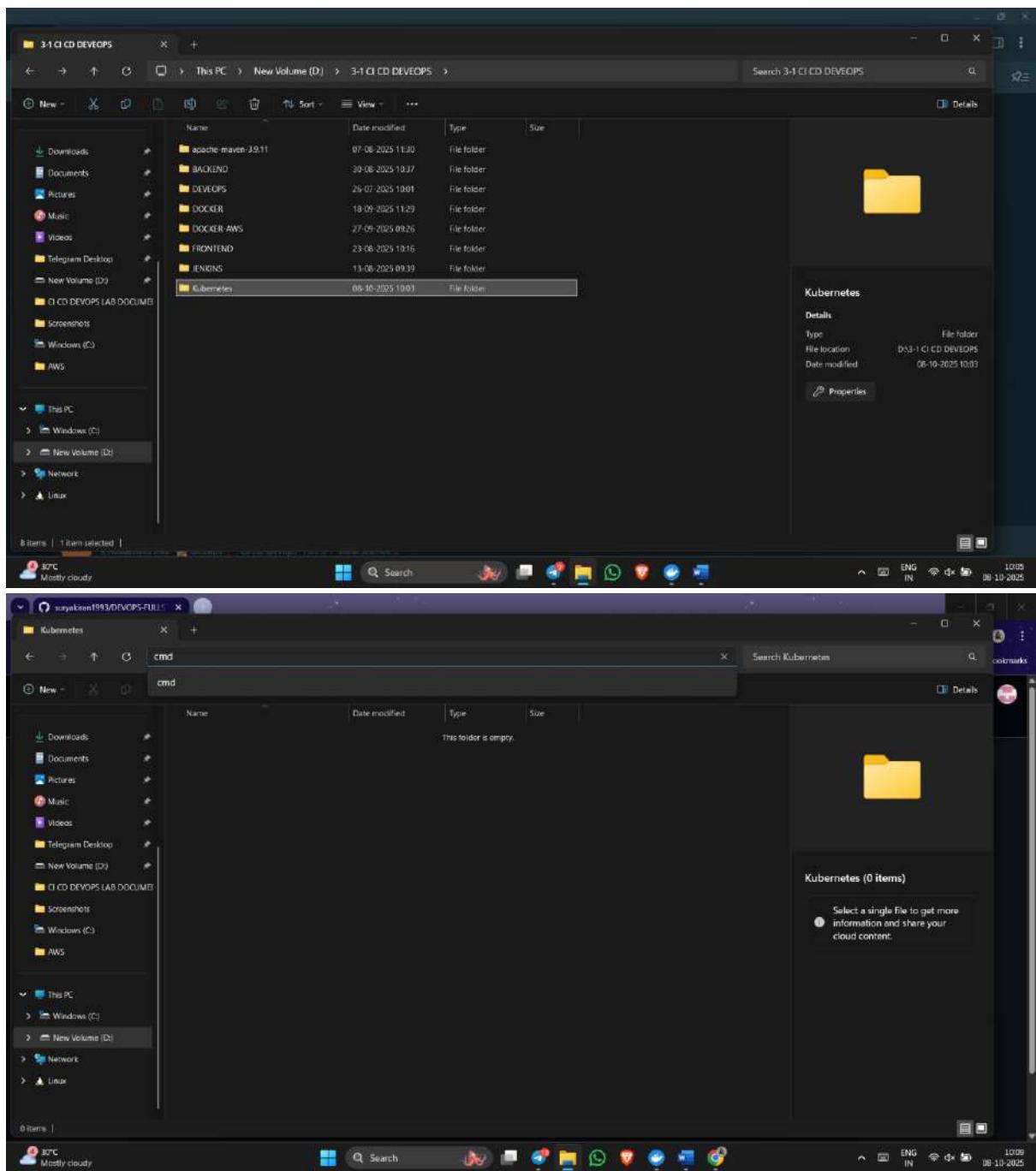


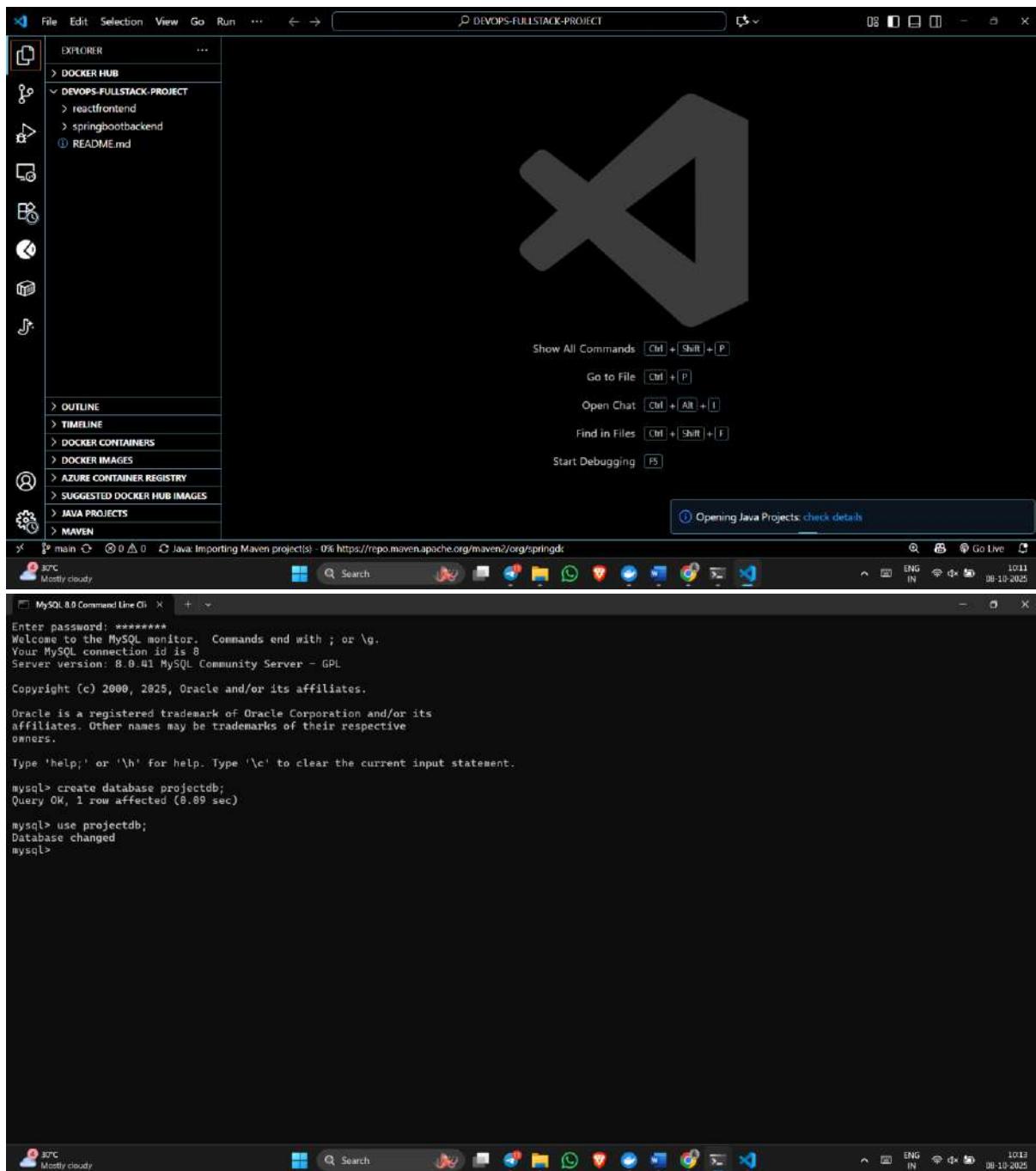
LAB 12



The image shows a Windows desktop environment with two main windows open:

- Top Window (GitHub Repository):** A screenshot of a GitHub repository page for "suryakiran1993/DEVOPS-FULLSTACK-PROJECT". The repository is public and contains three branches: "main", "reactfrontend", and "springbootbackend". It has 0 tags. The README file is visible. The "Code" tab is selected. On the right, there's an "About" section describing it as a "Full Stack Project on Task API" with links to "Readme", "Activity", and "Report repository".
- Bottom Window (Terminal):** A screenshot of a command-line interface (cmd.exe) running on Microsoft Windows 10. The user is cloning a GitHub repository into a local directory. The command entered is: `git clone https://github.com/suryakiran1993/DEVOPS-FULLSTACK-PROJECT.git`. The output shows the cloning process, including object enumeration, compression, and receiving objects. Once completed, the user navigates into the cloned repository directory with `cd DEVOPS-FULLSTACK-PROJECT` and runs `code .` to open it in a code editor.

The taskbar at the bottom shows various pinned icons, including Knowledge, TryHackMe, Sakata Neeraj, Live DSA Course, Interview specific Q, Java, and All Bookmarks. The system tray indicates the date as 08-10-2025 and the time as 10:09.



```
spring.application.name=springbootbackend
server.port=2000
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver
spring.datasource.url=jdbc:mysql://localhost:3306/projectdb
spring.datasource.username=root
spring.datasource.password=Nee@7483
spring.jpa.hibernate.ddl-auto=update
spring.jpa.show-sql=true
spring.jpa.properties.hibernate.format_sql=true
spring.jpa.database-platform=org.hibernate.dialect.MySQLDialect
```

```
spring.application.name=springbootbackend
server.port=2000
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver
spring.datasource.url=jdbc:mysql://localhost:3306/projectdb
spring.datasource.username=root
spring.datasource.password=Nee@7483
```

PROBLEMS: 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER 4

PS D:\3-1\CI\CD\DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> cd ..\springbootbackend\
PS D:\3-1\CI\CD\DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend> mvn clean package

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend> mvn clean package
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- jar:3.4.2:jar (default-jar) @ springbootbackend ---
[INFO] Building Jar: D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target\springbootbackend-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot:3.5.6:repackage (repackage) @ springbootbackend ---
[INFO] Replacing main artifact D:\3-1 CI CD DEVEOPS\Kubernetes\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 D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target\springbootbackend-0.0.1-SNAPSHOT.jar.original
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 21.050 s
[INFO] Finished at: 2025-10-08T10:17:48+05:30
[INFO]
```

```
D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>cd reactfrontend
D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\reactfrontend>npm install
added 226 packages, and audited 227 packages in 2m

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

found 0 vulnerabilities
npm notice
npm notice New patch 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
```

IDE Terminal Output (Top):

```

application.properties M
springbootbackend > src > main > resources > application.properties
  1  spring.application.name=springbootbackend

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER 4 + - | ☰ x
java target cmd

PS D:\l3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend> mvn clean package
[INFO] ...
PS D:\l3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend> cd ..\target
PS D:\l3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target> java -jar ./springbootbackend-0.0.1-SNAPSHOT.jar

:: Spring Boot ::      (v3.5.6)

2025-10-08T10:48:32.119+05:30  INFO 4108 --- [springbootbackend] [main] c.klef.dev.SpringbootbackendApplication : Starting SpringbootbackendApplication v0.0.1-SNAPSHOT using Java 21.0.6 with PID 4108 (D:\l3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target\springbootbackend-0.0.1-SNAPSHOT.jar started by sakal in D:\l3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target)
2025-10-08T10:48:32.126+05:30  INFO 4108 --- [springbootbackend] [main] c.klef.dev.SpringbootbackendApplication : No active profile set, falling back to 1 default profile: "default"
2025-10-08T10:48:33.274+05:30  INFO 4108 --- [springbootbackend] [main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2025-10-08T10:48:33.372+05:30  INFO 4108 --- [springbootbackend] [main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 84 ms. Found 1 JPA repository interface.
2025-10-08T10:48:34.077+05:30  INFO 4108 --- [springbootbackend] [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port 2000 (http)
2025-10-08T10:48:34.091+05:30  INFO 4108 --- [springbootbackend] [main] o.apache.catalina.core.StandardService : Starting service [Tomcat]

```

IDE Terminal Output (Bottom):

```

application.properties M
springbootbackend > src > main > resources > application.properties
  1  spring.application.name=springbootbackend

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER 4 + - | ☰ x
java target cmd

PS D:\l3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend\target> java -jar ./springbootbackend-0.0.1-SNAPSHOT.jar

2025-10-08T10:48:35.421+05:30  INFO 4108 --- [springbootbackend] [main] org.hibernate.orm.connections.pooling : HHH10001085: Database info:
  Database JDBC URL [Connecting through datasource 'HikariDataSource (HikariPool-1)']
  Database driver: undefined/unknown
  Database version: 8.0.41
  Autocommit mode: undefined/unknown
  Isolation level: undefined/unknown
  Minimum pool size: undefined/unknown
  Maximum pool size: undefined/unknown
2025-10-08T10:48:36.142+05:30  INFO 4108 --- [springbootbackend] [main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000489: No JTA platform available (set 'hibernate.transaction.jta.platform' to enable JTA platform integration)
2025-10-08T10:48:36.194+05:30  INFO 4108 --- [springbootbackend] [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2025-10-08T10:48:36.785+05:30  WARN 4108 --- [springbootbackend] [main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view to disable this warning
2025-10-08T10:48:36.883+05:30  INFO 4108 --- [springbootbackend] [main] o.s.v.b.OptionalValidatorFactoryBean : Failed to set up a Bean Validation provider: jakarta.validation.NoProviderFoundException: Unable to create a Configuration, because no Jakarta Bean Validation provider could be found. Add a provider like Hibernate Validator (R) to your classpath.
2025-10-08T10:48:37.539+05:30  INFO 4108 --- [springbootbackend] [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 2000 (http) with context path '/'
2025-10-08T10:48:37.571+05:30  INFO 4108 --- [springbootbackend] [main] c.klef.dev.SpringbootbackendApplication : Started SpringbootbackendApplication in 5.978 seconds (process running for 6.537)
Project Backend is Running Successfully ....

```

The screenshot shows a terminal window within a development environment. The command run is `npm run dev`. The output indicates that the application is running at `http://localhost:5173`.

