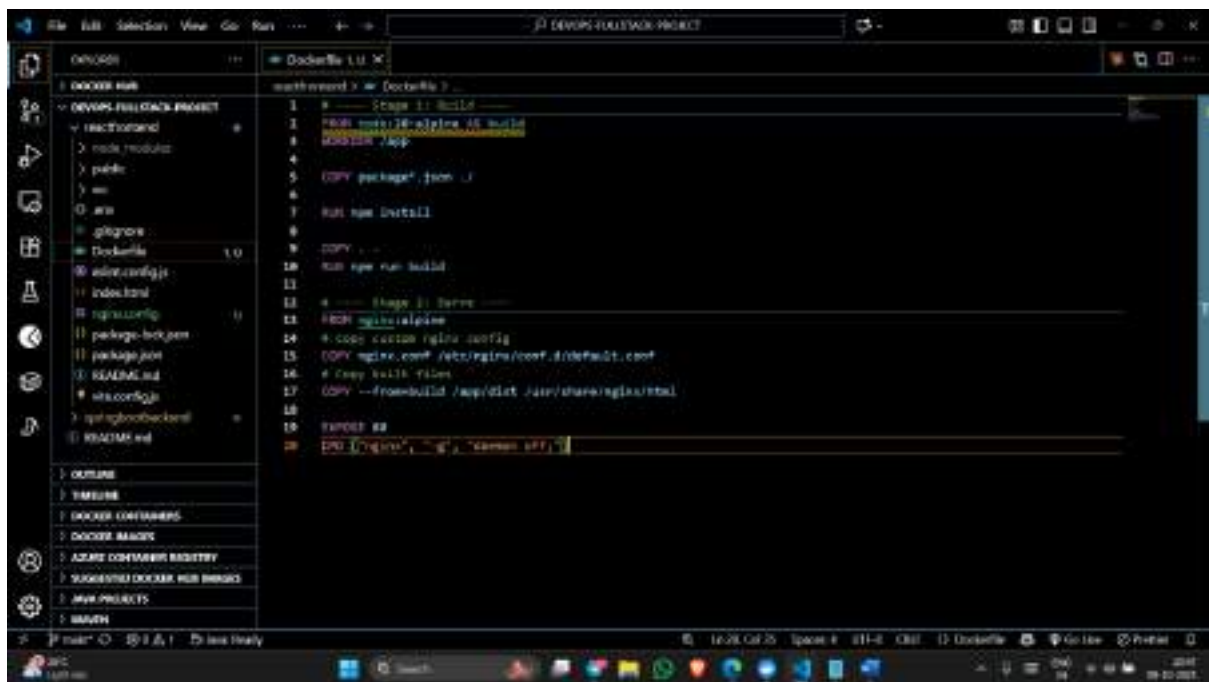












# ---- Stage 1: Build ----

FROM node:20-alpine AS build

WORKDIR /app

COPY package\*.json ./

RUN npm install

COPY . .

RUN npm run build

# ---- Stage 2: Serve ----

FROM nginx:alpine

# Copy custom nginx config

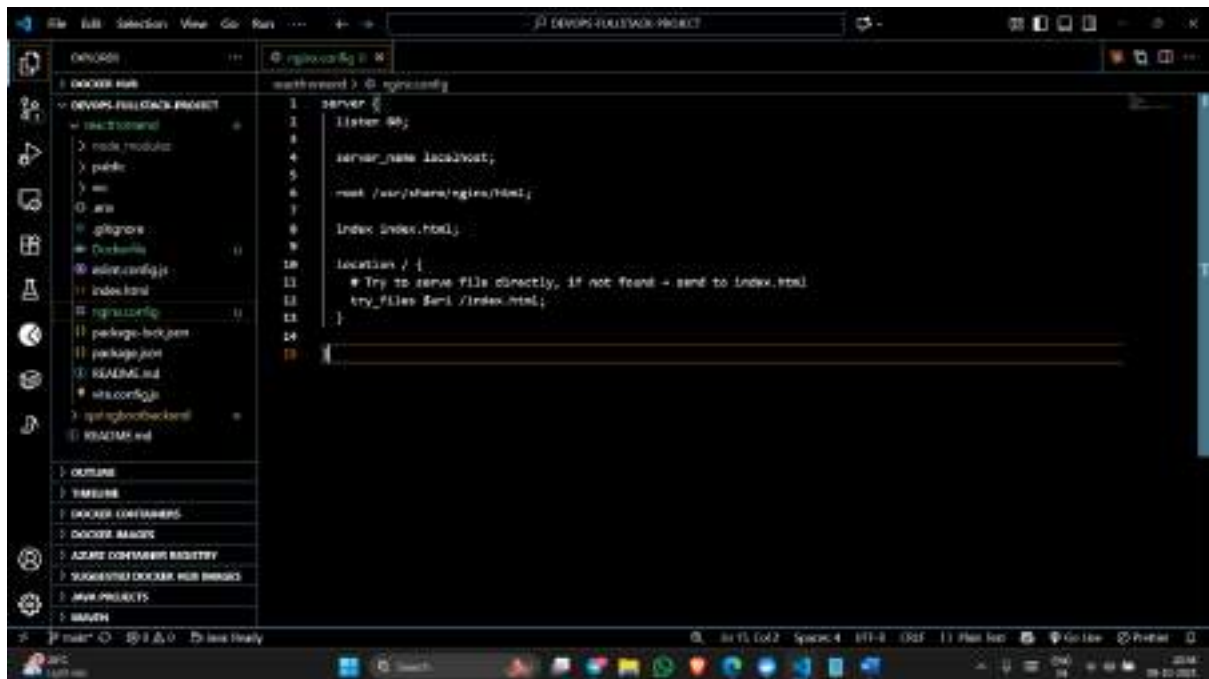
COPY nginx.conf /etc/nginx/conf.d/default.conf

# Copy built files

COPY --from=build /app/dist /usr/share/nginx/html

## EXPOSE 80

CMD ["nginx", "-g", "daemon off;"]



```
server {
```

```
    listen 80;
```

```
    server_name localhost;
```

```
    root /usr/share/nginx/html;
```

```
    index index.html;
```

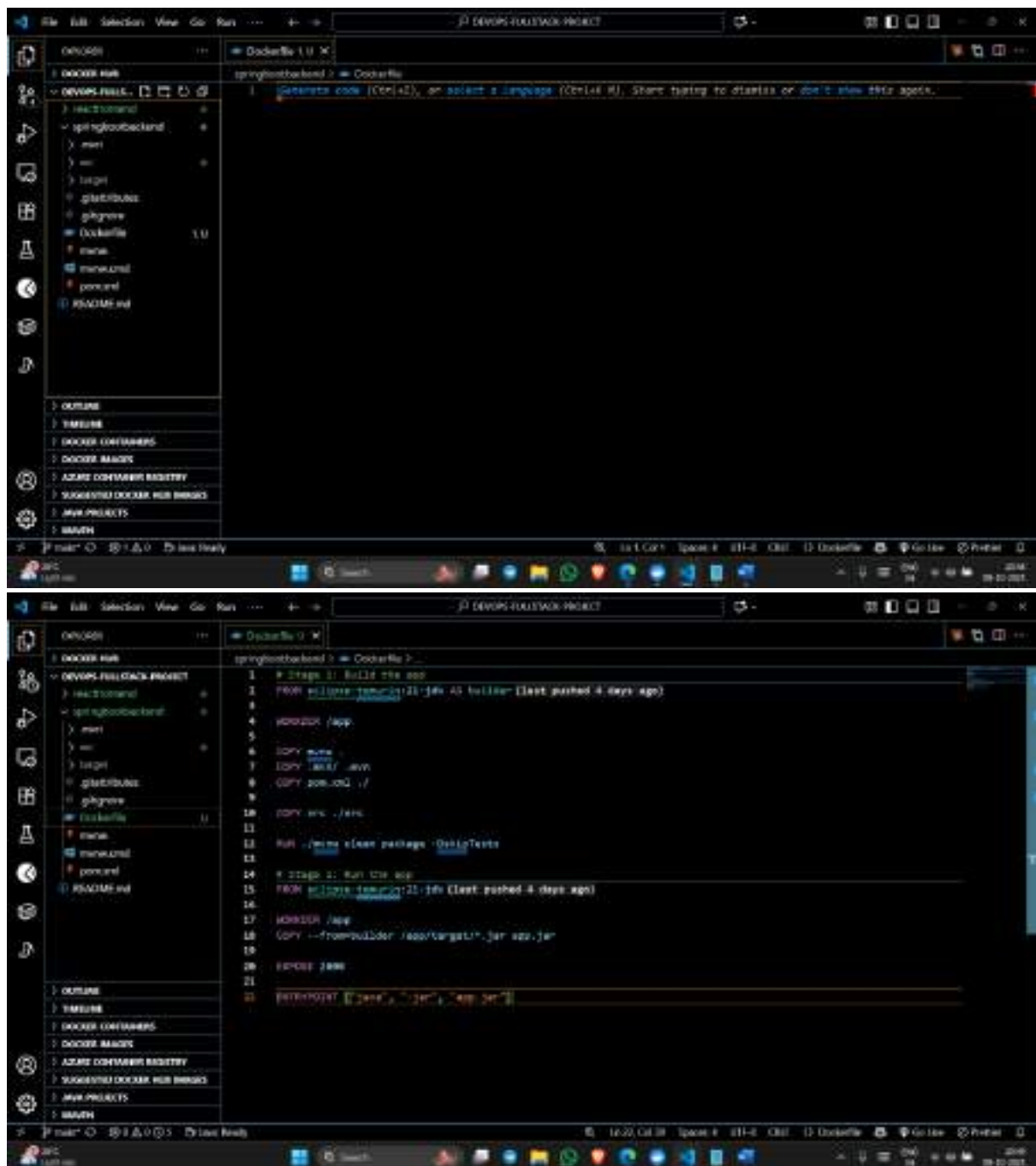
```
    location / {
```

```
        # Try to serve file directly, if not found → send to index.html
```

```
        try_files $uri /index.html;
```

```
    }
```

}



# Stage 1: Build the app

FROM eclipse-temurin:21-jdk AS builder

WORKDIR /app

COPY mvnw .

COPY .mvn/ .mvn

COPY pom.xml ./

COPY src ./src

RUN ./mvnw clean package -DskipTests

# Stage 2: Run the app

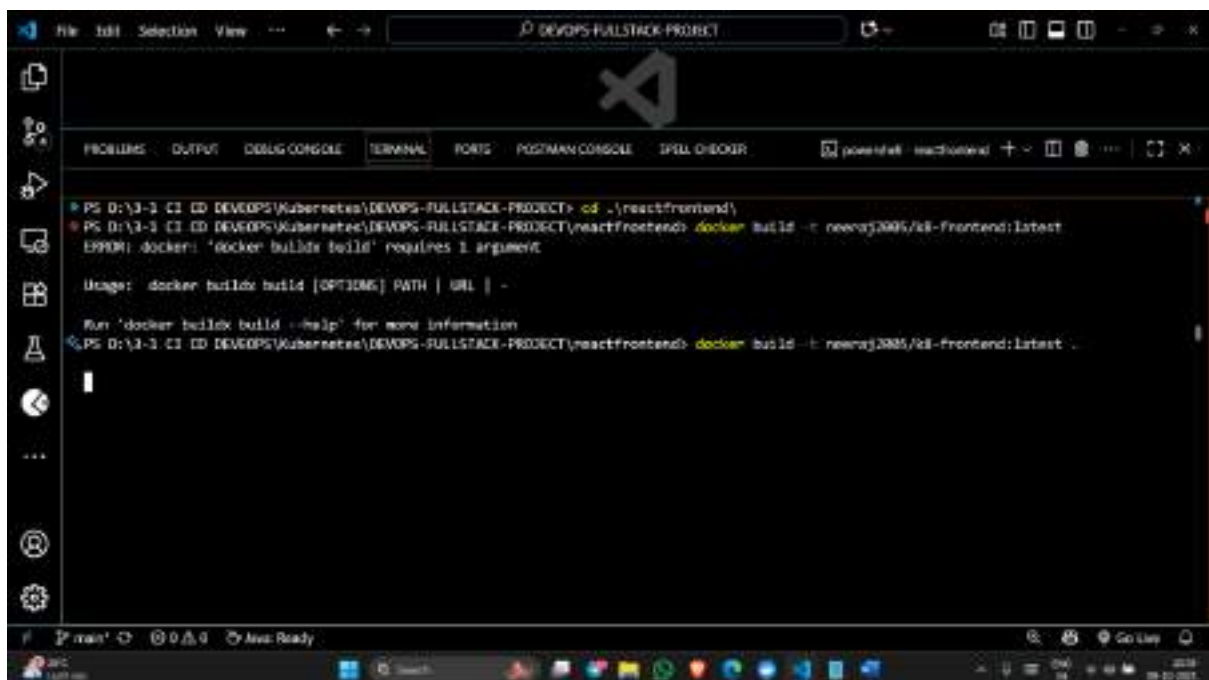
FROM eclipse-temurin:21-jdk

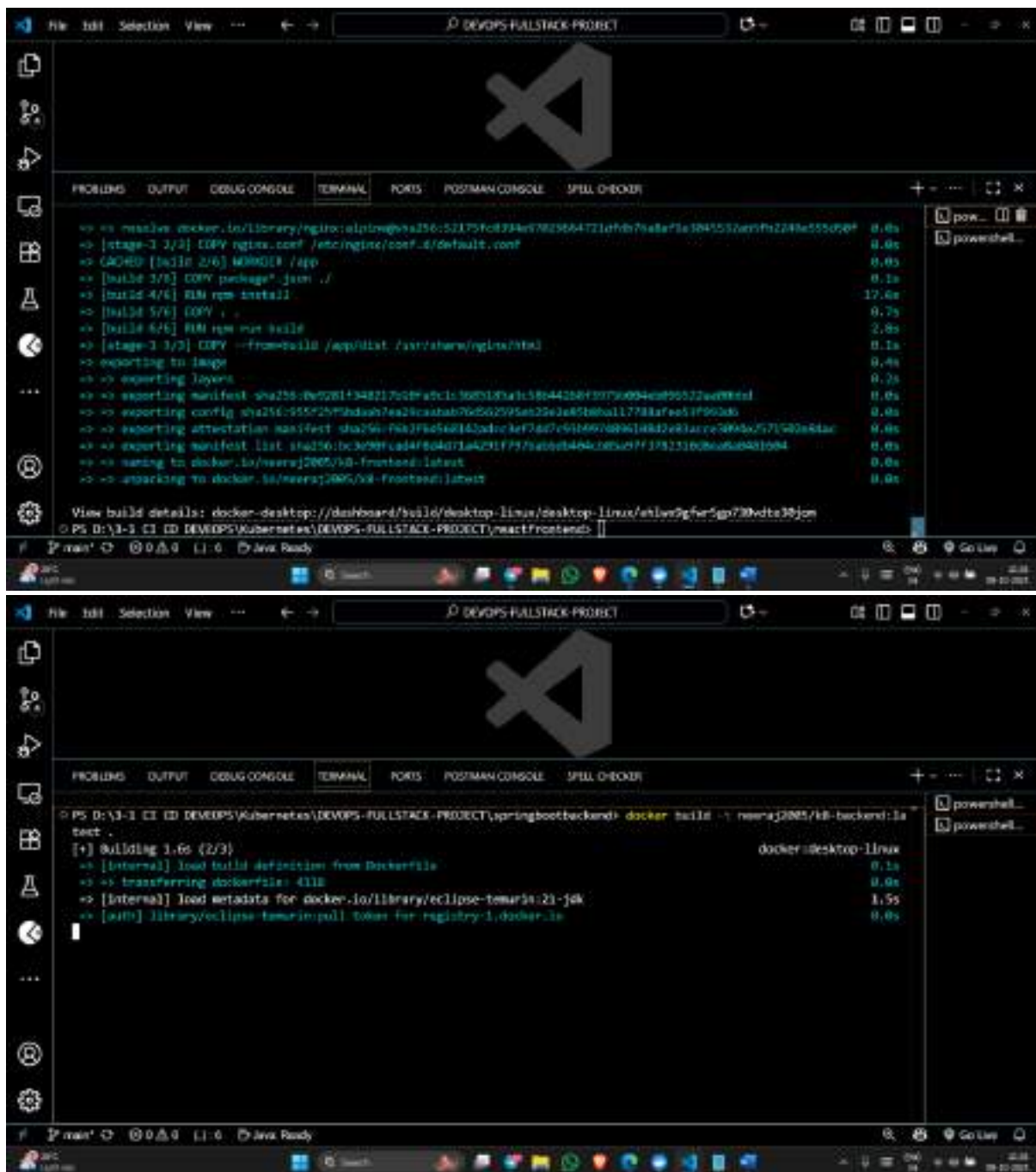
WORKDIR /app

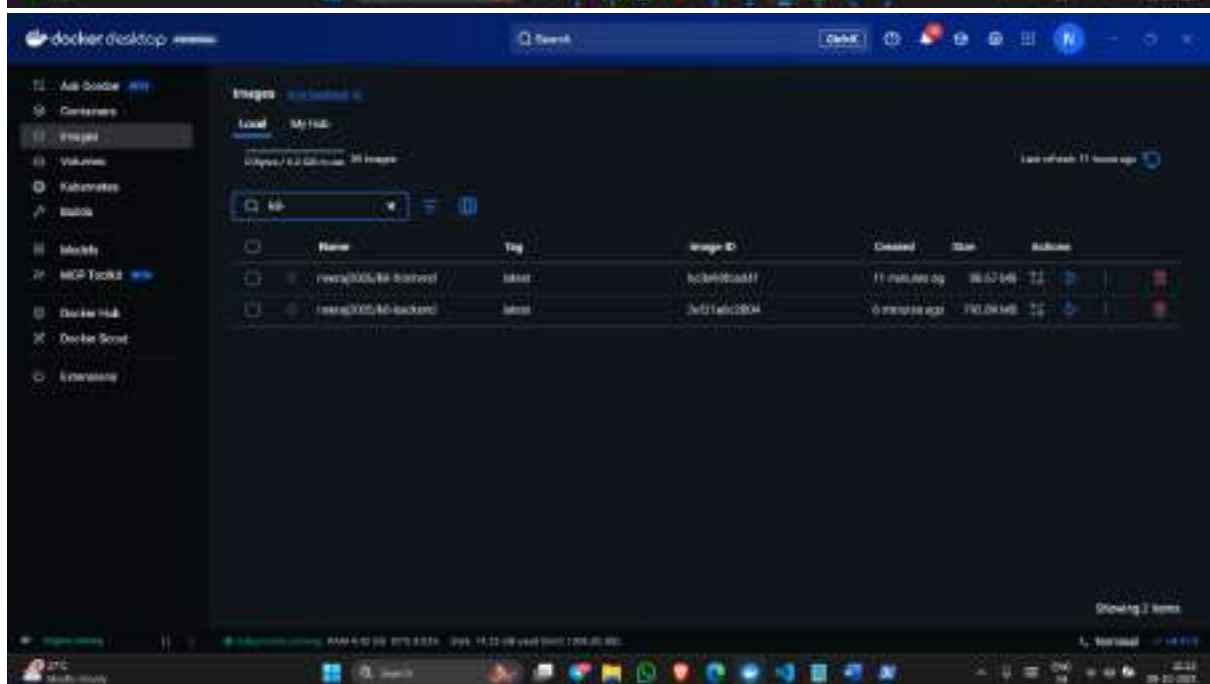
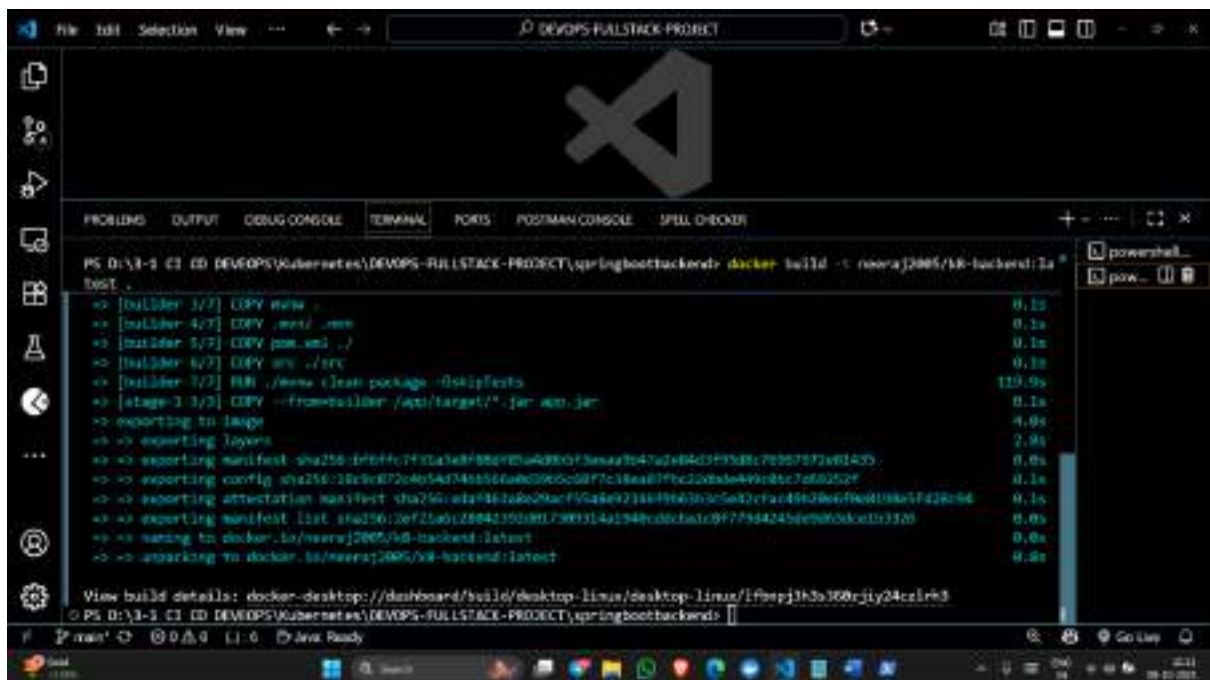
COPY --from=builder /app/target/\*.jar app.jar