```
npm notice
D:\3-1 CI CD DEVOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\reactfrontend>npm run dev
> reactfrontend@0.0.0 dev
> vite
VITE v7.1.9 ready in 371 ms
+ Local: http://localhost:5173/
+ Network: use --host to expose
+ press h + enter to show help
```

The screenshot shows a web-based task management application. A new task is being added with the title "AWS", description "AWS LABS", start date "2025-10-08", end date "2025-10-16", priority "HIGH", and status "ASSIGNED". The task has been successfully added.

Add Task

Title:	Description:	Start Date:	End Date:
Enter task title	Enter task description	dd-mm-yyyy	dd-mm-yyyy

Priority: --- Select Priority ---

All Tasks

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
68566	AWS	AWS LABS	2025-10-08	2025-10-16	HIGH	ASSIGNED	Edit Delete

Task Manager

+ Add Task

Title: Description: Start Date: End Date:

Priority: **Add Task**

Task added successfully!

Clear

All Tasks

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
68566	AWS	AWS LABS	2025-10-08	2025-10-16	HIGH	ASSIGNED	Edit Delete
82389	JENKINS	JENKINS	2025-10-09	2025-10-10	MEDIUM	ASSIGNED	Edit Delete

Task Manager

+ Add Task

Title: Description: Start Date: End Date:

Priority: **Add Task**

Task added successfully!

Clear

All Tasks

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
82389	JENKINS	JENKINS	2025-10-09	2025-10-10	MEDIUM	ASSIGNED	Edit Delete

The screenshot displays two consecutive screenshots of a Task Manager application running on a Windows operating system.

Screenshot 1: The application shows a form for adding a task. Fields include Title (Enter task title), Description (Enter task description), Start Date (dd-mm-yyyy), End Date (dd-mm-yyyy), and Priority (Select Priority). A success message "Task updated successfully!" is displayed below the form. The task list table shows two entries: AWS (ID 68566) and JENKINS (ID 82389).

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
68566	AWS	AWS LABS	2025-10-08	2025-10-16	HIGH	ASSIGNED	<button>Edit</button> <button>Delete</button>
82389	JENKINS	JENKINS	2025-10-09	2025-10-10	LOW	ASSIGNED	<button>Edit</button> <button>Delete</button>

Screenshot 2: The application shows a confirmation dialog box titled "localhost:5173 says" asking "Are you sure you want to delete this task?". The background shows the same task manager interface with the same two tasks listed.

React App

localhost:5173

Task Manager

[Dashboard](#) [Task Board](#)

Add Task

Title: Description: Start Date: End Date:

Priority:

[Add Task](#)

Task deleted successfully!

82389 [Clear](#)

All Tasks

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
82389	JENKINS	JENKINS	2025-10-09	2025-10-10	LOW	ASSIGNED	Edit Delete

Finance Headline India's new jobs...

React App

localhost:5173/board

Task Board

[ASSIGNED](#) [PROGRESS](#) [COMPLETED](#) [REJECTED](#)

aws
AWS LABS
Priority: HIGH
Start: 2025-10-09
End: 2025-10-20
[Start](#)

JENKINS
JENKINS
Priority: LOW
Start: 2025-10-09
End: 2025-10-10
[Start](#)

12°C Party Survey

The screenshot shows the Visual Studio Code interface with the title bar "DEVOPS-FULLSTACK-PROJECT". The left sidebar displays the "EXPLORER" view, which includes sections for "DOCKER HUB", "DEVOPS-FULLSTACK-PROJECT", and "AZURE CONTAINER REGISTRY". The main editor area shows the file "Dockerfile 1, U" with the following content:

```
Generate code (Ctrl+I), or select a language (Ctrl+K M). Start typing to dismiss or don't show this again.
```

The file contains the following Dockerfile code:

```
FROM node:14
WORKDIR /app
COPY package.json .
COPY package-lock.json .
RUN npm install
COPY . .
EXPOSE 3001
CMD ["node", "index.js"]
```

The screenshot shows the Visual Studio Code interface with the title bar "DEVOPS-FULLSTACK-PROJECT". The left sidebar displays the "EXPLORER" view, which includes sections for "DOCKER HUB", "DEVOPS-FULLSTACK-PROJECT", and "AZURE CONTAINER REGISTRY". The main editor area shows the file "nginx.config 1, U" with the following configuration:

```
server {
    listen 80;
    listen [::]:80;
    server_name localhost;

    location / {
        proxy_pass http://localhost:3001;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
    }
}
```

The screenshot shows the VS Code interface with a dark theme. The Explorer sidebar on the left lists files and folders related to a project named 'DEVOPS-FULLSTACK-PROJECT'. The 'Dockerfile' file is selected and open in the main editor area. The code in the editor is a Dockerfile:

```
1 # ---- Stage 1: Build ----
2 FROM node:20-alpine AS build
3 WORKDIR /app
4
5 COPY package*.json .
6
7 RUN npm install
8
9 COPY . .
10 RUN npm run build
11
12 # ---- Stage 2: Serve ----
13 FROM nginx:alpine
14 # Copy custom nginx config
15 COPY nginx.conf /etc/nginx/conf.d/default.conf
16 # Copy built files
17 COPY --from=build /app/dist /usr/share/nginx/html
18
19 EXPOSE 80
20 CMD ["nginx", "-g", "daemon off;"]
```

---- 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

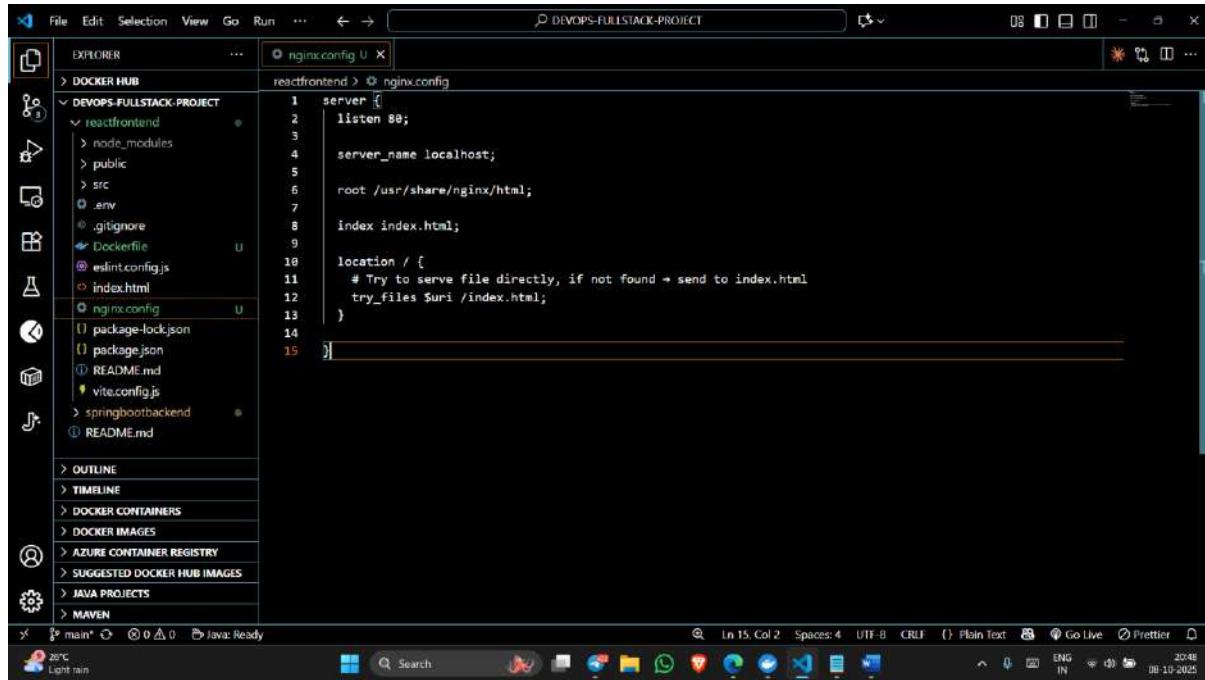
COPY nginx.conf /etc/nginx/conf.d/default.conf

Copy built files

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

EXPOSE 80

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



The screenshot shows a code editor interface with a dark theme. The title bar says "DEVOPS-FULLSTACK-PROJECT". The left sidebar has sections for "EXPLORER", "DOCKER HUB", and "RECENT FILES". The main area shows the "nginx.config" file under the "reactfrontend" directory. The code is as follows:

```
1 server {  
2     listen 80;  
3       
4     server_name localhost;  
5       
6     root /usr/share/nginx/html;  
7       
8     index index.html;  
9       
10    location / {  
11        # Try to serve file directly, if not found → send to index.html  
12        try_files $uri /index.html;  
13    }  
14}  
15 }
```

The status bar at the bottom shows "main" and "Java: Ready".

server {

listen 80;

server_name localhost;

root /usr/share/nginx/html;

index index.html;

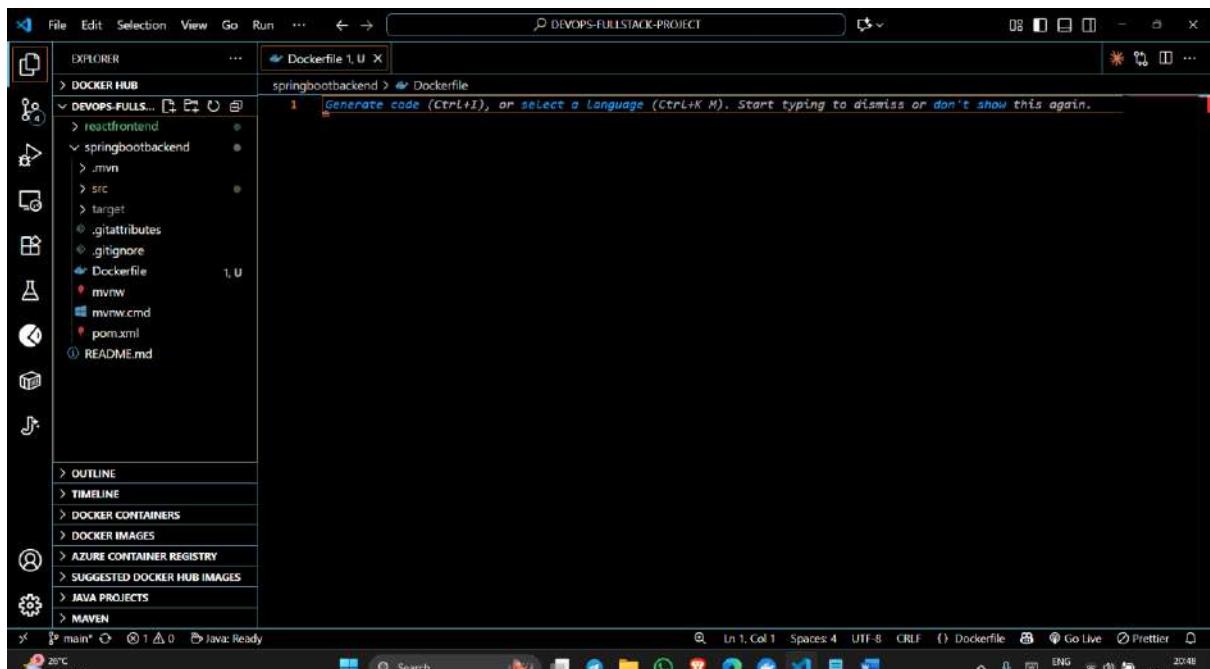
location / {

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

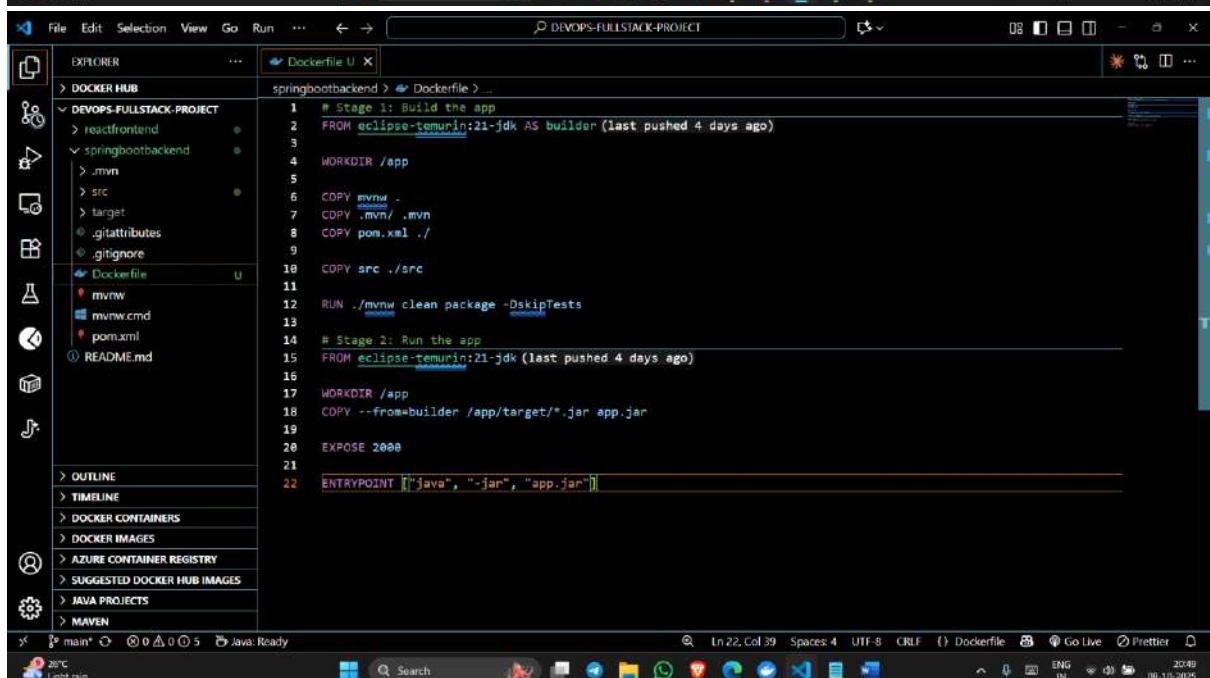
try_files \$uri /index.html;

}

}



The screenshot shows the VS Code interface with the Dockerfile 1.U tab active. A tooltip at the top right says: "Generate code (Ctrl+I), or select a language (Ctrl+K M). Start typing to dismiss or don't show this again." The Explorer sidebar shows a project structure under DEVOPS-FULLSTACK-PROJECT, including subfolders reactfrontend and springbootbackend, and files like .gitignore, Dockerfile, mvnw, mvnw.cmd, pom.xml, and README.md.



The screenshot shows the VS Code interface with the Dockerfile U tab active. The Dockerfile content is as follows:

```
1 # Stage 1: Build the app
2 FROM eclipse-temurin:21-jdk AS builder
3
4 WORKDIR /app
5
6 COPY mvnw .
7 COPY .mvn/.mvn
8 COPY pom.xml ./
9
10 COPY src ./src
11
12 RUN ./mvnw clean package -DskipTests
13
14 # Stage 2: Run the app
15 FROM eclipse-temurin:21-jdk (last pushed 4 days ago)
16
17 WORKDIR /app
18 COPY --from=builder /app/target/*.jar app.jar
19
20 EXPOSE 2008
21
22 ENTRYPOINT ["java", "-jar", "app.jar"]
```

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
```

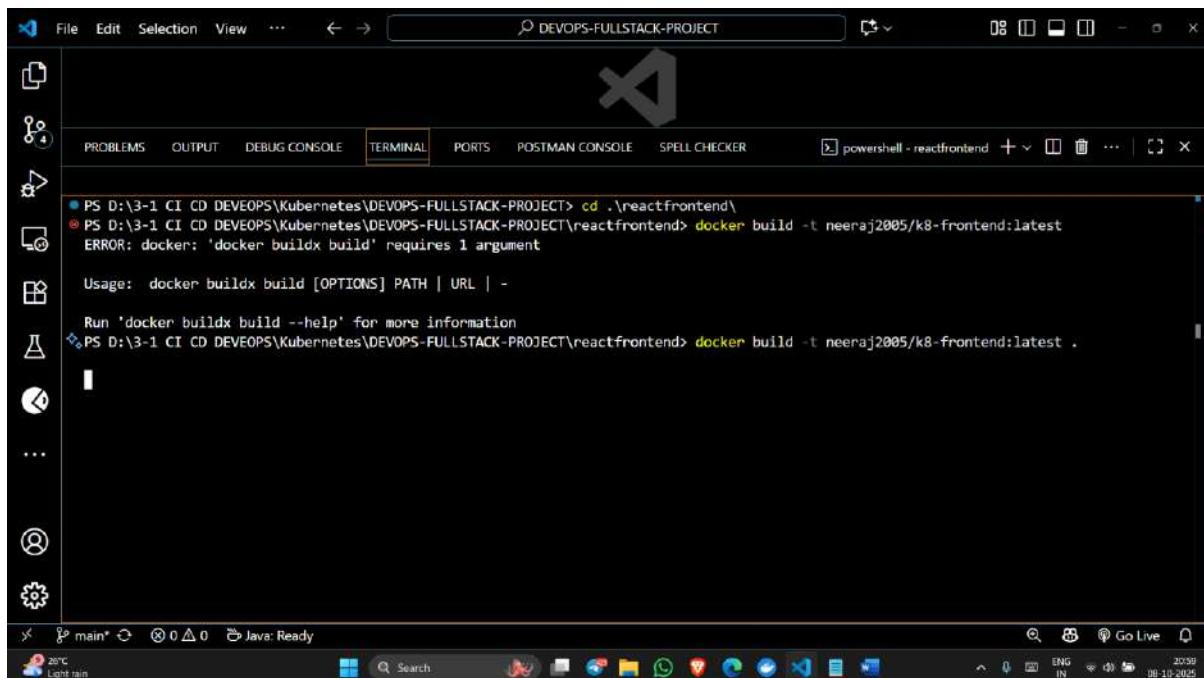
```
FROM eclipse-temurin:21-jdk
```

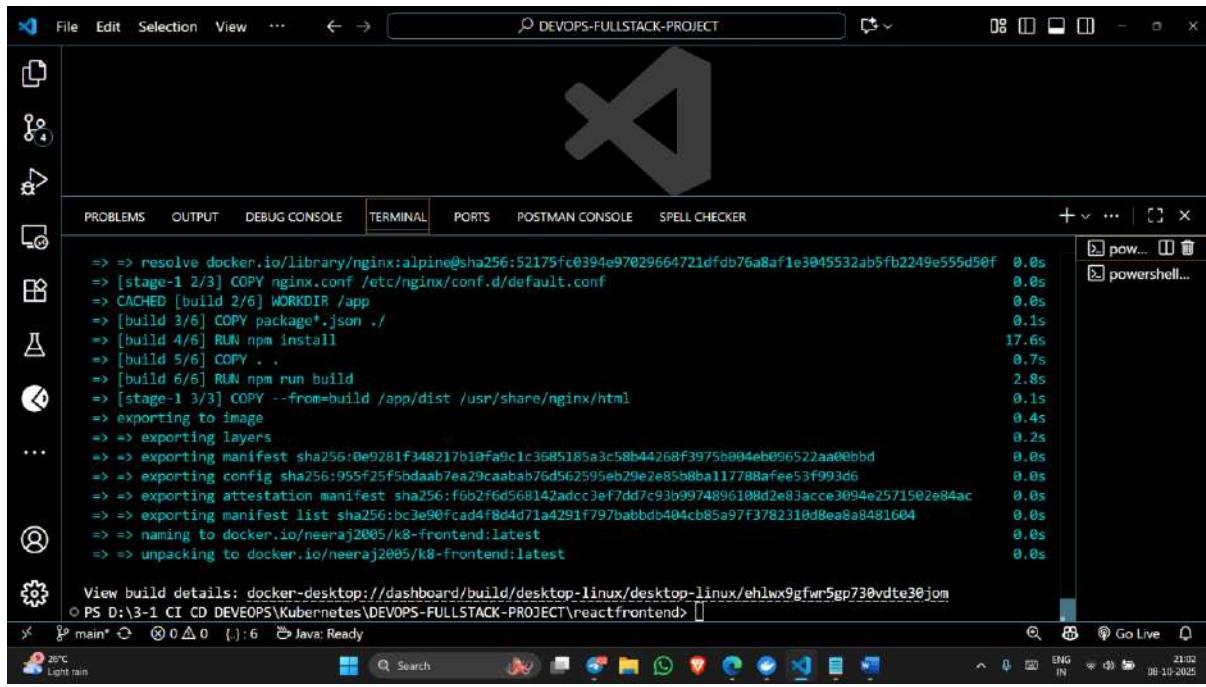
```
WORKDIR /app
```

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

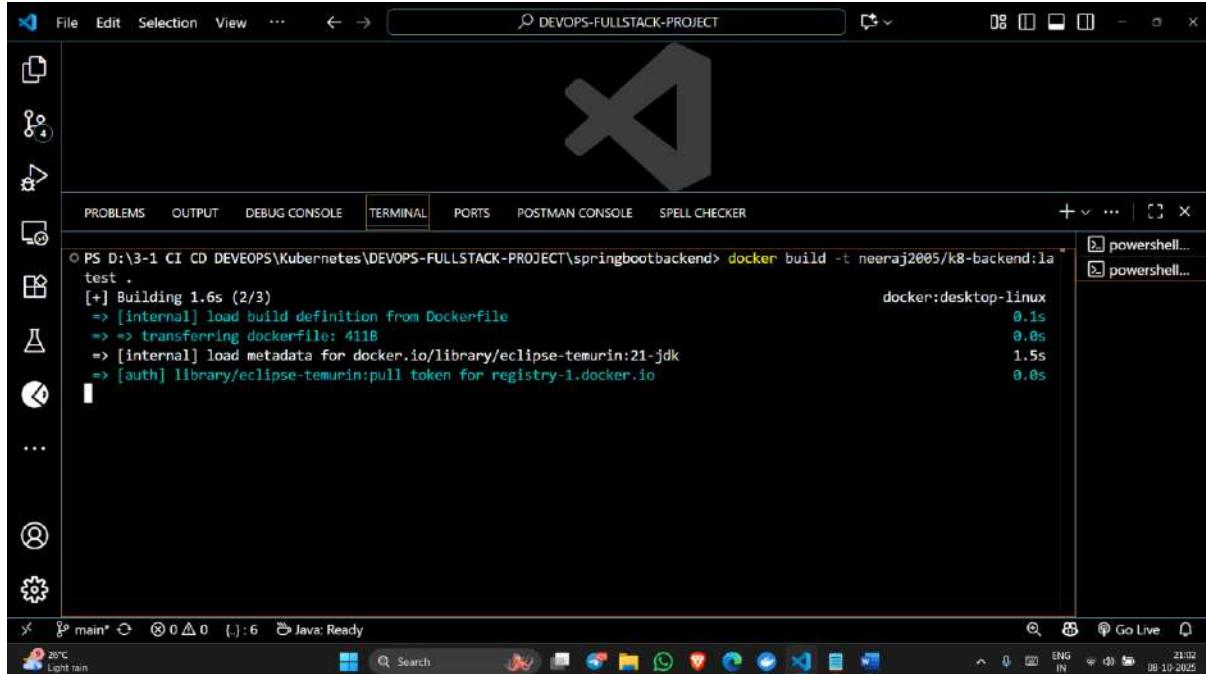
```
EXPOSE 2000
```

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





```
=> => resolve docker.io/library/nginx:alpine@sha256:52175fc0394e97029664721efdb76a8af1e3045532ab5fb2249e555d50f 0.05
=> [stage-1 2/3] COPY nginx.conf /etc/nginx/conf.d/default.conf
=> CACHED [build 2/6] WORKDIR /app
=> [build 3/6] COPY package*.json .
=> [build 4/6] RUN npm install
=> [build 5/6] COPY . .
=> [build 6/6] RUN npm run build
=> [stage-1 3/3] COPY --from=build /app/dist /usr/share/nginx/html
=> exporting to image
=> exporting layers
=> => exporting manifest sha256:0e9281f348217b10fa9c1c3685185a3c58b44268f3975b804eb096522aa0ebbd
=> => exporting config sha256:955f25f5bdaab7ea29caabab76d562595eb29e2e85b8ba117788afee53f993d6
=> => exporting attestation manifest sha256:f6b2fd568142adcc3ef7dd7c93b9974896108d2e83acce3094e2571502e84ac
=> => exporting manifest list sha256:bc3e90fcad4f8d4d71a4291f797babbdb404cb85a97f3782310d8ea8a8481604
=> => naming to docker.io/neeraj2005/k8-frontend:latest
=> => unpacking to docker.io/neeraj2005/k8-frontend:latest
0.0s
View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/ehlwx9gfwr5gp730vdte30j0m
PS D:\3-1 CI CD DEVEOPS\kubernetes\DEVOPS-FULLSTACK-PROJECT\reactfrontend>
```



```
PS D:\3-1 CI CD DEVEOPS\kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend> docker build -t neeraj2005/k8-backend:1a
test .
[+] Building 1.6s (2/3)
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 41B
=> [internal] load metadata for docker.io/library/eclipse-temurin:21-jdk
=> [auth] library/eclipse-temurin:pull token for registry-1.docker.io
docker:desktop-linux
0.1s
0.0s
1.5s
0.0s
```