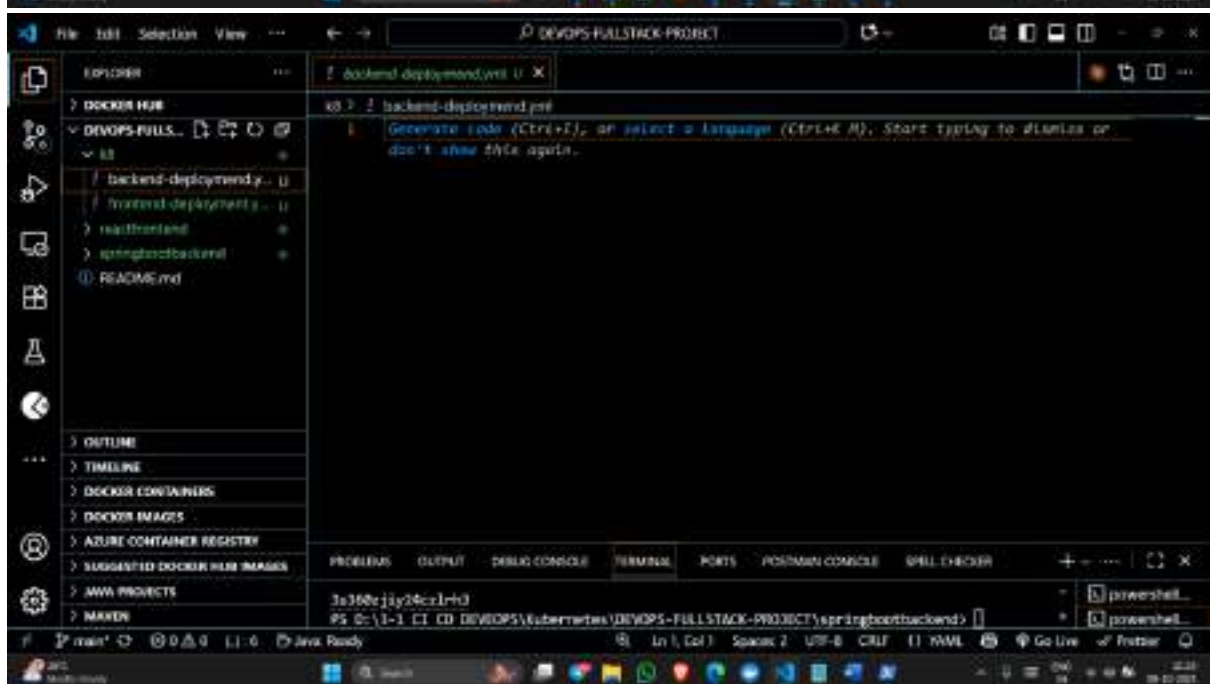
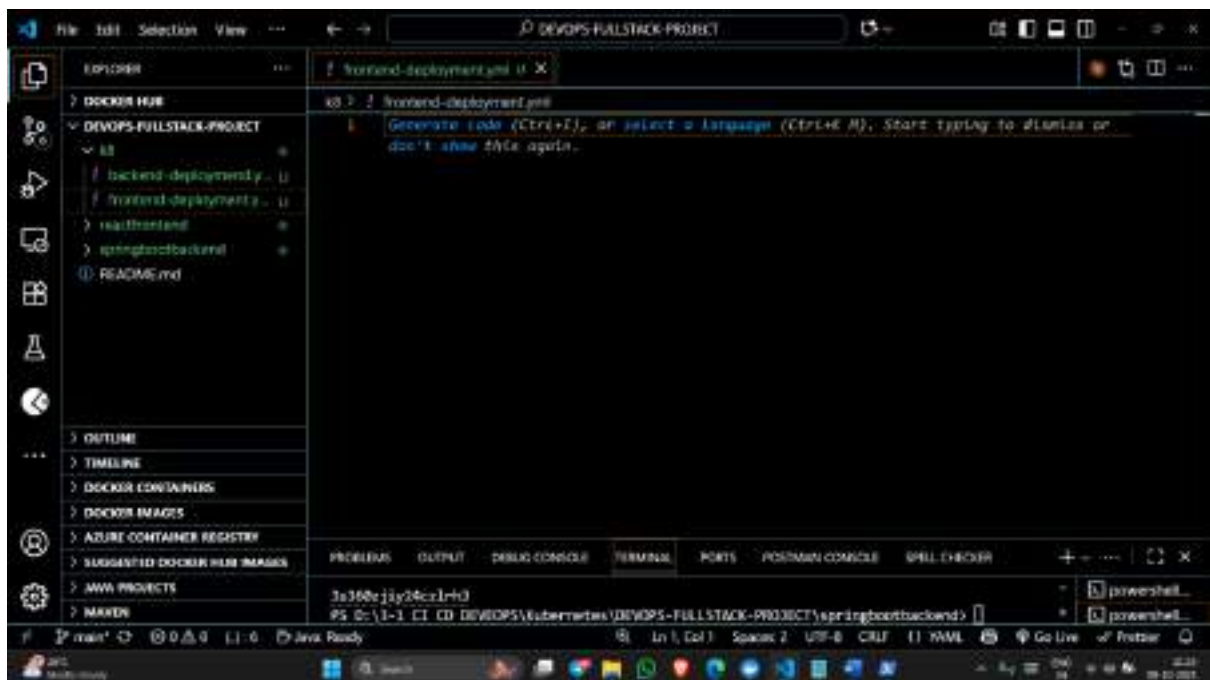
EXPOSE 2000

ENTRYPOINT ["java", "-jar", "app.jar"]









```
Microsoft Windows [Version 10.0.18290.1000]
(c) Microsoft Corporation. All rights reserved.

C:\Users\isaak\kubectl config get-contexts
CURRENT  NAME          CLUSTER          AUTHINFO          NAMESPACE
+-----+-----+-----+-----+-----+
*         minikube     minikube         minikube         default

C:\Users\isaak\kubectl config use-context
Set the current-context in a kubeconfig file.

Aliases:
use-context, use

Examples:
# Use the context for the minikube cluster
kubectl config use-context minikube

Usage:
kubectl config use-context CONTEXT_NAME [options]

For "kubectl options" for a list of global command-line options (applies to all commands),
error: Unexpected arg: []

C:\Users\isaak\kubectl config use-context docker-desktop
Switched to context "docker-desktop".

C:\Users\isaak\kubectl config current-context
docker-desktop

C:\Users\isaak\kubectl config get-contexts
error: unknown command "get-context"
See "kubectl config -h" for help and examples.

C:\Users\isaak\kubectl config get-contexts
CURRENT  NAME          CLUSTER          AUTHINFO          NAMESPACE
+-----+-----+-----+-----+-----+
*         minikube     minikube         minikube         default

C:\Users\isaak\kubectl
```

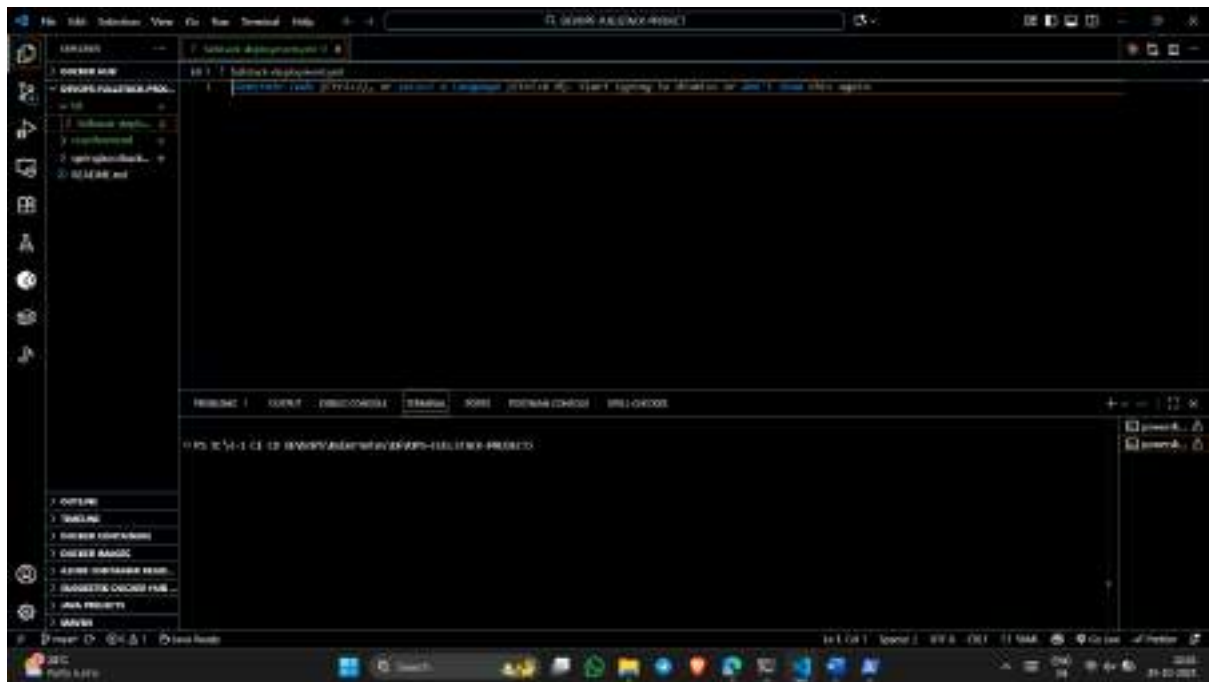
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

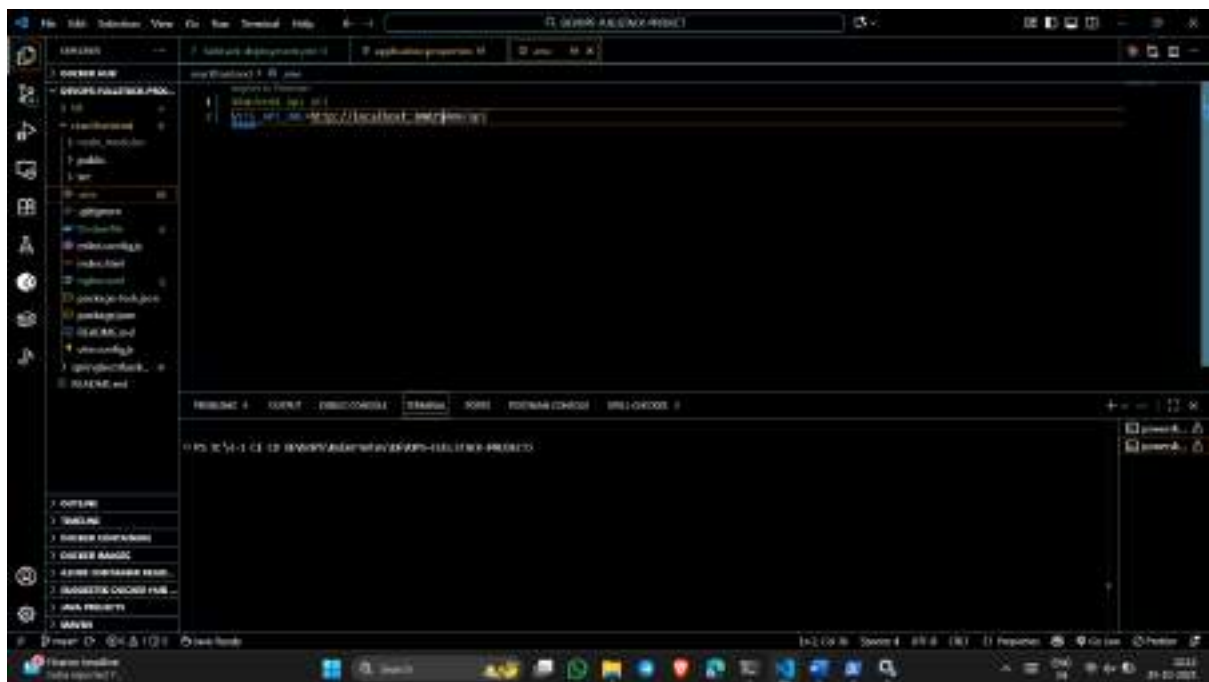
PS C:\WINDOWS\system32> minikube delete
+ Deleting "minikube" in docker ...
+ Removing C:\Users\isaak\minikube\machines\minikube ...
+ Removed all traces of the "minikube" cluster.
PS C:\WINDOWS\system32> choco uninstall minikube
Chocolatey v0.9.9
Could not find a command registered that wants "uninstall".
Try choco --help for command information/help.
PS C:\WINDOWS\system32> choco uninstall minikube
Chocolatey v0.9.9
Installing the following packages:
minikube

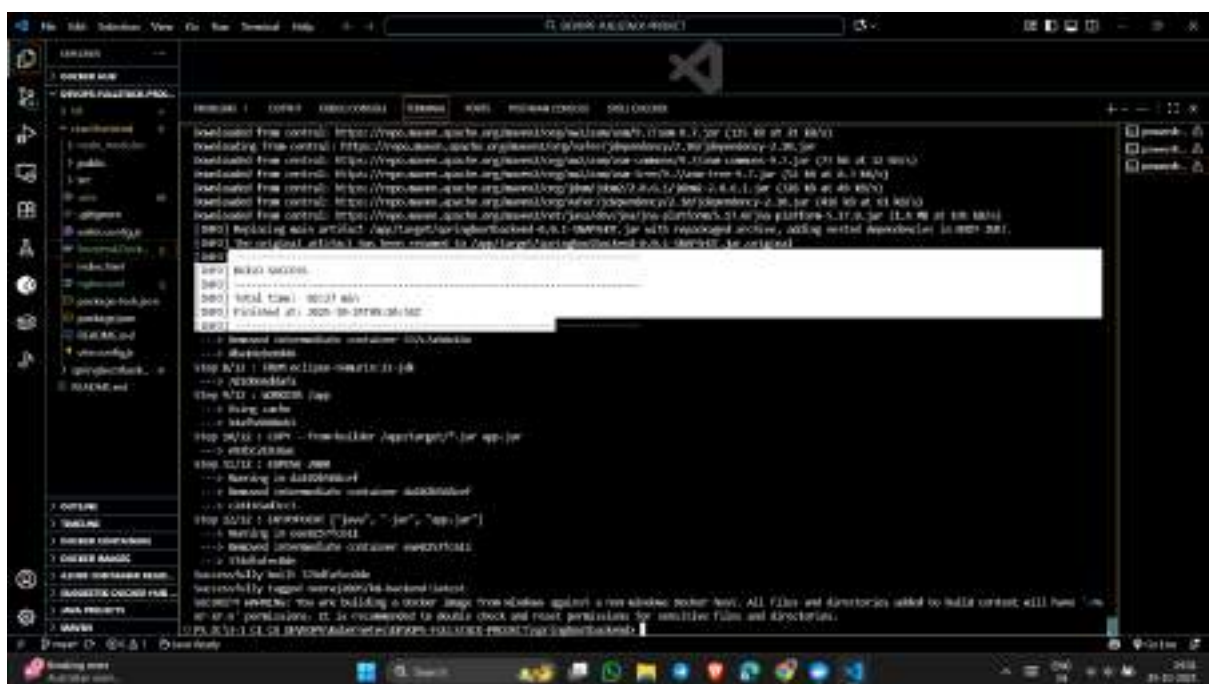
Package v0.9.9
Skipping auto-installer - no registry wrapper.
Minikube has been successfully uninstalled.

Chocolatey uninstalled 1/1 packages.
See the log for details (C:\ProgramData\chocolatey\logs\chocolatey.log).
PS C:\WINDOWS\system32>
```

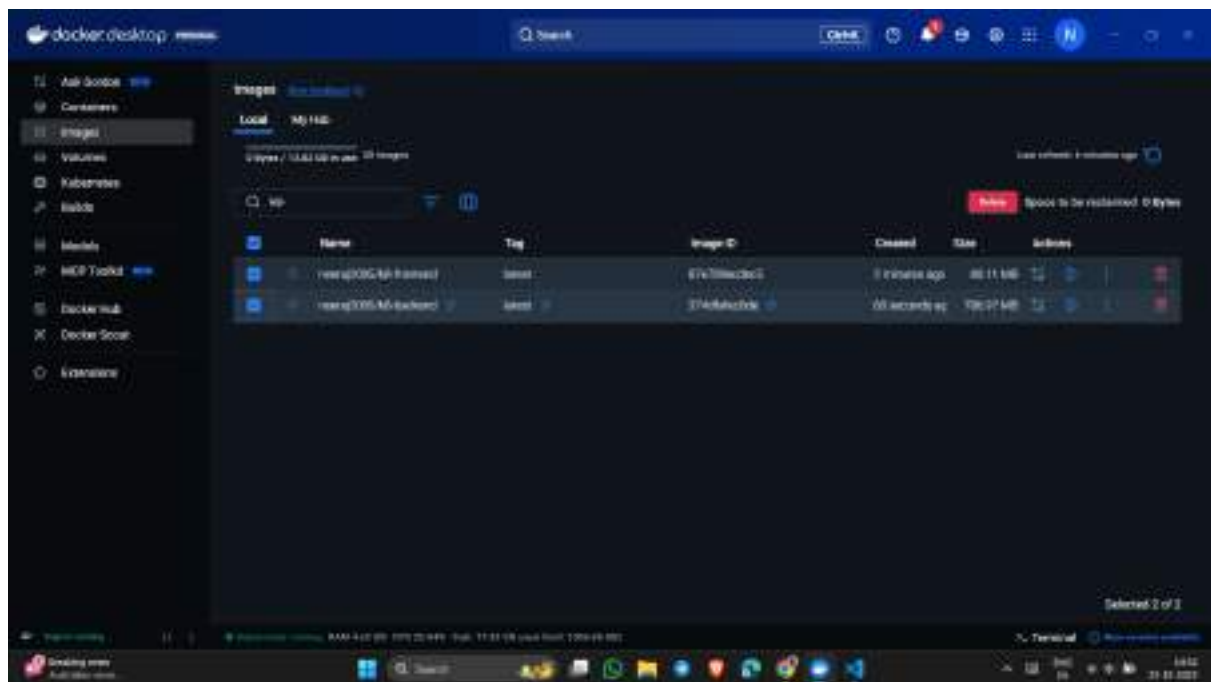


No multiple files for deployment using one full stack

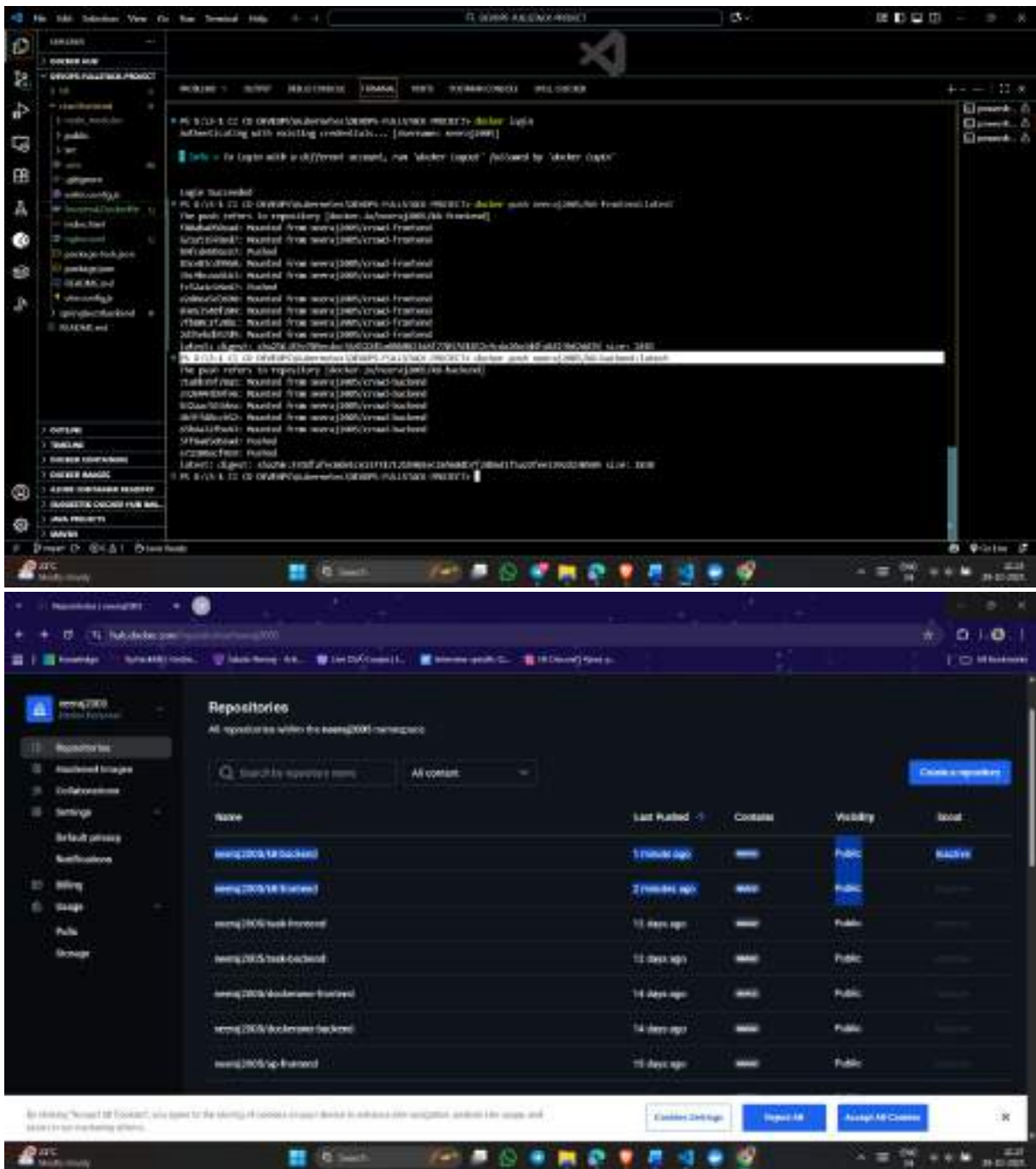


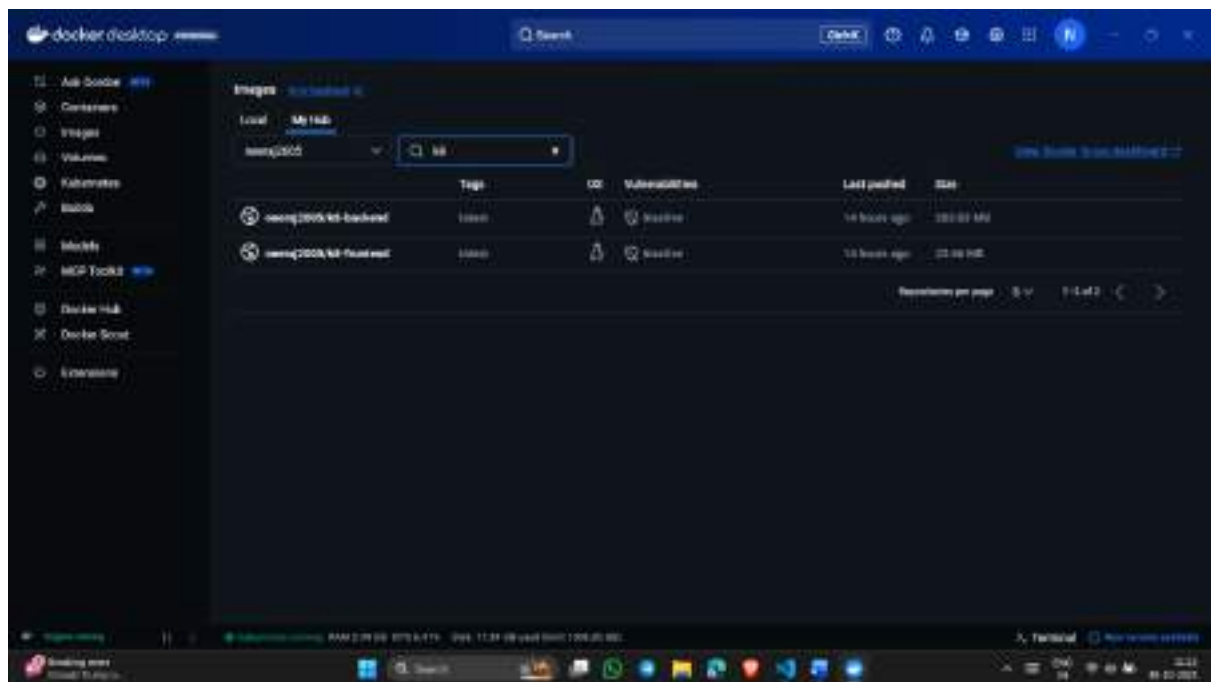




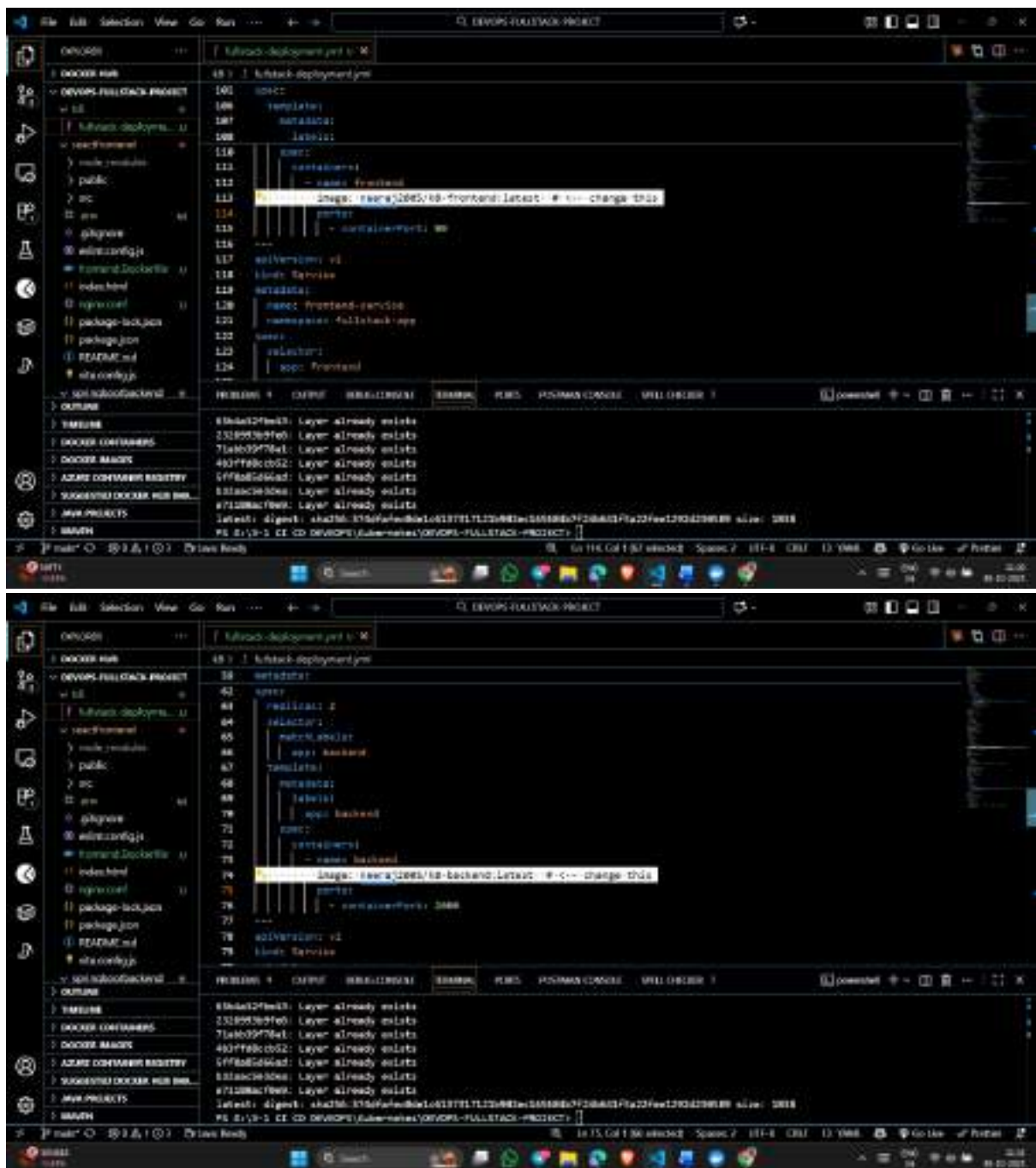




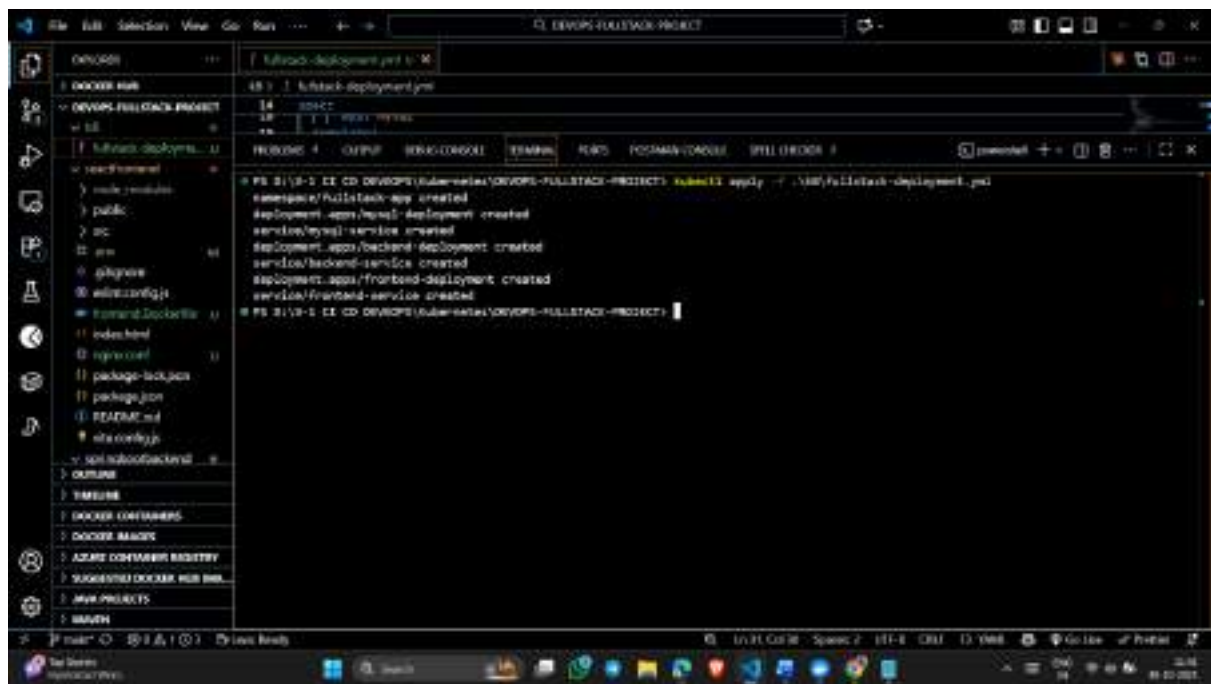


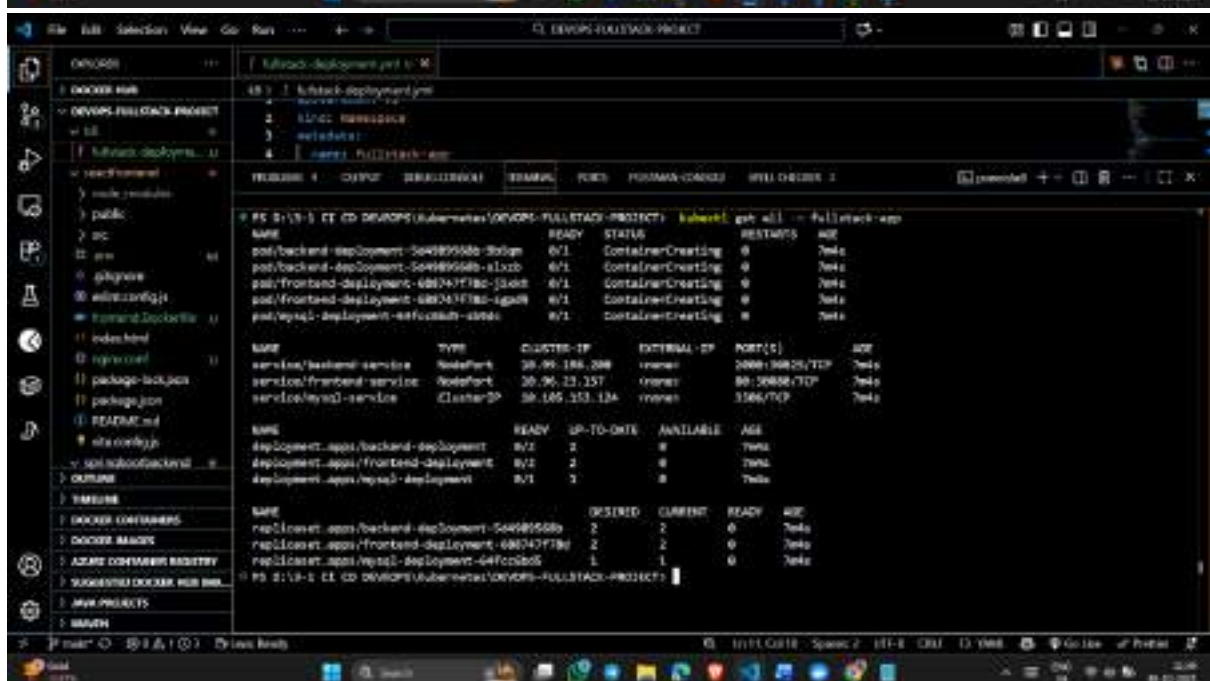
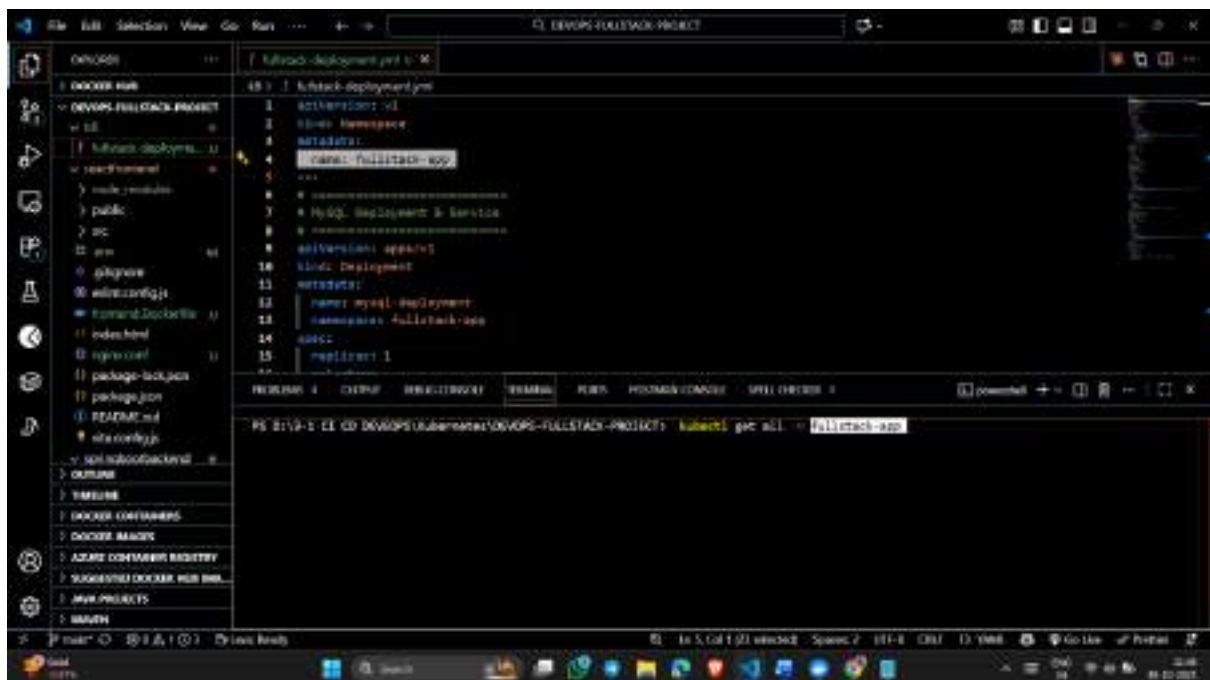






kubectl apply -f.\k8\fullstack-deployment.yml







Task Manager

DashboardTask Board

+ Add Task

Title

Description

Start Date

End Date

Priority

Add Task

Search by any field (id, title, description, priority, status)

Clear

All Tasks

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
----	-------	-------------	-------	-----	----------	--------	---------

Task added successfully!

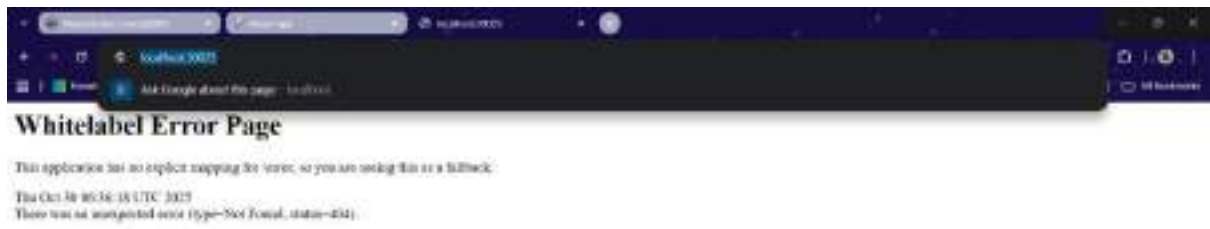
Search by any field (id, title, description, priority, status)

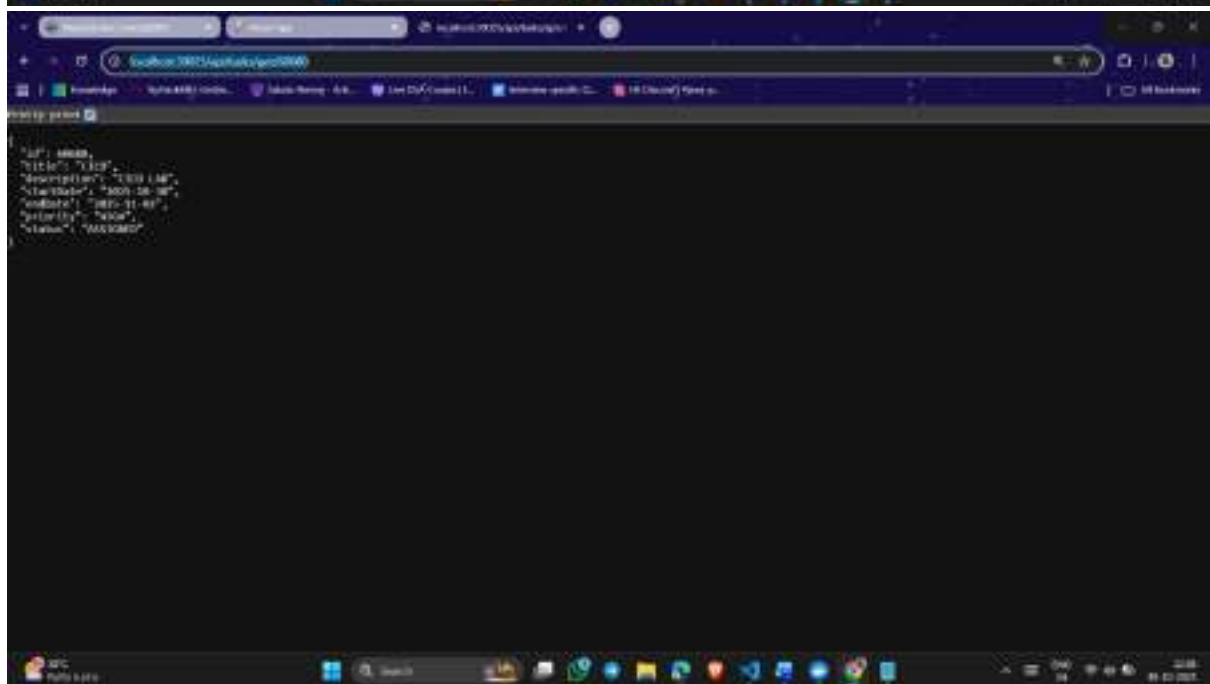
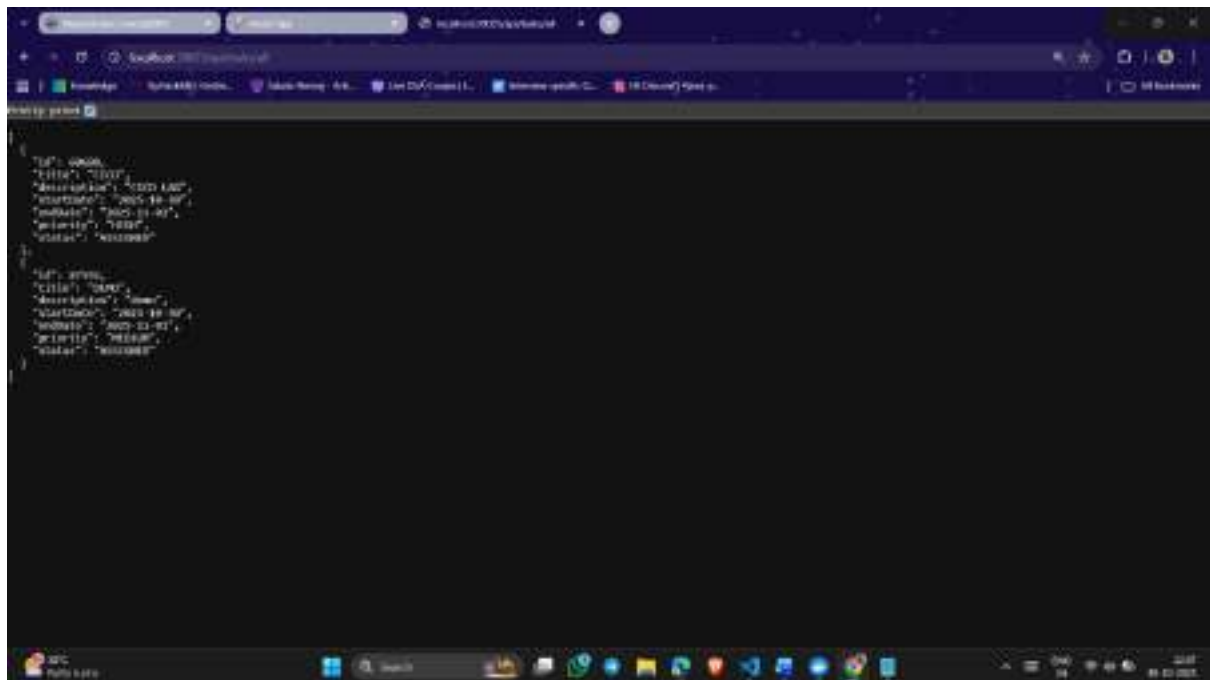
Clear

All Tasks

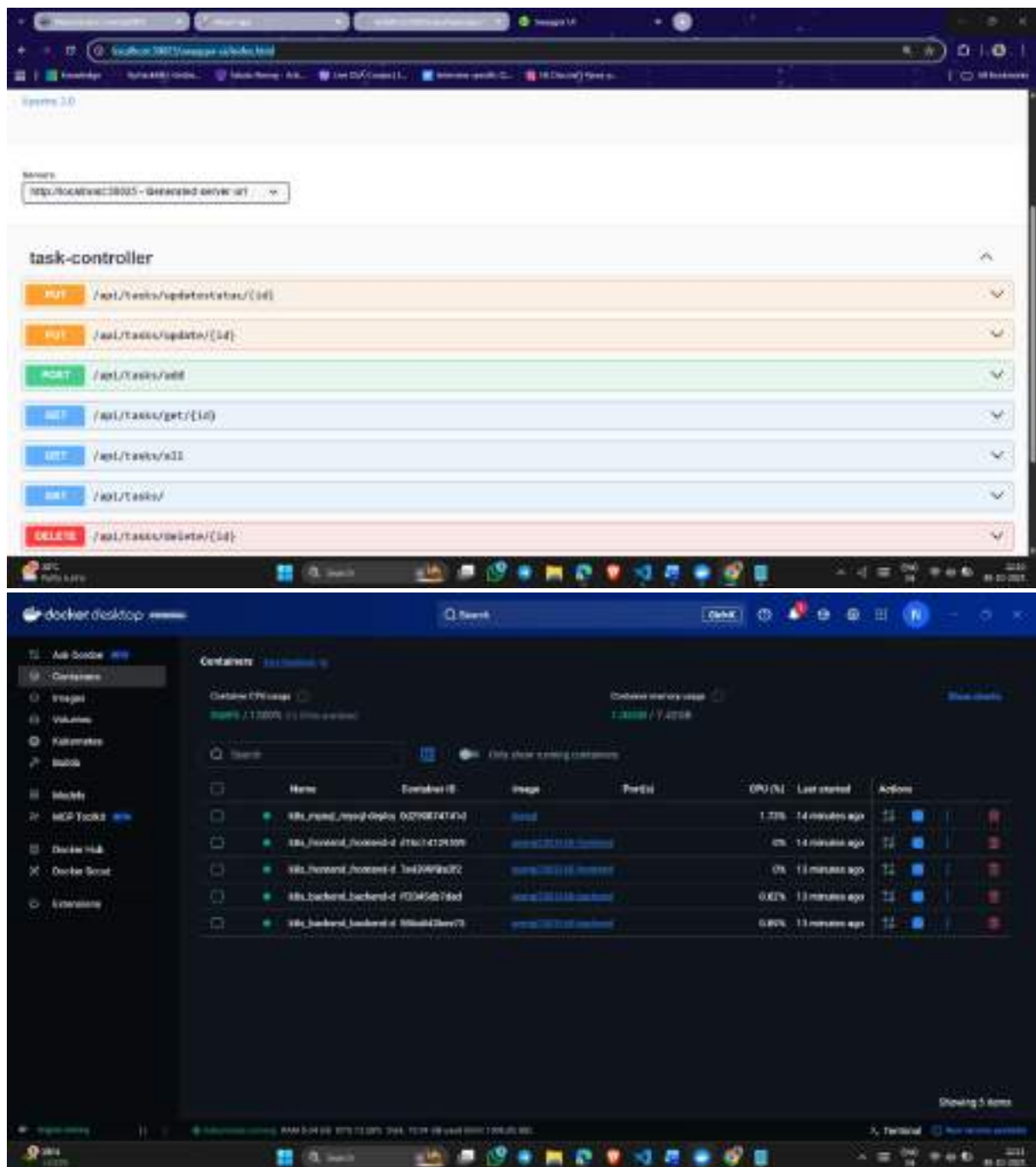
ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
97583	DEMO	demo	2025-10-30	2025-11-01	MEDIUM	ASSIGNED	<div>EditDelete</div>











File Edit Selection View Go Run ... Q DEVOPS-FULLSTACK-PROJECT

DOCKER ... fullstack-deployment.yml

DEVOPS-FULLSTACK-PROJECT

fullstack-deployment.yml

REVISION: 1 CPU: 0.00% MEM: 0.00% STATUS: READY

PS 2/13-1 DE CD DEVOPS(subernetes)/DEVOPS-FULLSTACK-PROJECT: kubectl get -f ./fullstack-deployment.yml

NAME	STATUS	AGE
namespace/fullstack-app	Active	51m