File Edit Selection View ... ← → 🔍 DEVOPS-FULLSTACK-PROJECT ⌂ ⌂ ⌂ ⌂ ⌂ ⌂ ⌂

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER + ⌂ ⌂ ⌂ ⌂ ⌂ ⌂

PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend> docker build -t neeraj2005/k8-backend:latest .

```

-> [builder 3/7] COPY mvnw .
-> [builder 4/7] COPY .mvn/.mvn
-> [builder 5/7] COPY pom.xml .
-> [builder 6/7] COPY src ./src
-> [builder 7/7] RUN ./mvnw clean package -DskipTests
-> [stage-1 3/3] COPY --from=builder /app/target/*.jar app.jar
-> exporting to image
-> => exporting layers
-> => exporting manifest sha256:bf6ffc7f31a3e8f08df85a4d0b5f3eeaa9b47a2e84d3f95d8c76967972e81435
-> => exporting config sha256:18c9c872c4b54d74bb566a0d39b5c68f7c38ea07fbc22dbe449c0bc7d69252f
-> => exporting attestation manifest sha256:eda461a8e29acf55a8e92146f9b63b3c5e42cfac49b20e6f0e8198e5fd28c94
-> => exporting manifest list sha256:2ef21a6c28042392d017309314a1940cddcbalcf8f779d4245de9d63dce1b3326
-> => naming to docker.io/neeraj2005/k8-backend:latest
-> => unpacking to docker.io/neeraj2005/k8-backend:latest

```

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/lfbnpj3h3s360zjiy24czlrb3
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT\springbootbackend>

main* ⟲ 0 △ 0 (.) 6 Java: Ready

Gold 130% 21:11 08-10-2025

docker:desktop PERSONAL

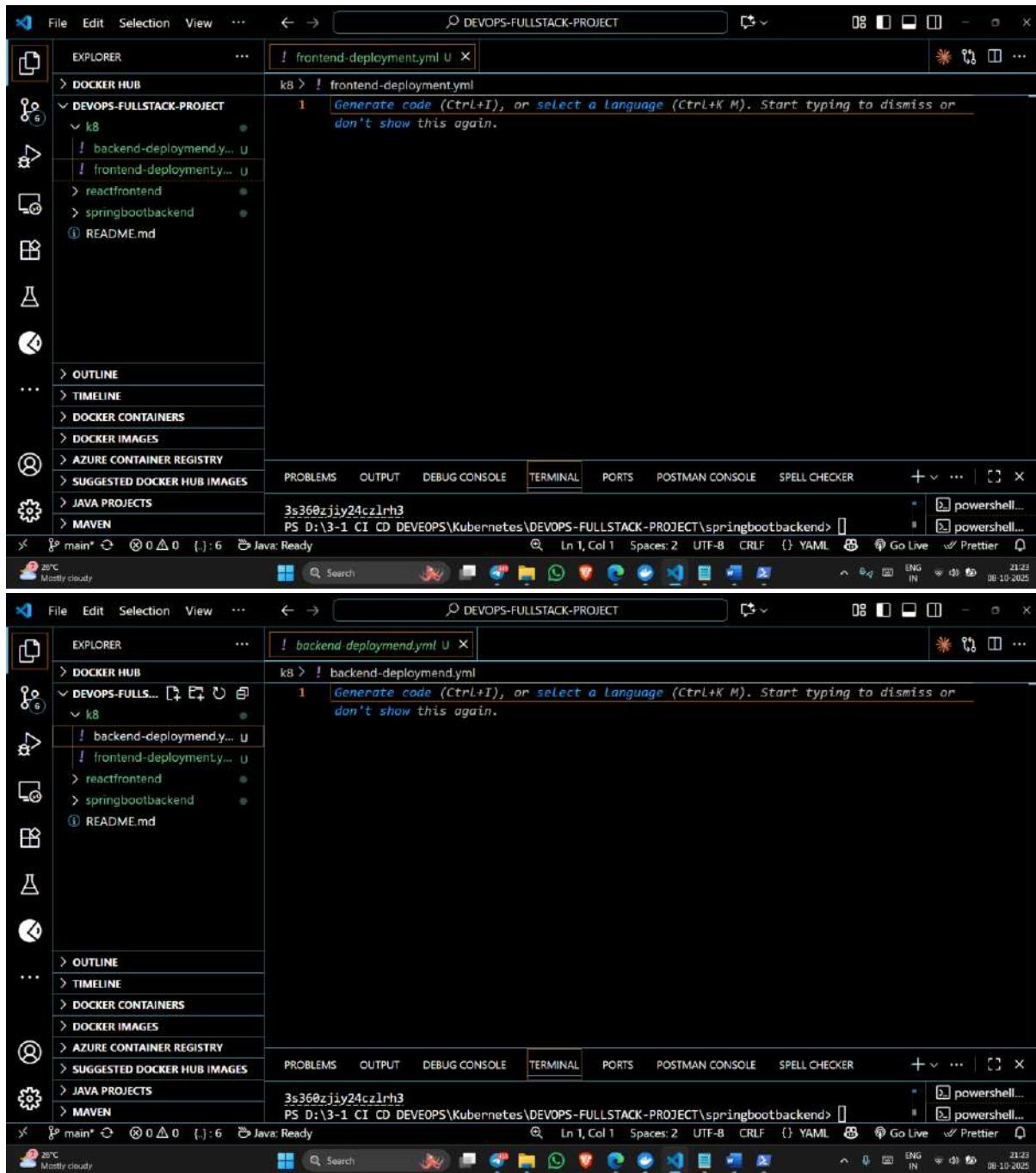
Images Give feedback Local My Hub 0 Bytes / 6.2 GB in use 35 images Last refresh: 11 hours ago

Actions	Size	Created	Name	Tag
...	88.67 MB	11 minutes ago	neeraj2005/k8-frontend	latest
...	795.89 MB	6 minutes ago	neeraj2005/k8-backend	latest

Showing 2 items

Engine running | Kubernetes running | RAM 4.42 GB CPU 3.02% Disk 14.25 GB used (limit 1005.05 GB) Terminal ✓ v4.47.0

ZTC Mostly cloudy 21:12 08-10-2025



```
Command Prompt Microsoft Windows [version 10.0.26200.6899]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sakal>kubectl config get-contexts
CURRENT  NAME          CLUSTER      AUTHINFO      NAMESPACE
*        docker-desktop  docker-desktop  docker-desktop  default
*        minikube       minikube      minikube      default

C:\Users\sakal>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]

Use "kubectl options" for a list of global command-line options (applies to all commands).
error: Unexpected args: []

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

C:\Users\sakal>kubectl config current-context
docker-desktop

C:\Users\sakal>kubectl config get-context
error: unknown command "get-context"
See 'kubectl config -h' for help and examples

C:\Users\sakal>kubectl config get-contexts
CURRENT  NAME          CLUSTER      AUTHINFO      NAMESPACE
*        docker-desktop  docker-desktop  docker-desktop  default
*        minikube       minikube      minikube      default

C:\Users\sakal>
```



```
Administrator: Windows PowerShell
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\sakal\.minikube\machines\minikube ...
* Removed all traces of the "minikube" cluster.
PS C:\WINDOWS\system32> choco uninstall minikube
Chocolatey v2.5.1
Could not find a command registered that meets 'uninstall'.
Try choco --help for command reference/help.
PS C:\WINDOWS\system32> choco uninstall minikube
Chocolatey v2.5.1
Uninstalling the following packages:
minikube

Minikube v1.37.0
Skipping auto uninstaller - No registry snapshot.
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>
```



```
Administrator: Windows PowerShell
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\sakal\.minikube\machines\minikube ...
* Removed all traces of the "minikube" cluster.
PS C:\WINDOWS\system32> choco uninstall minikube
Chocolatey v2.5.1
Could not find a command registered that meets 'uninstall'.
Try choco --help for command reference/help.
PS C:\WINDOWS\system32> choco uninstall minikube
Chocolatey v2.5.1
Uninstalling the following packages:
minikube

Minikube v1.37.0
Skipping auto uninstaller - No registry snapshot.
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>
```

The screenshot shows the Visual Studio Code interface with the title bar "DEVOPS-FULLSTACK-PROJECT". The Explorer panel on the left displays a project structure under "DOCKER HUB" with files like "fullstack-deployment.yml", "k8s", "reactfrontend", "springbootback...", and "README.md". The "TERMINAL" tab is active, showing the command prompt: "PS D:\3-1\CD\DEVOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>". The bottom status bar indicates "Java Ready".

No multiple files for deployment using one full stack

The screenshot shows the Visual Studio Code interface with the title bar "DEVOPS-FULLSTACK-PROJECT". The Explorer panel on the left displays a project structure under "DOCKER HUB" with files like "fullstack-deployment.yml", "application.properties", ".env", "k8s", "reactfrontend", "node_modules", "public", "src", ".env", ".gitignore", "Dockerfile", "eslint.config.js", "index.html", "eslintconfig", "package-lock.json", "package.json", "README.md", "vite.config.js", "springbootback...", and "README.md". The "TERMINAL" tab is active, showing the command prompt: "PS D:\3-1\CD\DEVOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>". The bottom status bar indicates "Java Ready".

File Edit Selection View Go Run Terminal Help ← → O DEVOPS-FULLSTACK-PROJECT

EXPLORER

DOCKER HUB

DEVOPS-FULLSTACK-PROJECT

- > KE
- > reactfrontend
- > node_modules
- > public
- > src
- o .env
- o .gitignore
- o eslint.config.js
- o frontEndDock_U
- o index.html
- o mifrocon_U
- o package-lock.json
- o package.json
- o README.md
- o vite.config.js
- > springbootback...
- o README.md

PROBLEMS | OUTPUT DEBUG CONSOLE TERMINAL FQNS POSTMAN CONSOLE SPILL CHECKER

```

PS D:\3-1 CI CD\DEVOPS\kubernetes\DEVOPS-FULLSTACK-PROJECT> cd ..\SpringbootBackend\
PS D:\3-1 CI CD\DEVOPS\kubernetes\DEVOPS-FULLSTACK-PROJECT\SpringbootBackend> docker build -f .\backend.dockerfile -t neeraj2005/k8-backend:latest .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit: https://docs.docker.com/go/buildx/

```

Sending build context to Docker daemon 59.85MB
Step 1/12 : FROM eclipse-temurin:21-jdk AS builder
21-jdk: Pulling from library/eclipse-temurin
Digest: sha256:7dfe66ddfa1a2eddb7b96ec77ecff8b2af9d7953a7e555cc82f86511
Status: Downloaded newer image for eclipse-temurin:21-jdk
--> 7dfe66ddfa1a
Step 2/12 : WORKDIR /app
--> Runned in 154a6c65a0a7
--> Created intermediate container 154a6c65a0a7
--> 7dfe66ddfa1a
Step 3/12 : COPY .mav... .
--> 2d7f4fa029c
Step 4/12 : COPY .mav... .mav...
--> f49a0cc209
Step 5/12 : COPY pom.xml ./
--> 3deefac0c5b
Step 6/12 : COPY src ./src
--> b53ddad0c5d
Step 7/12 : RUN /mvn clean package -DskipTests
--> Running in 537c7a6d6e
[INFO] Scanning for projects...
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-starter-parent/3.5.6/spring-boot-starter-parent-3.5.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-starter-parent/3.5.6/spring-boot-starter-parent-3.5.6.pom (13 kB at 19 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-dependencies/3.5.6/spring-boot-dependencies-3.5.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-dependencies/3.5.6/spring-boot-dependencies-3.5.6.pom (96 kB at 101 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/activemq/artemis-bom/6.1.7/activemq-bom-6.1.7.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/activemq/activemq-bom/6.1.7/activemq-bom-6.1.7.pom (7.9 kB at 21 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/activemq/artemis-bom/2.49.0/artemis-bom-2.49.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/activemq/artemis-bom/2.49.0/artemis-bom-2.49.0.pom (9.6 kB at 23 kB/s)

File Edit Selection View Go Run Terminal Help ← → O DEVOPS-FULLSTACK-PROJECT

EXPLORER

DOCKER HUB

DEVOPS-FULLSTACK-PROJECT

- > KE
- > reactfrontend
- > node_modules
- > public
- > src
- o .env
- o .gitignore
- o eslint.config.js
- o frontEndDock_U
- o index.html
- o mifrocon_U
- o package-lock.json
- o package.json
- o README.md
- o vite.config.js
- > springbootback...
- o README.md