NAME	STATUS	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/mysql-deployment	READY	1/1	1	51m

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/mysql-service	ClusterIP	10.100.181.124	None	3306/TCP	51m

NAME	STATUS	UP-TO-DATE	AVAILABLE	AGE
Deployment.apps/backend-deployment	READY	2/2	2	51m

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/backend-service	NodePort	10.100.180.100	None	3000:3000/TCP	51m

NAME	STATUS	UP-TO-DATE	AVAILABLE	AGE
Deployment.apps/frontend-deployment	READY	2/2	2	51m

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/frontend-service	NodePort	10.100.151.157	None	80:30080/TCP	51m

PS 2/13-1 DE CD DEVOPS(subernetes)/DEVOPS-FULLSTACK-PROJECT:

main

File Edit Selection View Go Run ... Q DEVOPS-FULLSTACK-PROJECT

DOCKER ... fullstack-deployment.yml

DEVOPS-FULLSTACK-PROJECT

fullstack-deployment.yml

REVISION: 1 CPU: 0.00% MEM: 0.00% STATUS: READY

PS 2/13-1 DE CD DEVOPS(subernetes)/DEVOPS-FULLSTACK-PROJECT: kubectl get pods -f fullstack-app

NAME	READY	STATUS	RESTARTS	AGE
backend-deployment-5d45895680-86sqp	2/2	Running	1 (38m ago)	54m
backend-deployment-5d45895680-s1xsk	2/2	Running	1 (38m ago)	54m
frontend-deployment-5d4742f784-j5dsk	2/2	Running	0	54m
frontend-deployment-5d4742f784-qpd9	2/2	Running	0	54m
mysql-deployment-64fcd6d5-4b6dc	2/2	Running	0	54m

PS 2/13-1 DE CD DEVOPS(subernetes)/DEVOPS-FULLSTACK-PROJECT: kubectl logs -f backend-deployment-5d45895680-86sqp

error: error from server (NotFound): pods "backend-deployment-5d45895680-86sqp" not found in namespace "default"

PS 2/13-1 DE CD DEVOPS(subernetes)/DEVOPS-FULLSTACK-PROJECT:

main

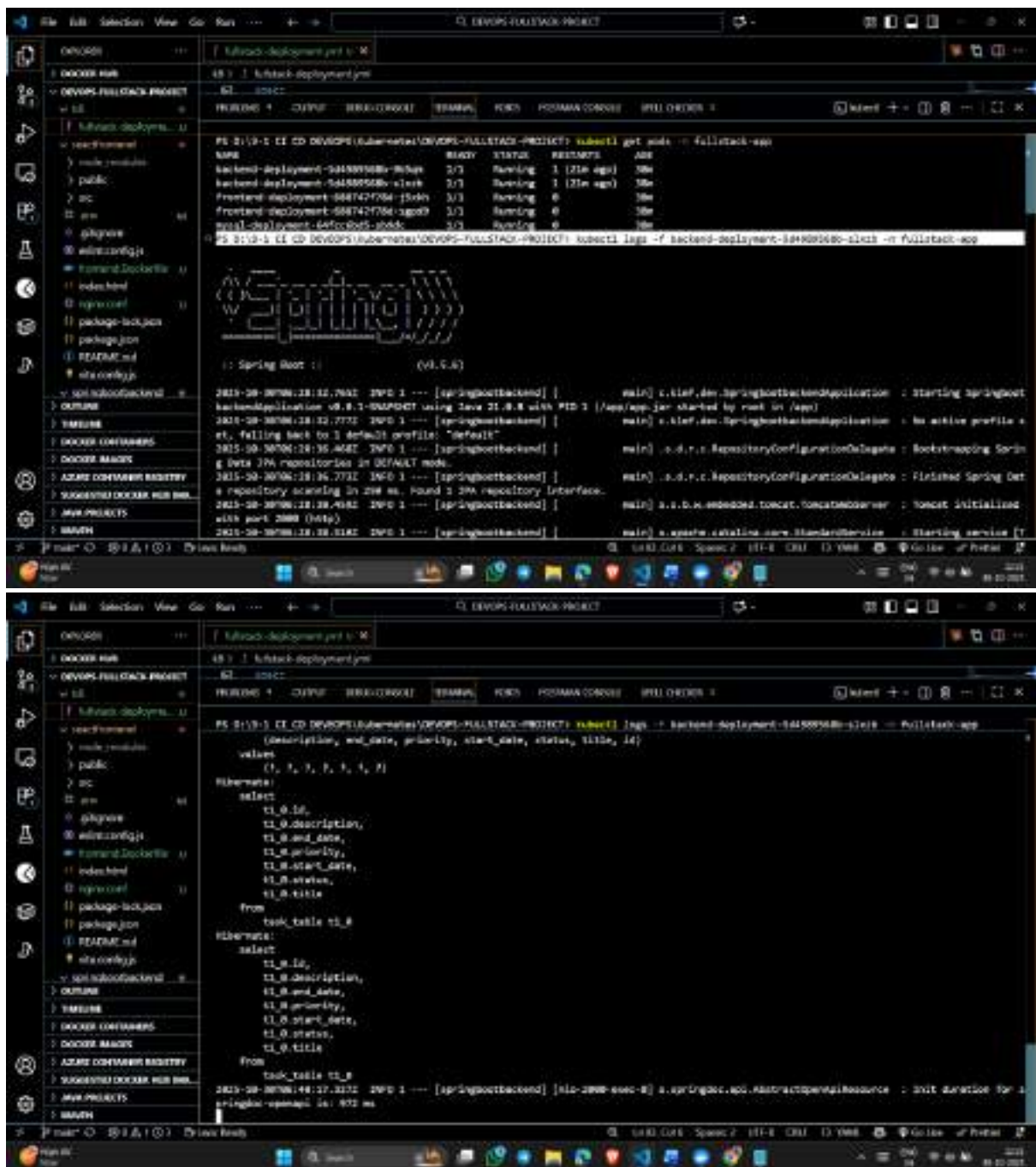
```

File Edit Selection View Go Run ...
DEVOPS-FULLSTACK-PROJECT
DEVOPS
  DEVOPS-HUB
  DEVOPS-FULLSTACK-PROJECT
    fullstack-deployment.yml
      PS 2/13:11 DE CD DEVOPS\submodules\DEVOPS-FULLSTACK-PROJECT\ kubectl get pods -n fullstack-app
      NAME                                READY   STATUS    RESTARTS   AGE
      backend-deployment-5448895486-back  2/2     Running   1 (38m ago)  54s
      backend-deployment-5448895486-clerk  2/2     Running   1 (38m ago)  54s
      frontend-deployment-5447427784-jsdk  2/2     Running   0           54s
      frontend-deployment-5447427784-nginx  2/2     Running   0           54s
      mysql-deployment-64fcd8d5-ubdd       2/2     Running   0           54s
      PS 2/13:11 DE CD DEVOPS\submodules\DEVOPS-FULLSTACK-PROJECT\ kubectl logs -f backend-deployment-5448895486-9c5qe
      error: error from server (NotFound): pods "backend-deployment-5448895486-9c5qe" not found in namespace "default"
      PS 2/13:11 DE CD DEVOPS\submodules\DEVOPS-FULLSTACK-PROJECT\ kubectl logs -f backend-deployment-5448895486-back -n fullstack-app