PROBLEMS | OUTPUT DEBUG CONSOLE TERMINAL FQNS POSTMAN CONSOLE SPILL CHECKER

```

Downloaded from central: https://repo.maven.apache.org/maven2/org/antlr/antlr/9.7/antlr-9.7.jar (125 kB at 21 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/waterfalldependency/2.10/waterfalldependency-2.10.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/waterfalldependency/2.10/waterfalldependency-2.10.jar (73 kB at 12 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/antlr/antlr-tree/9.7/antlr-tree-9.7.jar (52 kB at 8.3 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/jdom/jdom2/2.0.6.1/jdom2-2.0.6.1.jar (328 kB at 49 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/waterfalldependency/2.10/waterfalldependency-2.10.jar (416 kB at 61 kB/s)
[INFO] Replacing main artifact /app/target/springbootbackend-0.0.1-SNAPSHOT.jar with repackaged archive, adding nested dependencies in ROOT-INF.
[INFO] The original artifact has been renamed to /app/target/springbootbackend-0.0.1-SNAPSHOT.jar.original
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 02:27 min
[INFO] Finished at: 2023-10-25T09:20:54Z
[INFO] -----
--> Removed intermediate container 537c7a6d6e
--> 7dfe66ddfa1a
Step 8/12 : FROM eclipse-temurin:21-jdk
--> 7dfe66ddfa1a
Step 9/12 : WORKDIR /app
--> Using cache
--> 3deefac0c5b
Step 10/12 : COPY --from=builder /app/target/*.jar app.jar
--> 2d7f4fa029c
Step 11/12 : EXPOSE 2000
--> Running in da00b56a0cf
--> Removed intermediate container da00b56a0cf
--> 24110ad3cc3
Step 12/12 : ENTRYPOINT ["java", "-jar", "app.jar"]
--> Running in eae8257fc611
--> Removed intermediate container eae8257fc611
--> 324dfafe0e
Successfully built 324dfafe0e
Successfully tagged neeraj2005/k8-backend:latest
SECURITY WARNING: You are building a Docker image from Windows against a non-Windows Docker host. All files and directories added to build context will have 'rwx-r-x-r-' permissions. It is recommended to double check and reset permissions for sensitive files and directories.

```

File Edit Selection View Go Run Terminal Help ← → O DEVOPS-FULLSTACK-PROJECT

EXPLORER

DOCKER HUB

DEVOPS-FULLSTACK-PROJECT

- > KE
- > reactfrontend
- > node_modules
- > public
- > src
- o .env
- o .gitignore
- o eslint.config.js
- o frontEndDock_U
- o index.html
- o mifrocon_U
- o package-lock.json
- o package.json
- o README.md
- o vite.config.js
- > springbootback...
- o README.md

PROBLEMS | OUTPUT DEBUG CONSOLE TERMINAL FQNS POSTMAN CONSOLE SPILL CHECKER

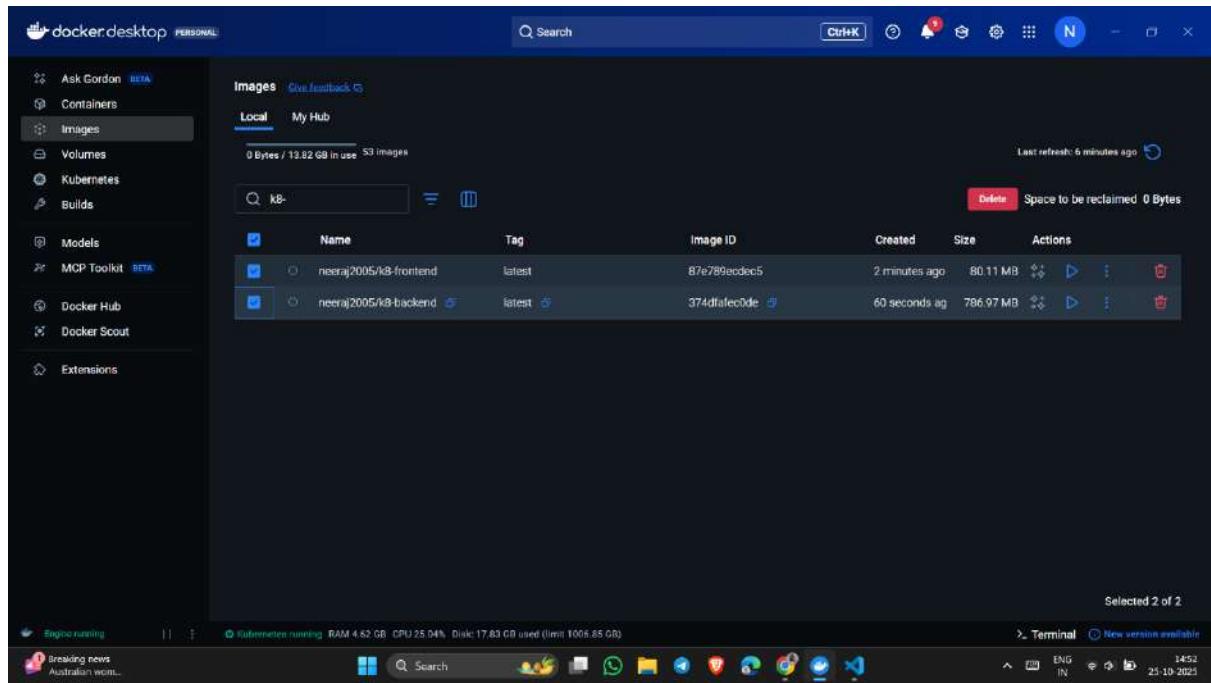
```

Downloaded from central: https://repo.maven.apache.org/maven2/org/antlr/antlr/9.7/antlr-9.7.jar (125 kB at 21 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/waterfalldependency/2.10/waterfalldependency-2.10.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/waterfalldependency/2.10/waterfalldependency-2.10.jar (73 kB at 12 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/antlr/antlr-tree/9.7/antlr-tree-9.7.jar (52 kB at 8.3 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/jdom/jdom2/2.0.6.1/jdom2-2.0.6.1.jar (328 kB at 49 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/waterfalldependency/2.10/waterfalldependency-2.10.jar (416 kB at 61 kB/s)
[INFO] Replacing main artifact /app/target/springbootbackend-0.0.1-SNAPSHOT.jar with repackaged archive, adding nested dependencies in ROOT-INF.
[INFO] The original artifact has been renamed to /app/target/springbootbackend-0.0.1-SNAPSHOT.jar.original
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 02:27 min
[INFO] Finished at: 2023-10-25T09:20:54Z
[INFO] -----
--> Removed intermediate container 537c7a6d6e
--> 7dfe66ddfa1a
Step 8/12 : FROM eclipse-temurin:21-jdk
--> 7dfe66ddfa1a
Step 9/12 : WORKDIR /app
--> Using cache
--> 3deefac0c5b
Step 10/12 : COPY --from=builder /app/target/*.jar app.jar
--> 2d7f4fa029c
Step 11/12 : EXPOSE 2000
--> Running in da00b56a0cf
--> Removed intermediate container da00b56a0cf
--> 24110ad3cc3
Step 12/12 : ENTRYPOINT ["java", "-jar", "app.jar"]
--> Running in eae8257fc611
--> Removed intermediate container eae8257fc611
--> 324dfafe0e
Successfully built 324dfafe0e
Successfully tagged neeraj2005/k8-backend:latest
SECURITY WARNING: You are building a Docker image from Windows against a non-Windows Docker host. All files and directories added to build context will have 'rwx-r-x-r-' permissions. It is recommended to double check and reset permissions for sensitive files and directories.

```

```
PS D:\3-1 CI CD\DEVOPS\kubernetes\DEVOPS-FULLSTACK-PROJECT> cd ./reactfrontend& docker build -t neeraj2005/k8s-frontend:latest .  
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.  
Install the buildx component to build images with buildkit:  
https://docs.docker.com/gs/buildx/  
  
Sending build context to Docker daemon: 68.16MB  
Step 7/11 : FROM node:20-alpine AS build  
20-alpine: Pulling from library/node  
d49e4522c98f: Pulling fs layer  
80952a969cfc: Pulling fs layer  
e7f8edc939ef: Pulling fs layer  
d49e4522c98f: Download complete  
e7f8edc939ef: Download complete  
06ec666cfd: Pulling fs layer  
80952a969cfc: Pull complete  
d49e4522c98f: Pull complete  
e7f8edc939ef: Pull complete  
Digest: sha256:6178e786972f79c335df281fb2674a2b85071aae2af02effa39f0a770265435  
Status: Downloaded newer image for node:20-alpine  
      > 6178e786972f  
Step 2/11 : WORKDIR /app  
      --> Running in caffenefab9405  
      --> Removed intermediate container caffenefab9405  
      --> 6178e786972f  
Step 3/11 : COPY package*.json ./  
      --> 8220ca2966ea  
Step 4/11 : RUN npm install  
      --> Running in bfcc66687781
```

```
PS D:\3-1 CI CD\DEVOPS\kubernetes\DEVOPS-FULLSTACK-PROJECT> reactfrontend@0.0.0 build  
> vite build  
  
vite v2.1.9 building for production...  
transforming...  
✓ 99 modules transformed.  
rendering chunks...  
computing gzip size...  
dist/index.html          0.47 kB  gzip: 0.36 kB  
dist/assets/index-5bjgyek.css   3.97 kB  gzip: 1.26 kB  
dist/assets/index-8W9adz2.js  269.90 kB  gzip: 88.88 kB  
✓ built in 3.27s  
      --> Removed intermediate container 2b073f23998  
      --> 6178e786972f  
Step 7/11 : FROM nginx:alpine  
alpine: Pulling from library/nginx  
Digest: sha256:6178e786972f79c335df281fb2674a2b85071aae2af02effa39f0a770265435  
Status: Downloaded newer image for nginx:alpine  
      --> 6178e786972f  
Step 8/11 : COPY nginx.conf /etc/nginx/conf.d/default.conf  
      --> 606833cc01  
Step 9/11 : COPY --from=build /app/dist /usr/share/nginx/html  
      --> 72926599b68  
Step 10/11 : EXPOSE 80  
      --> Running in 2f344374d72b  
      --> Removed intermediate container 2f344374d72b  
      --> 6178e786972f  
Step 11/11 : CMD ["nginx", "-g", "daemon off;"]  
      --> Running in 76137439169  
      --> Removed intermediate container 76137439169  
      --> 6178e786972f  
Successfully built 6178e786972f  
successfully tagged neeraj2005/k8s-frontend:latest  
SECURITY WARNING: You are building a Docker image from Windows against a non-Windows Docker host. All files and directories added to build context will have '-rwxr-xr-x' permissions. It is recommended to double check and reset permissions for sensitive files and directories.
```

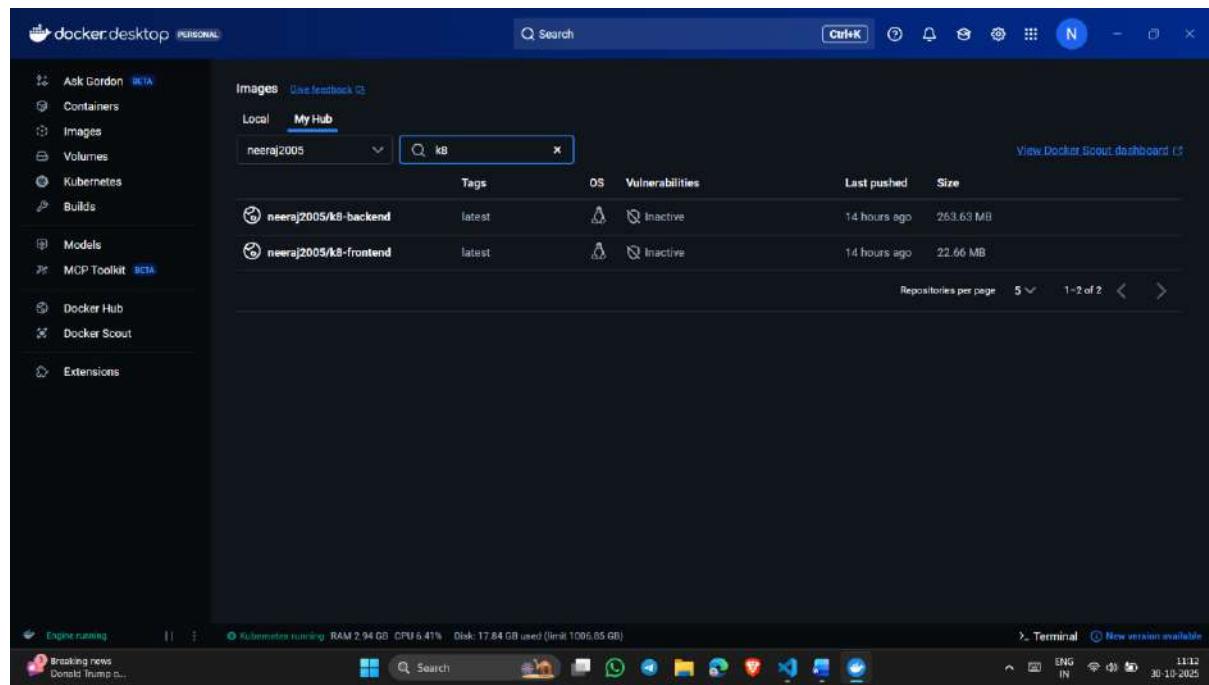


```
PS D:\U-1\CI\CD\DEVOPTS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> docker login
Authenticating with existing credentials... [username: neeraj2005]

Info : To login with a different account, run 'docker logout' followed by 'docker login'

Login Succeeded
```

```
PS D:\U-1\CI\CD\DEVOPTS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> docker push neeraj2005/k8s-frontend:latest
The push refers to repository [docker.io/neeraj2005/k8s-frontend]
f80abab5ead: Mounted from neeraj2005/crowd-frontend
621351078bed7: Mounted from neeraj2005/crowd-frontend
bfcded9ac7: Pushed
83c083cd9900: Mounted from neeraj2005/crowd-frontend
75c9bcfaa163: Mounted from neeraj2005/crowd-frontend
fc52a7a946d7: Pushed
e2d8eabd4600: Mounted from neeraj2005/crowd-frontend
016e0394ff299: Mounted from neeraj2005/crowd-frontend
7fb18c2f280c: Mounted from neeraj2005/crowd-frontend
2b35eb1b57d9: Mounted from neeraj2005/crowd-frontend
```