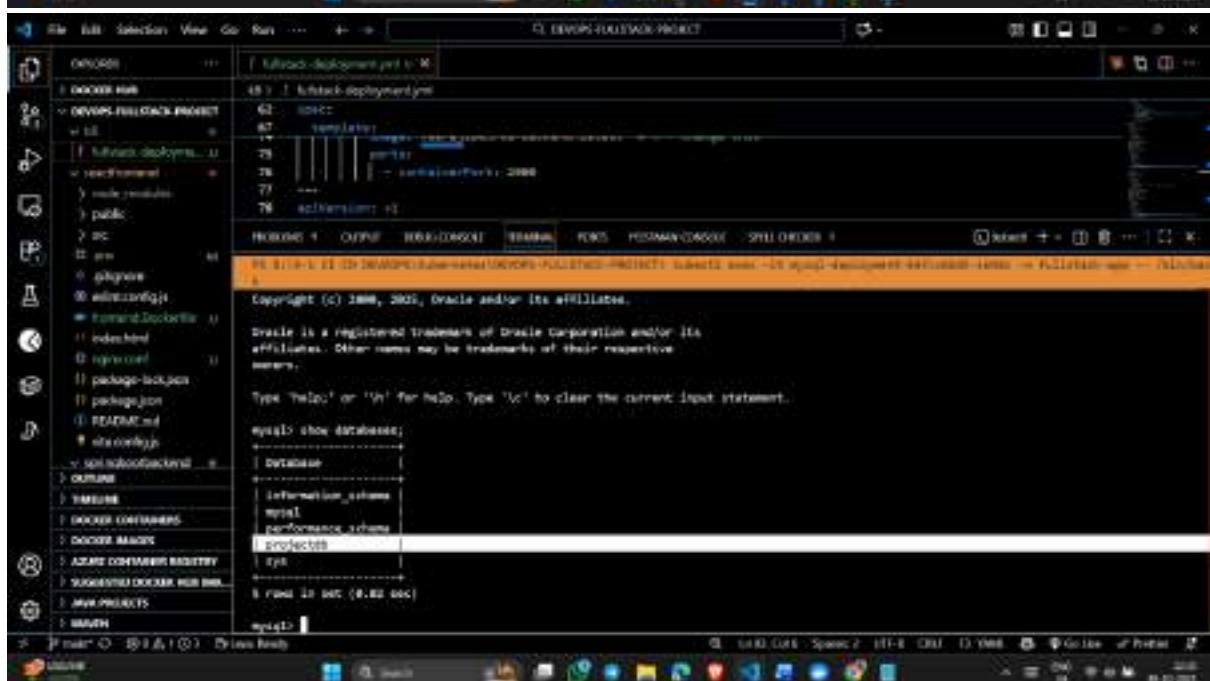
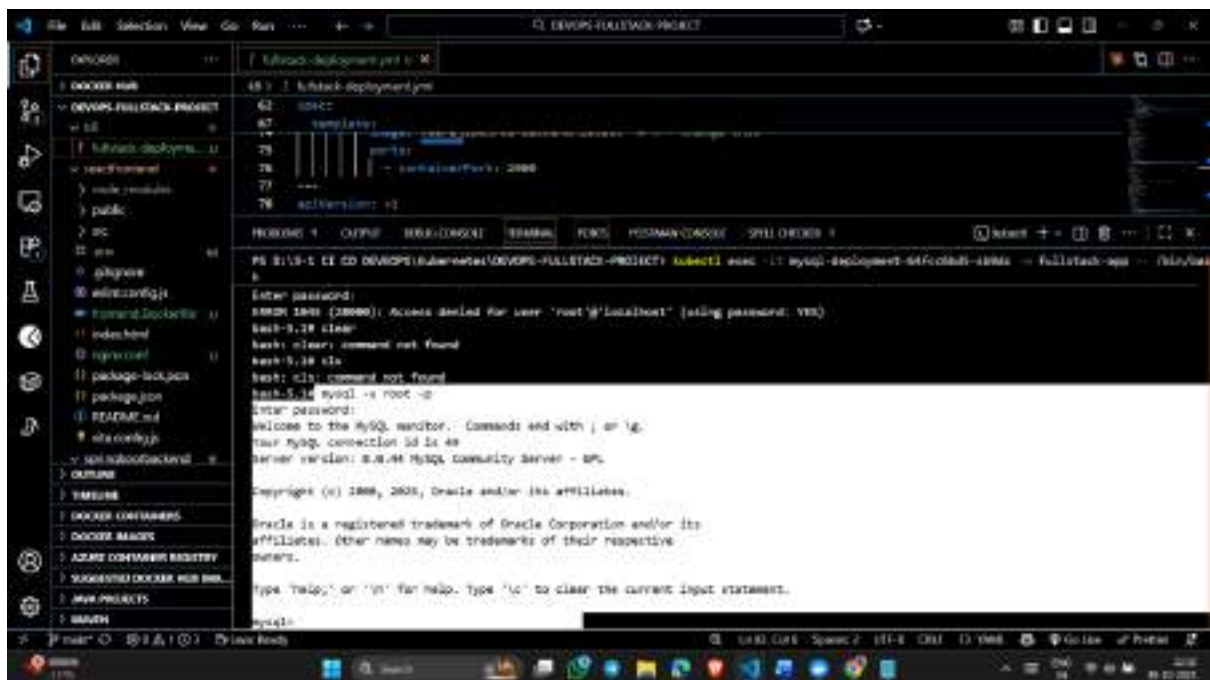
Spring
  Spring Boot 1: (v1.3.4)
  2021-08-30T06:18:35.443Z INFO 1 --- [springbootbackend] | main| c.hief.de.SpringbootbackApplication : Starting Springboot
  2021-08-30T06:18:35.447Z INFO 1 --- [springbootbackend] | main| c.hief.de.SpringbootbackApplication : No active profile s
  2021-08-30T06:18:38.547Z INFO 1 --- [springbootbackend] | main| o.s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Sprin
  2021-08-30T06:18:38.614Z INFO 1 --- [springbootbackend] | main| o.s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Bot
  2021-08-30T06:18:38.703Z INFO 1 --- [springbootbackend] | main| o.s.b.f.s.embetted.tomcat.TomcatStarterer : Tomcat initialed
  
```

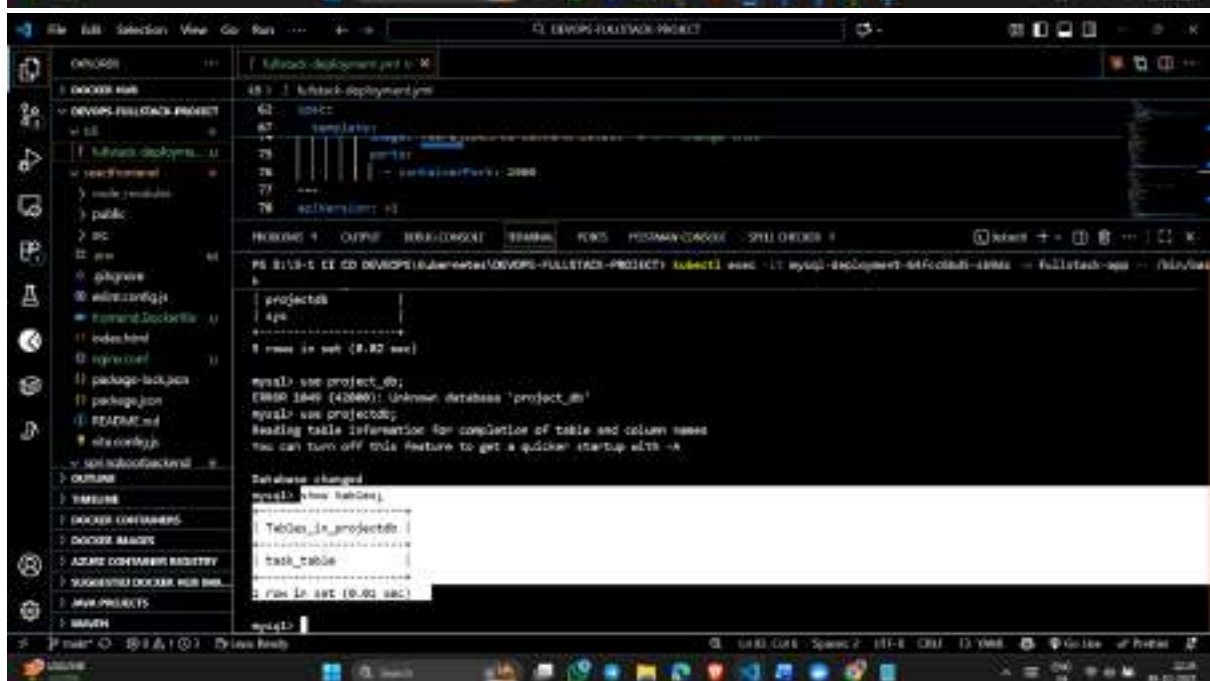
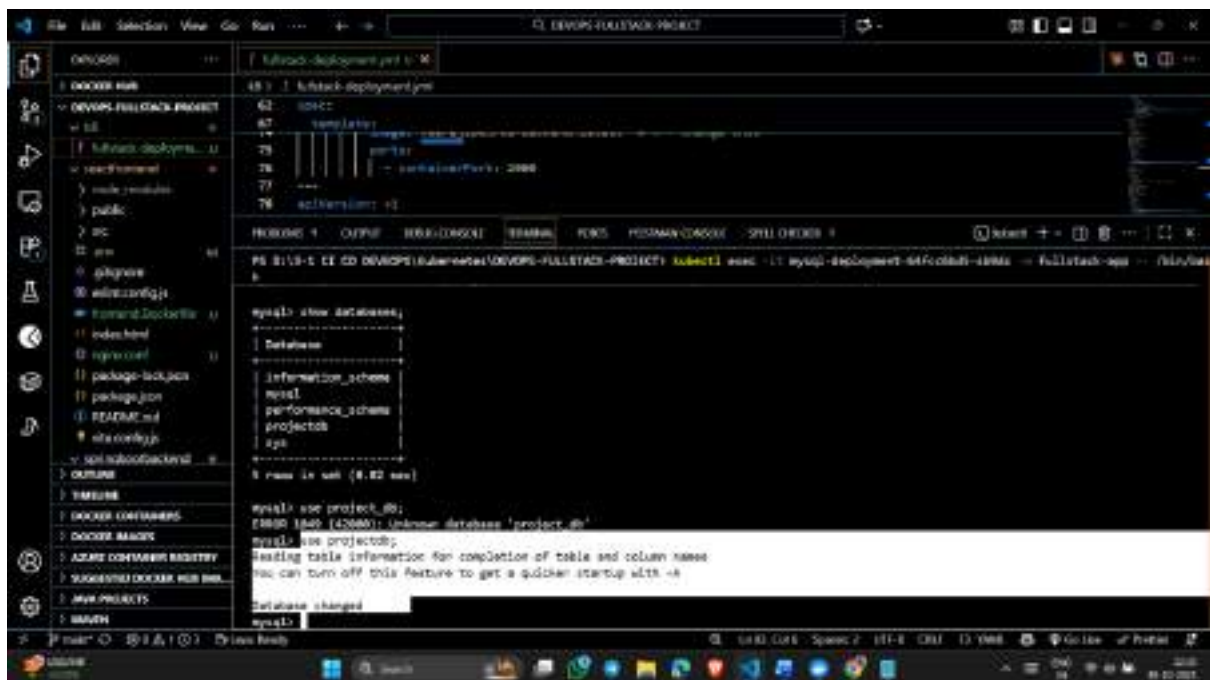
```

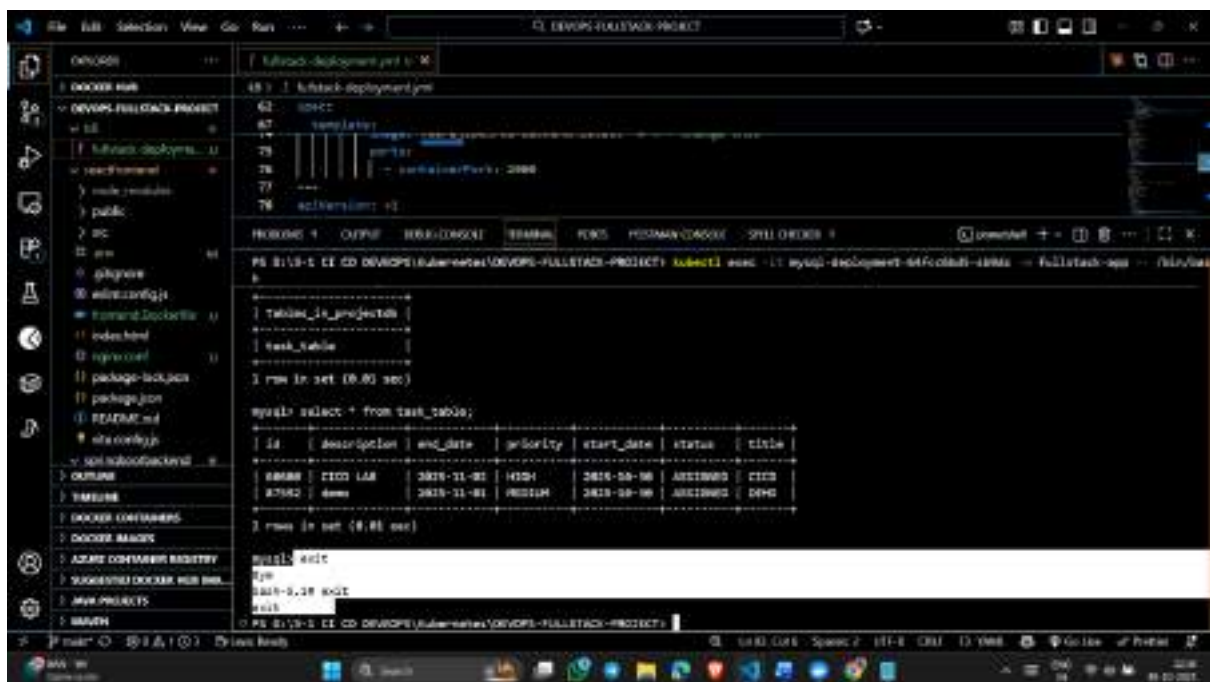
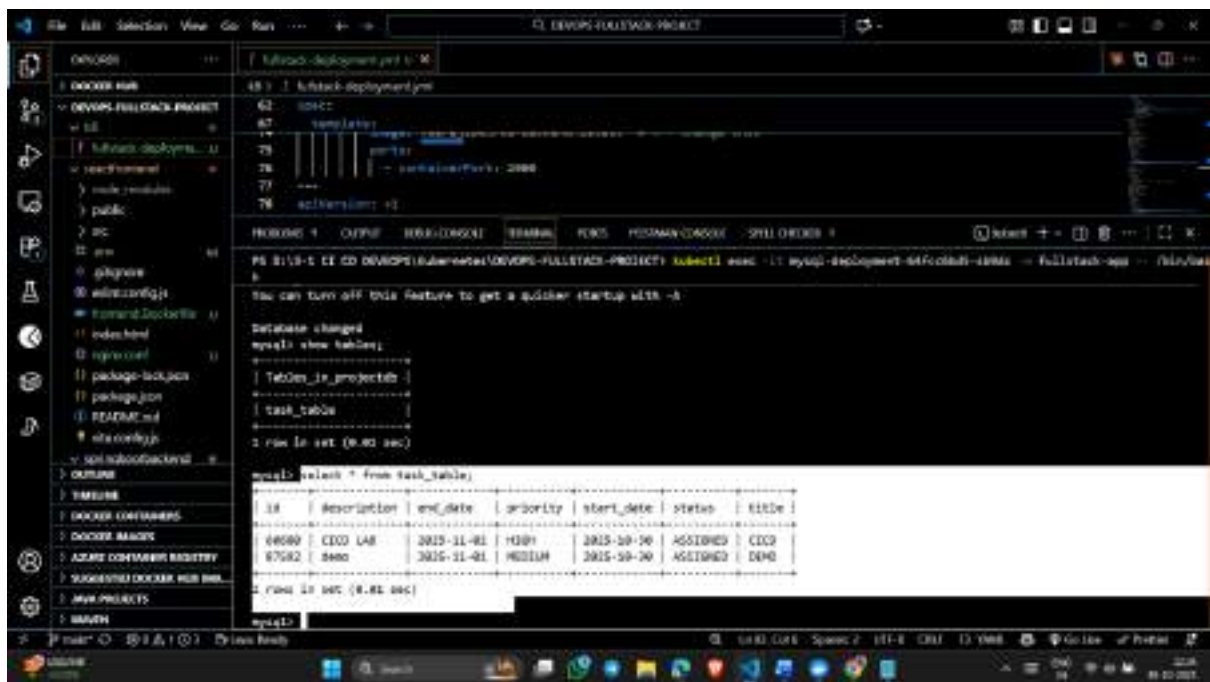
File Edit Selection View Go Run ...
DEVOPS-FULLSTACK-PROJECT
DEVOPS
  DEVOPS-HUB
  DEVOPS-FULLSTACK-PROJECT
    fullstack-deployment.yml
      PS 2/13:11 DE CD DEVOPS\submodules\DEVOPS-FULLSTACK-PROJECT\ kubectl logs -f backend-deployment-5448895486-9c5qe -n fullstack-app
      task_table ts_8
      Hibernate:
      select
      ts_8.ts_id,
      ts_8.description,
      ts_8.start_date,
      ts_8.priority,
      ts_8.start_date,
      ts_8.status,
      ts_8.title
      from
      task_table ts_8
      where
      ts_8.ts_id=1
      Hibernate:
      select
      ts_8.ts_id,
      ts_8.description,
      ts_8.start_date,
      ts_8.priority,
      ts_8.start_date,
      ts_8.status,
      ts_8.title
      from
      task_table ts_8
      where
      ts_8.ts_id=1
  
```

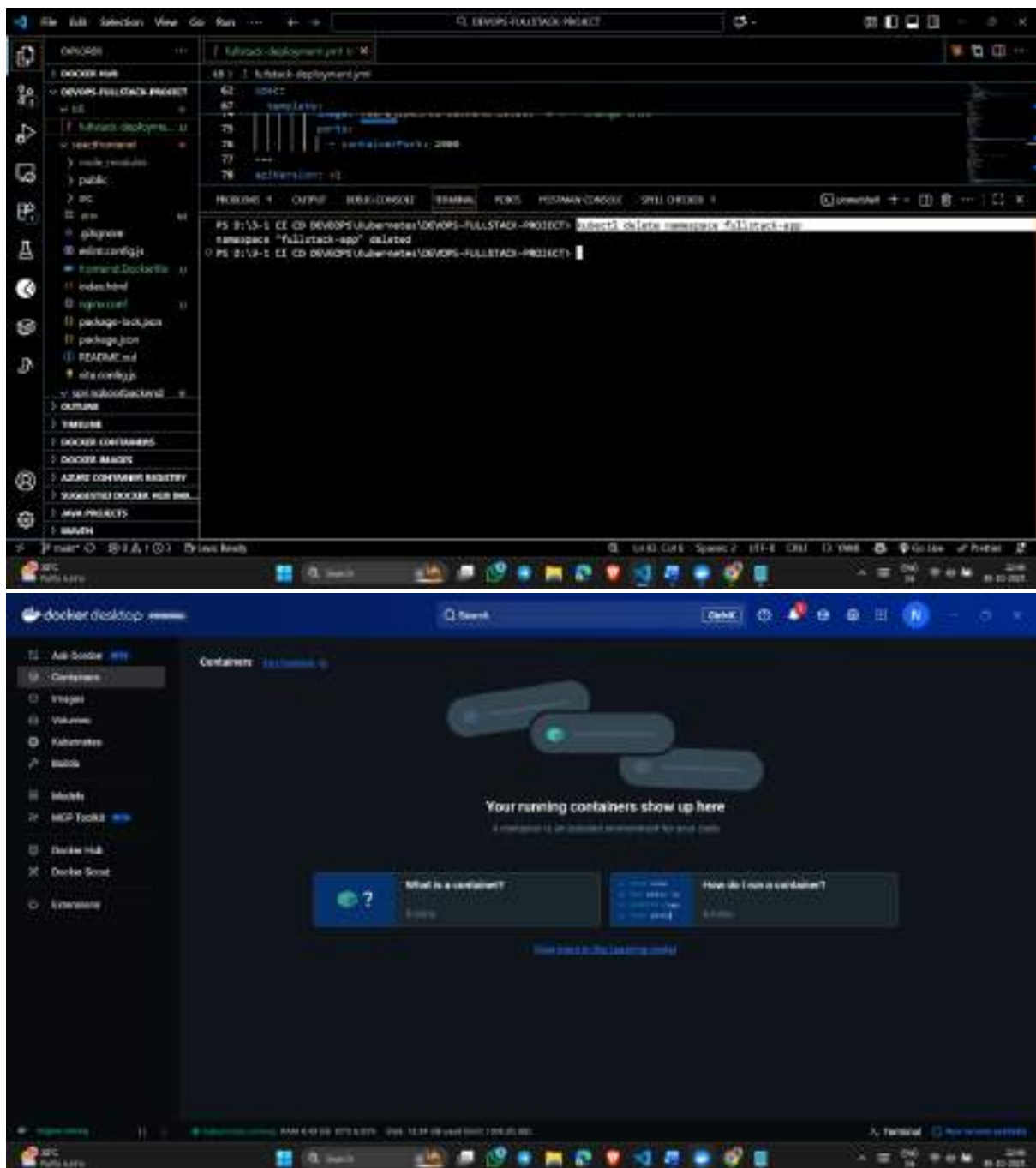












## # 1. Delete the old namespace

kubectl delete namespace fullstack-app

## # 2. Build and push new Docker images (If code is modified)

**cd reactfrontend**

**docker build -f frontend.Dockerfile -t username/k8-frontend:latest .**

**docker push username/k8-frontend:latest**

**cd springbootbackend**

**docker build -f backend.Dockerfile -t username/k8-backend:latest .**

**docker push username/k8-backend:latest**

**# 3. Reapply deployment configuration**

**kubectl apply -f ./k8/fullstack-deployment.yml**

**# 4. Check that everything is up and running**

**kubectl get all -n fullstack-app**