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> docker login
Authenticating with existing credentials... [Username: neeraj2005]

Info: To Login with a different account, run 'docker Logout' followed by 'docker Login'

Login Succeeded
```

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> docker login
Info: To Login with a different account, run 'docker Logout' followed by 'docker Login'

Login Succeeded
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> docker push neeraj2005/k8-frontend:latest
e2d0ea5d3690: Layer already exists
76c9bcac4163: Layer already exists
03e63548f209: Layer already exists
7fb80c2f28b0: Layer already exists
621a51978ed7: Layer already exists
2d35ebdd57d9: Layer already exists
fc52a1c94e47: Layer already exists
b9fcdd89a0ce7: Layer already exists
83ce83cd9960: Layer already exists
f80abae550ead: Layer already exists
latest: digest: sha256:87e7899cdec56452245a08b0821d4f77817d1852c9cda20a3d4fa8423b62dd7d size: 2488
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> docker push neeraj2005/k8-backend:latest
65b4a32fb43: Layer already exists
2326993b9fe6: Layer already exists
71abb39f78a1: Layer already exists
4b3ff8cc52: Layer already exists
5ff8a85d66ad: Layer already exists
b32aa5563dea: Layer already exists
e71188acf9e9: Layer already exists
latest: digest: sha256:374dfafec0de1c6137317121b982ec165684b7f24b641f5a22fee1292d230589 size: 1838
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>
```

```

    k8 > ! fullstack-deployment.yml X
    101   spec:
    102     template:
    103       metadata:
    104         labels:
    105           spec:
    106             containers:
    107               - name: frontend
    108                 image: neeraj2005/k8-frontend:latest #--> change this
    109               ports:
    110                 - containerPort: 80
    111     apiVersion: v1
    112     kind: Service
    113     metadata:
    114       name: Frontend-service
    115       namespace: fullstack-app
    116     spec:
    117       selector:
    118         app: frontend
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```

The screenshot shows a Windows desktop environment with the Visual Studio Code (VS Code) application open. The title bar reads "DEVOPS-FULLSTACK-PROJECT". The left sidebar (Explorer) lists a "DOCKER HUB" section and a "DEVOPS-FULLSTACK-PROJECT" section. Under "DEVOPS-FULLSTACK-PROJECT", there is a "k8" folder containing "fullstack-deployment.yaml". The main editor area displays the contents of "fullstack-deployment.yaml". The terminal tab shows the command line output of running "kubectl apply -f .\k8\fullstack-deployment.yaml" in a PowerShell window, which successfully creates various Kubernetes resources including a MySQL deployment and service, and a Backend deployment and service. The bottom status bar shows the file path "D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>" and the current date and time "30-10-2025".

```
! fullstack-deployment.yaml X
k8 > ! fullstack-deployment.yaml
  14 spec:
    10 app: mysql
    10
  PROBLEMS: 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER: 3
  PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl apply -f .\k8\fullstack-deployment.yaml
namespace/fullstack-app created
deployment.apps/mysql-deployment created
service/mysql-service created
deployment.apps/backend-deployment created
service/backend-service created
deployment.apps/frontend-deployment created
service/frontend-service created
  PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>
```

```
apiVersion: v1
kind: Namespace
metadata:
  name: fullstack-app
---
# =====
# MySQL Deployment & Service
# =====
apiVersion: apps/v1
kind: Deployment
metadata:
  name: mysql-deployment
  namespace: fullstack-app
spec:
  replicas: 1
```

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/backend-deployment	0/2	2	0	7m4s
deployment.apps/frontend-deployment	0/2	2	0	7m4s
deployment.apps/mysql-deployment	0/1	1	0	7m4s

NAME	READY	STATUS	RESTARTS	AGE
pod/backend-deployment-5d4989568b-9b5qm	0/1	ContainerCreating	0	7m4s
pod/backend-deployment-5d4989568b-slxzb	0/1	ContainerCreating	0	7m4s
pod/frontend-deployment-688747f78d-j5xkh	0/1	ContainerCreating	0	7m4s
pod/frontend-deployment-688747f78d-sgpd9	0/1	ContainerCreating	0	7m4s
pod/mysql-deployment-64fcc6bd5-sb9dc	0/1	ContainerCreating	0	7m4s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/backend-service	NodePort	10.99.198.200	<none>	2000:30025/TCP	7m4s
service/frontend-service	NodePort	10.96.23.157	<none>	80:30088/TCP	7m4s
service/mysql-service	ClusterIP	10.105.153.124	<none>	3306/TCP	7m4s

The screenshot shows a terminal window with the following command and output:

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl apply -f .\k8\fullstack-deployment.yaml
```

Output:

```
service/frontend-service unchanged
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl get all -n fullstack-app
NAME                                         READY   STATUS    RESTARTS   AGE
pod/backend-deployment-5d4989568b-9b5qm   1/1    Running   1 (2m2s ago)  18m
pod/backend-deployment-5d4989568b-s1xbz   1/1    Running   1 (2m4s ago)  18m
pod/frontend-deployment-688747f78d-j5xkh  1/1    Running   0          18m
pod/frontend-deployment-688747f78d-sgpd9  1/1    Running   0          18m
pod/mysql-deployment-64fcc6bd5-sb9dc     1/1    Running   0          18m

NAME                           TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)          AGE
service/backend-service   NodePort   10.99.198.200 <none>       2000:30925/TCP  18m
service/frontend-service  NodePort   10.96.23.157  <none>       80:30888/TCP   18m
service/mysql-service     ClusterIP  10.105.153.124 <none>      3306/TCP        18m

NAME                           READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/backend-deployment  2/2    2           2           18m
deployment.apps/frontend-deployment 2/2    2           2           18m
deployment.apps/mysql-deployment   1/1    1           1           18m

NAME             DESIRED  CURRENT  READY   AGE
replicaset.apps/backend-deployment-5d4989568b  2        2        2        18m
replicaset.apps/frontend-deployment-688747f78d  2        2        2        18m
replicaset.apps/mysql-deployment-64fcc6bd5     1        1        1        18m
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>
```

The screenshot shows a Task Manager application running on a Windows desktop. The application has a dark blue header with the title "Task Manager". Below the header is a "Add Task" form and a "All Tasks" table.

Add Task Form:

- Title:
- Description:
- Start Date:
- End Date:
- Priority:
- Add Task** button

All Tasks Table:

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
No matching tasks found							
87592	DEMO	demo	2025-10-30	2025-11-01	MEDIUM	ASSIGNED	Edit Delete

localhost:30080

+ Add Task

Title:	Description:	Start Date:	End Date:
<input type="text" value="Enter task title"/>	<input type="text" value="Enter task description"/>	<input type="text" value="dd-mm-yyyy"/>	<input type="text" value="dd-mm-yyyy"/>

Priority:

Add Task

Task added successfully!

All Tasks

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
60680	CICD	CICD LAB	2025-10-30	2025-11-02	HIGH	ASSIGNED	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
87592	DEMO	demo	2025-10-30	2025-11-01	MEDIUM	ASSIGNED	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

localhost:30080/board

Task Board

ASSIGNED
PROGRESS
COMPLETED
REJECTED

CICD

CICD LAB

Priority: HIGH

Start: 2025-10-30

End: 2025-11-02

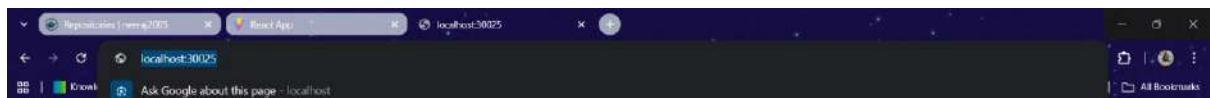
DEMO

demo

Priority: MEDIUM

Start: 2025-10-30

End: 2025-11-01

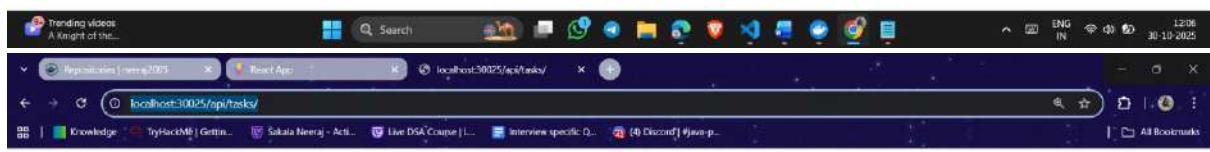


Whitelabel Error Page

This application has no explicit mapping for /error, so you are seeing this as a fallback.

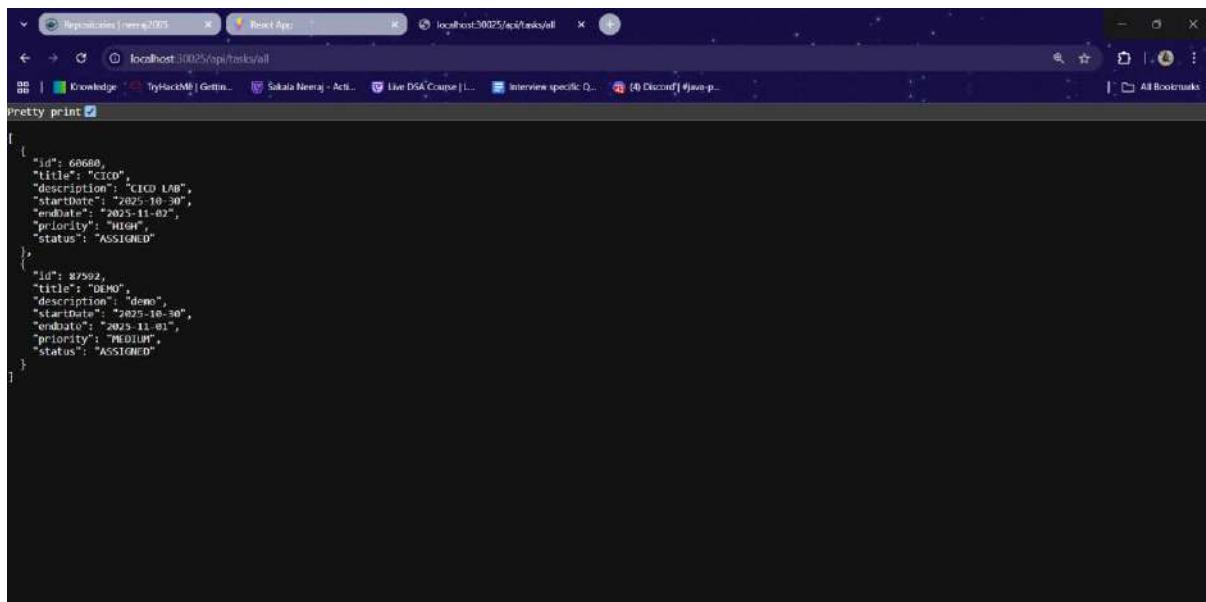
Thu Oct 30 06:36:18 UTC 2025

There was an unexpected error (type=Not Found, status=404).



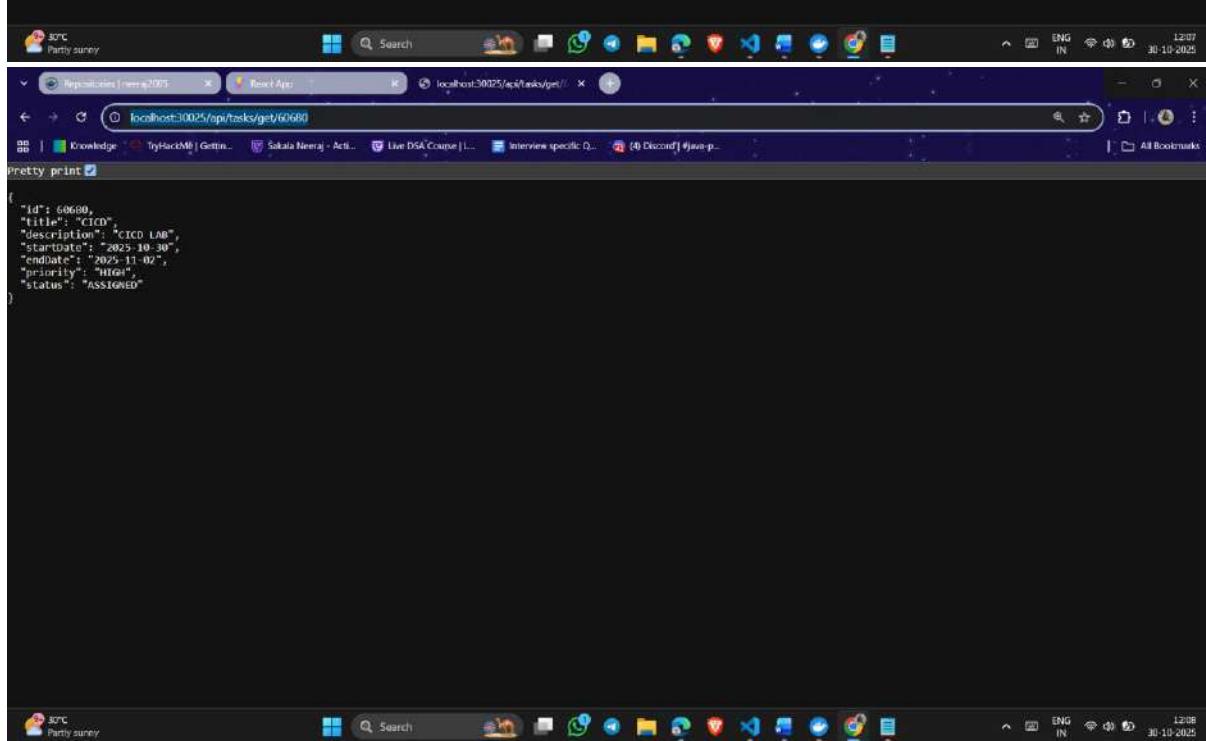
Task API Demo





A screenshot of a web browser window showing a list of tasks. The URL is `localhost:30025/api/tasks/all`. The tasks listed are:

```
[{"id": 60680, "title": "CI/CD", "description": "CI/CD LAB", "startDate": "2025-10-30", "endDate": "2025-11-02", "priority": "HIGH", "status": "ASSIGNED"}, {"id": 87592, "title": "DEMO", "description": "demo", "startDate": "2025-10-30", "endDate": "2025-11-01", "priority": "MEDIUM", "status": "ASSIGNED"}]
```



A screenshot of a web browser window showing a single task detail. The URL is `localhost:30025/api/tasks/get/60680`. The task details are:

```
{"id": 60680, "title": "CI/CD", "description": "CI/CD LAB", "startDate": "2025-10-30", "endDate": "2025-11-02", "priority": "HIGH", "status": "ASSIGNED"}
```



The screenshot shows a Windows desktop environment with two main windows open:

- Browser Window (Top):** Displays the Swagger UI for a 'task-controller' API. The URL is `http://localhost:30025`. The API endpoints listed are:
 - PUT /api/tasks/updatestatus/{id}
 - PUT /api/tasks/update/{id}
 - POST /api/tasks/add
 - GET /api/tasks/get/{id}
 - GET /api/tasks/all
 - GET /api/tasks/
 - DELETE /api/tasks/delete/{id}
- Docker Desktop (Bottom):** Shows the 'Containers' tab with the following table of running containers:

Name	Container ID	Image	Port(s)	CPU (%)	Last started	Actions
k8s_mysql_mysql-deploy_0d290874741d	0d290874741d	mysql		1.73%	14 minutes ago	[Actions]
k8s_frontend_frontend-d_d16c14129559	d16c14129559	neeraj2005/k8s-frontend		0%	14 minutes ago	[Actions]
k8s_frontend_frontend-d_7e439f8a0f2	7e439f8a0f2	neeraj2005/k8s-frontend		0%	13 minutes ago	[Actions]
k8s_backend_backend-d_f12045db7dad	f12045db7dad	neeraj2005/k8s-backend		0.82%	13 minutes ago	[Actions]
k8s_backend_backend-d_986a842bee73	986a842bee73	neeraj2005/k8s-backend		0.89%	13 minutes ago	[Actions]

The taskbar at the bottom shows several pinned icons, including GitHub, Docker Desktop, and a terminal icon.

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl get -f .\k8\fullstack-deployment.yaml
NAME           STATUS   AGE
namespace/fullstack-app   Active  31m

NAME          READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/mysql-deployment   1/1     1           1           31m
service/mysql-service   ClusterIP  10.105.153.124 <none>    3306/TCP  31m
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/backend-deployment 2/2     2           2           31m
service/backend-service   NodePort  10.99.198.208 <none>    2080:30002/TCP 31m
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/frontend-deployment 2/2     2           2           31m
service/frontend-service   NodePort  10.96.23.157 <none>    80:30000/TCP  31m
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>
```

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl get pods -n fullstack-app
NAME             READY   STATUS    RESTARTS   AGE
backend-deployment-5d4989568b-9b5qm   1/1     Running   1 (18m ago)  34m
backend-deployment-5d4989568b-s1xzbb  1/1     Running   1 (18m ago)  34m
frontend-deployment-688747f78d-j5xkh  1/1     Running   0            34m
frontend-deployment-688747f78d-4gpd9  1/1     Running   0            34m
mysql-deployment-64fcc6bd5-ab9dc    1/1     Running   0            34m
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl logs -f backend-deployment-5d4989568b-9b5qm
error from server (NotFound): pods "backend-deployment-5d4989568b-9b5qm" not found in namespace "default"
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>
```

File Edit Selection View Go Run ... ⏪ ⏩ 🔍 DEVOPS-FULLSTACK-PROJECT

EXPLORER k8 > ! fullstack-deployment.yml

DOCKER HUB

DEVOPS-FULLSTACK-PROJECT

v k8

! fullstack-deployment.yml

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER 3

PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl get pods -n fullstack-app

NAME	READY	STATUS	RESTARTS	AGE
backend-deployment-5d4989568b-9b5qm	1/1	Running	1 (18m ago)	34m
backend-deployment-5d4989568b-s1xzb	1/1	Running	1 (18m ago)	34m
frontend-deployment-688747f78d-j5khh	1/1	Running	0	34m
frontend-deployment-688747f78d-sppg9	1/1	Running	0	34m
mysql-deployment-64fcfc8bd5-sb8dc	1/1	Running	0	34m

PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl logs -f backend-deployment-5d4989568b-9b5qm

error: error from server (NotFound): pods "backend-deployment-5d4989568b-9b5qm" not found in namespace "default"

PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl logs -f backend-deployment-5d4989568b-9b5qm -n fullstack-app

```

:: Spring Boot ::          (v3.5.6)

2025-10-30T06:28:35.641Z INFO 1 --- [springbootbackend] [main] c.klef.dev.SpringbootbackendApplication : Starting Springboot
backendApplication v0.0.1-SNAPSHOT using Java 21.8.8 with PID 1 (/app/app.jar started by root in /app)
2025-10-30T06:28:35.642Z INFO 1 --- [springbootbackend] [main] c.klef.dev.SpringbootbackendApplication : No active profile s
et, falling back to 1 default profile: "default"
2025-10-30T06:28:38.547Z INFO 1 --- [springbootbackend] [main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Sprin
g Data JPA repositories in DEFAULT mode.
2025-10-30T06:28:38.854Z INFO 1 --- [springbootbackend] [main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Dat
a repository scanning in 290 ms. Found 1 JPA repository interface.
2025-10-30T06:28:40.759Z INFO 1 --- [springbootbackend] [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized

```

In 82, Col 6 Spaces:2 UTF-8 CRLF () YAML ⚙ Go Live ⚙ Prettier ⚙ ENG IN 12:18 30-10-2025

File Edit Selection View Go Run ... ⏪ ⏩ 🔍 DEVOPS-FULLSTACK-PROJECT

EXPLORER k8 > ! fullstack-deployment.yml

DOCKER HUB

DEVOPS-FULLSTACK-PROJECT

v k8

! fullstack-deployment.yml

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER 3

PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl logs -f backend-deployment-5d4989568b -n fullstack-app

```

task_table t1_0
Hibernate:
    select
        t1_0.id,
        t1_0.description,
        t1_0.end_date,
        t1_0.priority,
        t1_0.start_date,
        t1_0.status,
        t1_0.title
    from
        task_table t1_0
    where
        t1_0.id=?;
Hibernate:
    select
        t1_0.id,
        t1_0.description,
        t1_0.end_date,
        t1_0.priority,
        t1_0.start_date,
        t1_0.status,
        t1_0.title
    from
        task_table t1_0
    where
        t1_0.id=?

```

In 82, Col 6 Spaces:2 UTF-8 CRLF () YAML ⚙ Go Live ⚙ Prettier ⚙ ENG IN 12:18 30-10-2025

The screenshot shows a Microsoft Visual Studio Code interface with a terminal window open. The terminal displays a CI/CD pipeline for a 'DEVS-FULLSTACK-PROJECT'. It starts with a 'k8s' command to get pods, followed by a log command for the 'backend-deployment' pod. The logs show the deployment of a Spring Boot application, including the startup of the 'SpringbootbackendApplication' and the configuration of JPA repositories. The pipeline then moves to a 'nextjs' command, which triggers a build process. The build output shows the creation of a 'dist' directory containing static files like 'index.html' and 'manifest.json'. Finally, the pipeline ends with a 'git push' command to a GitHub repository.

```
PS D:\3\1 CI CD DEVEOPS\Kubernetes\DEVS-FULLSTACK-PROJECT> kubectl get pods -n fullstack-app
NAME          READY   STATUS    RESTARTS   AGE
backend-deployment-5d4989568b-9b5qm  1/1     Running   1 (2m ago)  38m
backend-deployment-5d4989568b-slxzb  1/1     Running   1 (2m ago)  38m
frontend-deployment-588747f78d-j5khh  1/1     Running   0        38m
frontend-deployment-588747f78d-sgpd9  1/1     Running   0        38m
mysql-deployment-64fc6bd5-sh9dc     1/1     Running   0        38m

PS D:\3\1 CI CD DEVEOPS\Kubernetes\DEVS-FULLSTACK-PROJECT> kubectl logs -f backend-deployment-5d4989568b-slxzb -n fullstack-app
[...]
:: Spring Boot ::      (v3.5.6)

2025-10-30T06:28:32.765Z  INFO 1 --- [springbootbackend] [main] c.klef.dev.SpringbootbackendApplication : Starting Springboot
2025-10-30T06:28:32.777Z  INFO 1 --- [springbootbackend] [main] c.klef.dev.SpringbootbackendApplication : No active profile s
et, falling back to 1 default profile: "default"
2025-10-30T06:28:36.468Z  INFO 1 --- [springbootbackend] [main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Sprin
g Data JPA repositories in DEFAULT mode.
2025-10-30T06:28:36.773Z  INFO 1 --- [springbootbackend] [main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Dat
a repository scanning in 250 ms. Found 1 JPA repository interface.
2025-10-30T06:28:38.459Z  INFO 1 --- [springbootbackend] [main] o.s.w.e.embedded.tomcat.TomcatWebServer : Tomcat initialized
2025-10-30T06:28:38.516Z  INFO 1 --- [springbootbackend] [main] o.apache.catalina.core.StandardService : Starting service [T
```

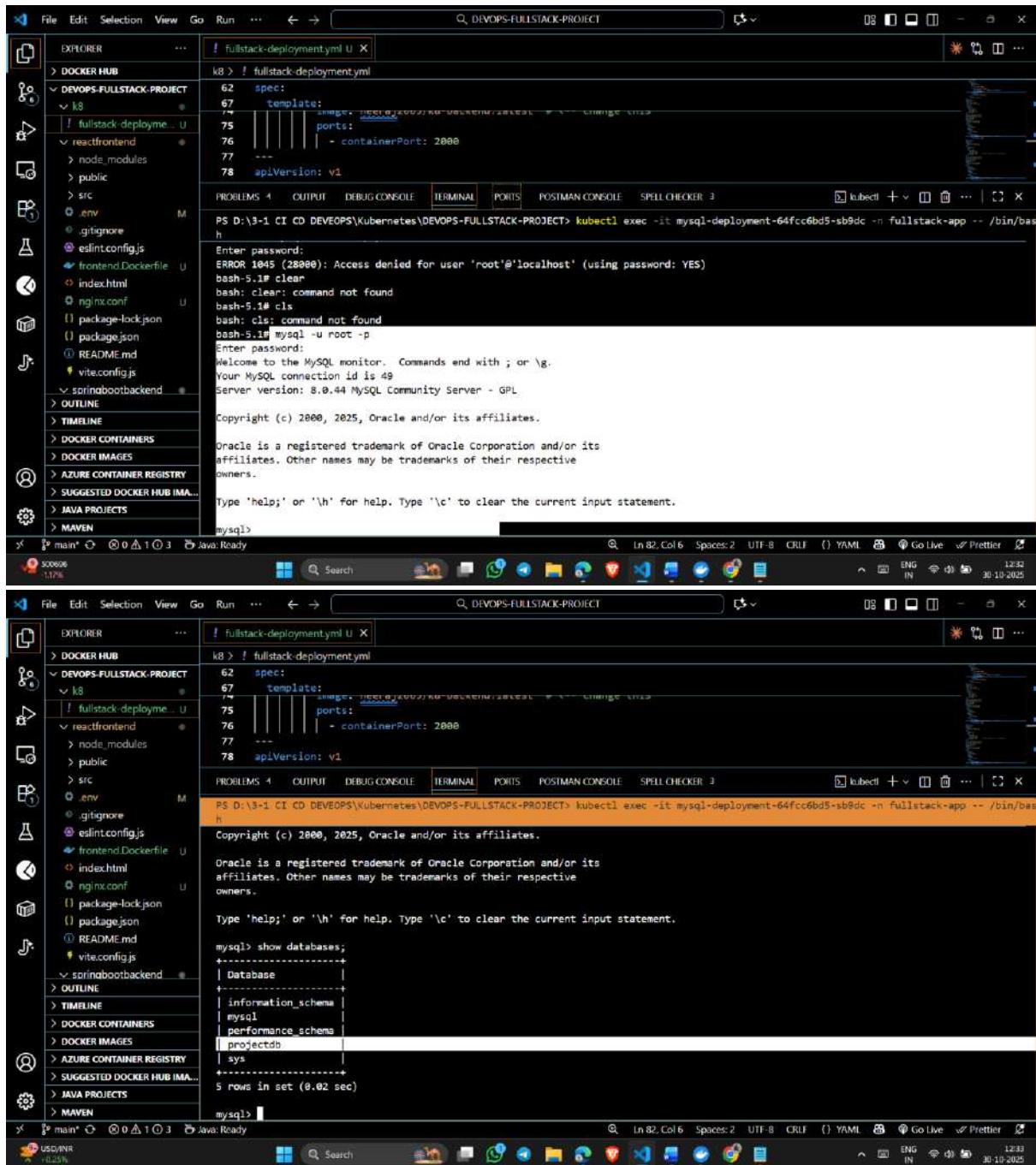
The screenshot shows the VS Code interface with the title bar "DEVOPS-FULLSTACK-PROJECT". The Explorer sidebar on the left lists a "K8" folder containing "reactfrontend", "node_modules", "public", "src", ".env", ".gitignore", ".eslintrc.js", "frontend.Dockerfile", "index.html", "nginx.conf", "package-lock.json", "package.json", "README.md", and "vite.config.js". The "K8" folder also contains "springbootbackend". The "TERMINAL" tab is active, displaying the command "kubectl get pods -n fullstack-app" and its output:

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl get pods -n fullstack-app
NAME           READY   STATUS    RESTARTS   AGE
backend-deployment-5d4989568b-9b5qm   1/1   Running   1 (26m ago)  42m
backend-deployment-5d4989568b-s1xzb   1/1   Running   1 (26m ago)  42m
frontend-deployment-688747f78d-j5xkh  1/1   Running   0        42m
frontend-deployment-688747f78d-sgpd9  1/1   Running   0        42m
mysql-deployment-64fcc6bd5-sb9dc   1/1   Running   0        42m
```

The screenshot shows the VS Code interface with the title bar "DEVOPS-FULLSTACK-PROJECT". The Explorer sidebar on the left lists a "K8" folder containing "reactfrontend", "node_modules", "public", "src", ".env", ".gitignore", ".eslintrc.js", "frontend.Dockerfile", "index.html", "nginx.conf", "package-lock.json", "package.json", "README.md", and "vite.config.js". The "K8" folder also contains "springbootbackend". The "TERMINAL" tab is active, displaying the command "kubectl exec -it mysql-deployment-64fcc6bd5-sb9dc -n fullstack-app -- /bin/bash" and its output:

```
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl exec -it mysql-deployment-64fcc6bd5-sb9dc -n fullstack-app -- /bin/bash
bash-5.1# mysql -u root -p password
Enter password:
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
bash-5.1# clear
bash: clear: command not found
bash-5.1# cls
bash: cls: command not found
bash-5.1# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 49
Server version: 8.0.44 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.
```



```
! fullstack-deployment.yml X
k8 > ! fullstack-deployment.yml
62   spec:
67     template:
75       ports:
76         - containerPort: 2000
77     ...
78   apiVersion: v1
PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE SPELL CHECKER 3
PS D:\3-1\CI\CD\DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl exec -it mysql-deployment-64fcc6bd5-sb9dc -n fullstack-app -- /bin/bash
Enter password:
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
bash-5.1# clear
bash: clear: command not found
bash-5.1# cls
bash: cls: command not found
bash-5.1# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 49
Server version: 8.0.44 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| projectdb |
| sys |
+-----+
5 rows in set (0.02 sec)

mysql>
```

In 82, Col 6 Spaces:2 UTF-8 CRLF () YAML ⚙ Go Live ✅ Prettier ENG IN 12:32 30-10-2025

The screenshot shows two instances of a code editor interface, likely Visual Studio Code, displaying a DevOps Full Stack Project. The project structure includes a Docker Hub folder, a DEVOPS-FULLSTACK-PROJECT folder containing K8, fullstack-deployment.yml, reactfrontend, node_modules, public, src, .env, .gitignore, eslint.config.js, frontend.Dockerfile, index.html, nginx.conf, package-lock.json, package.json, README.md, vite.config.js, and springbootbackend. The terminal tab shows the execution of kubectl commands to interact with a MySQL deployment. In the first instance, the MySQL prompt shows:

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| projectdb |
| sys |
+-----+
5 rows in set (0.02 sec)

mysql> use project_db;
ERROR 1049 (42000): Unknown database 'project_db'
mysql> use projectdb;
Reading table information for completion of table and column names.
You can turn off this feature to get a quicker startup with -A
```

In the second instance, the MySQL prompt shows:

```
mysql> show databases;
+-----+
| Database |
+-----+
| projectdb |
| sys |
+-----+
5 rows in set (0.02 sec)

mysql> use project_db;
ERROR 1049 (42000): Unknown database 'project_db'
mysql> use projectdb;
Reading table information for completion of table and column names.
You can turn off this feature to get a quicker startup with -A
```

Both instances also show a terminal command PS D:\3-1\CI_CD\DEVOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl exec -it mysql-deployment-64fcc6bd5-sb9dc -n fullstack-app -- /bin/bash.

The screenshot shows a Visual Studio Code interface with the title bar "DEVOPS-FULLSTACK-PROJECT". The left sidebar displays a project structure under "EXPLORER" with sections like "DOCKER HUB", "DEVOPS-FULLSTACK-PROJECT", "k8", "fullstack-deployment", "reactfrontend", "node_modules", "public", "src", ".env", ".gitignore", "eslintconfig.js", "frontend.Dockerfile", "index.html", "nginx.conf", "package-lock.json", "package.json", "README.md", "vite.config.js", "springbootbackend", "OUTLINE", "TIMELINE", "DOCKER CONTAINERS", "DOCKER IMAGES", "AZURE CONTAINER REGISTRY", "SUGGESTED DOCKER HUB IMA...", "JAVA PROJECTS", and "MAVEN".

The main area shows a terminal window titled "k8 > fullstack-deployment.yml" with the following content:

```
! fullstack-deployment.yml X
k8 > ! fullstack-deployment.yml
62 spec:
67   template:
75     ports:
76       - containerPort: 2000
77     ...
78   apiVersion: v1
```

Below the terminal, the status bar indicates "PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT> kubectl exec -it mysql-deployment-64fcc6bd5-sb9dc -n fullstack-app -- /bin/bash". The terminal output shows:

```
Database changed
mysql> show tables;
+-----+
| Tables_in_projectdb |
+-----+
| task_table |
+-----+
1 row in set (0.01 sec)

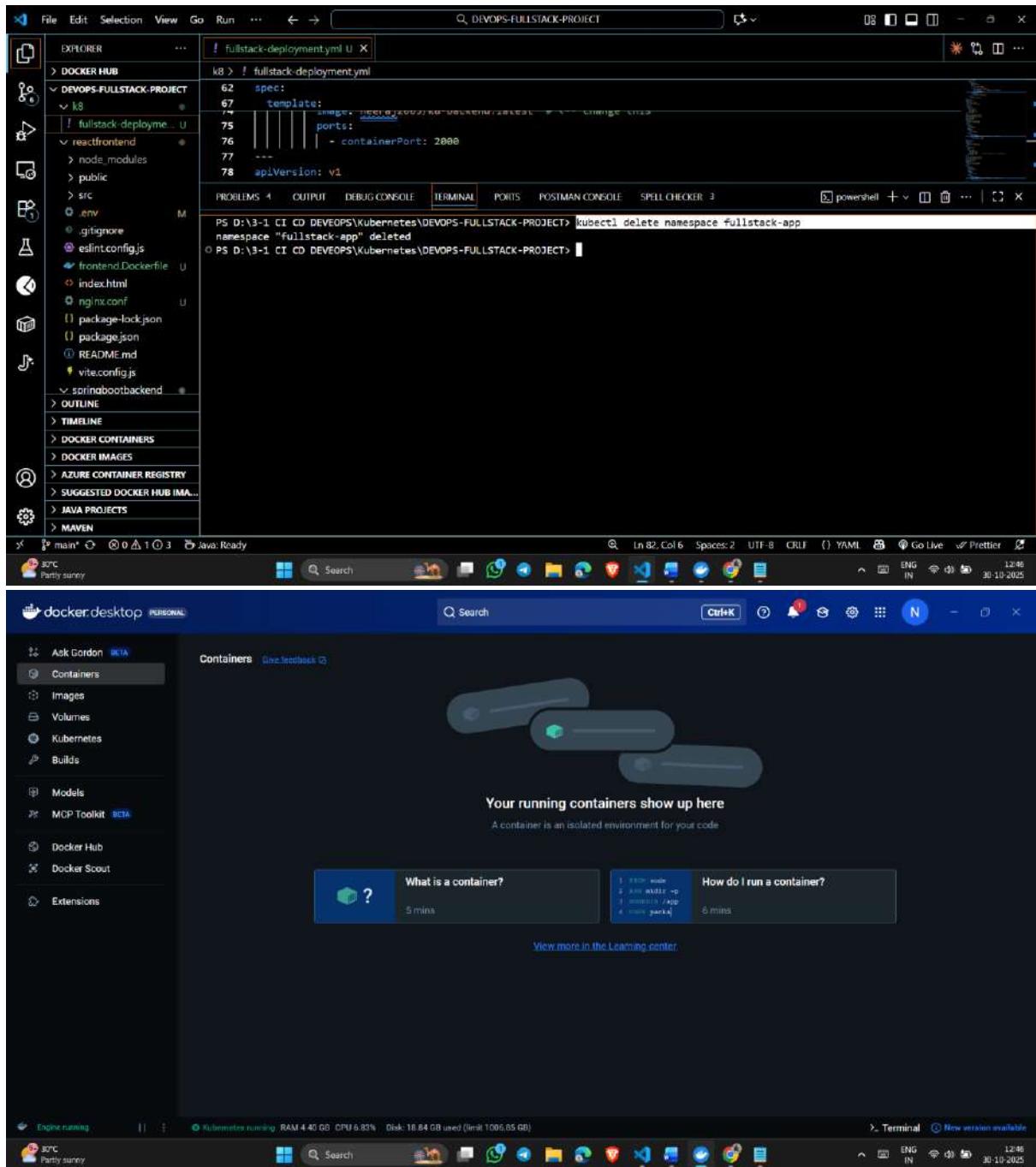
mysql> select * from task_table;
+-----+
| id | description | end_date | priority | start_date | status | title |
+-----+
| 60680 | CICD LAB | 2025-11-02 | HIGH | 2025-10-30 | ASSIGNED | CICD |
| 87592 | demo | 2025-11-01 | MEDIUM | 2025-10-30 | ASSIGNED | DEMO |
+-----+
2 rows in set (0.01 sec)
```

The status bar at the bottom shows "mysql" and "In 82, Col 6 Spaces:2 UTF-8 CRLF () YAML Go Live Prettier".

This screenshot is nearly identical to the one above, showing the same project structure and terminal content. The difference is in the terminal output, which includes the command to exit the MySQL session:

```
mysql> exit
Bye
bash-5.1# exit
exit
PS D:\3-1 CI CD DEVEOPS\Kubernetes\DEVOPS-FULLSTACK-PROJECT>
```

The status bar at the bottom shows "In 82, Col 6 Spaces:2 UTF-8 CRLF () YAML Go Live Prettier".



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
```