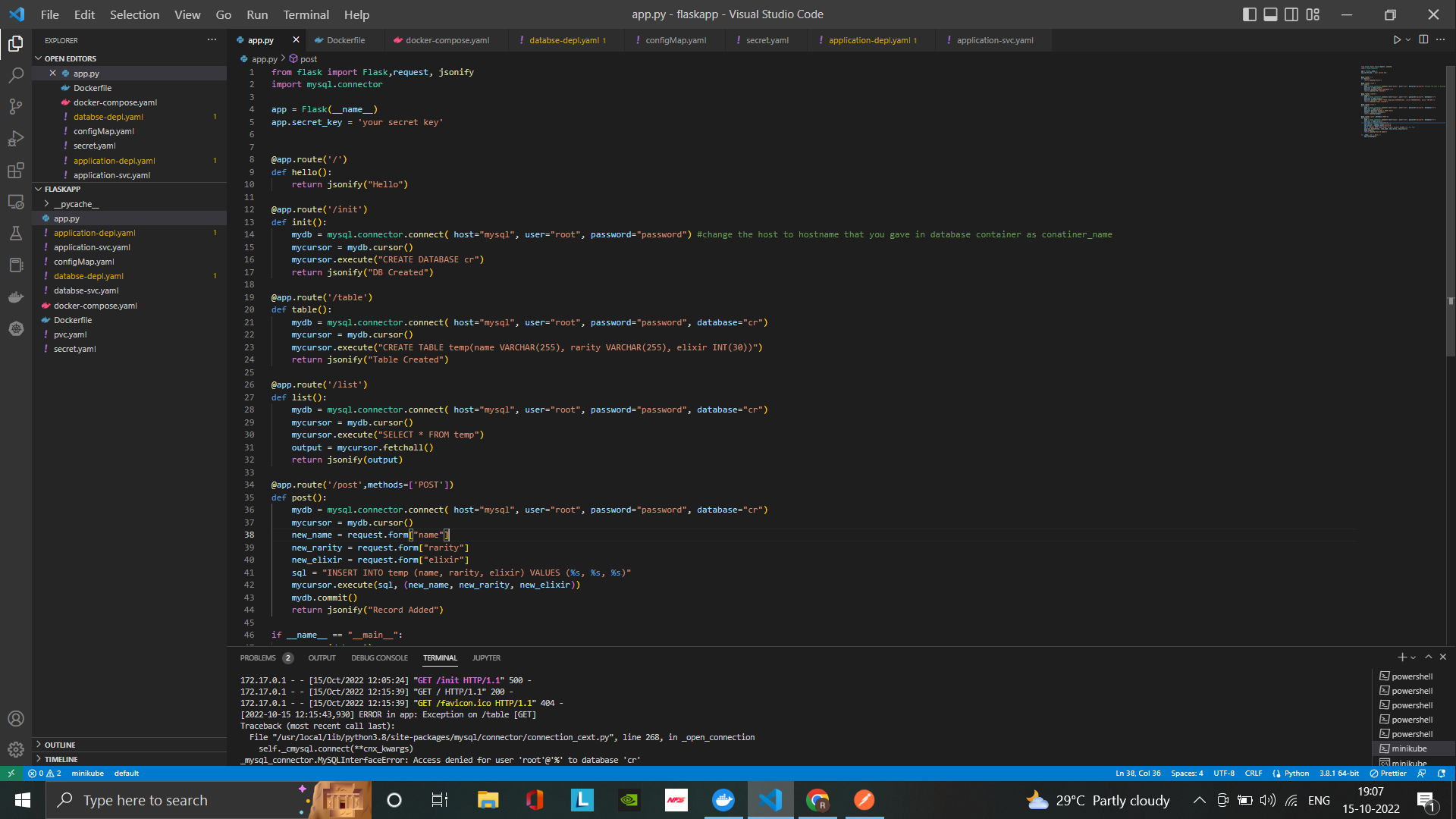
**Deploying flask-MySQL app on Kubernetes**

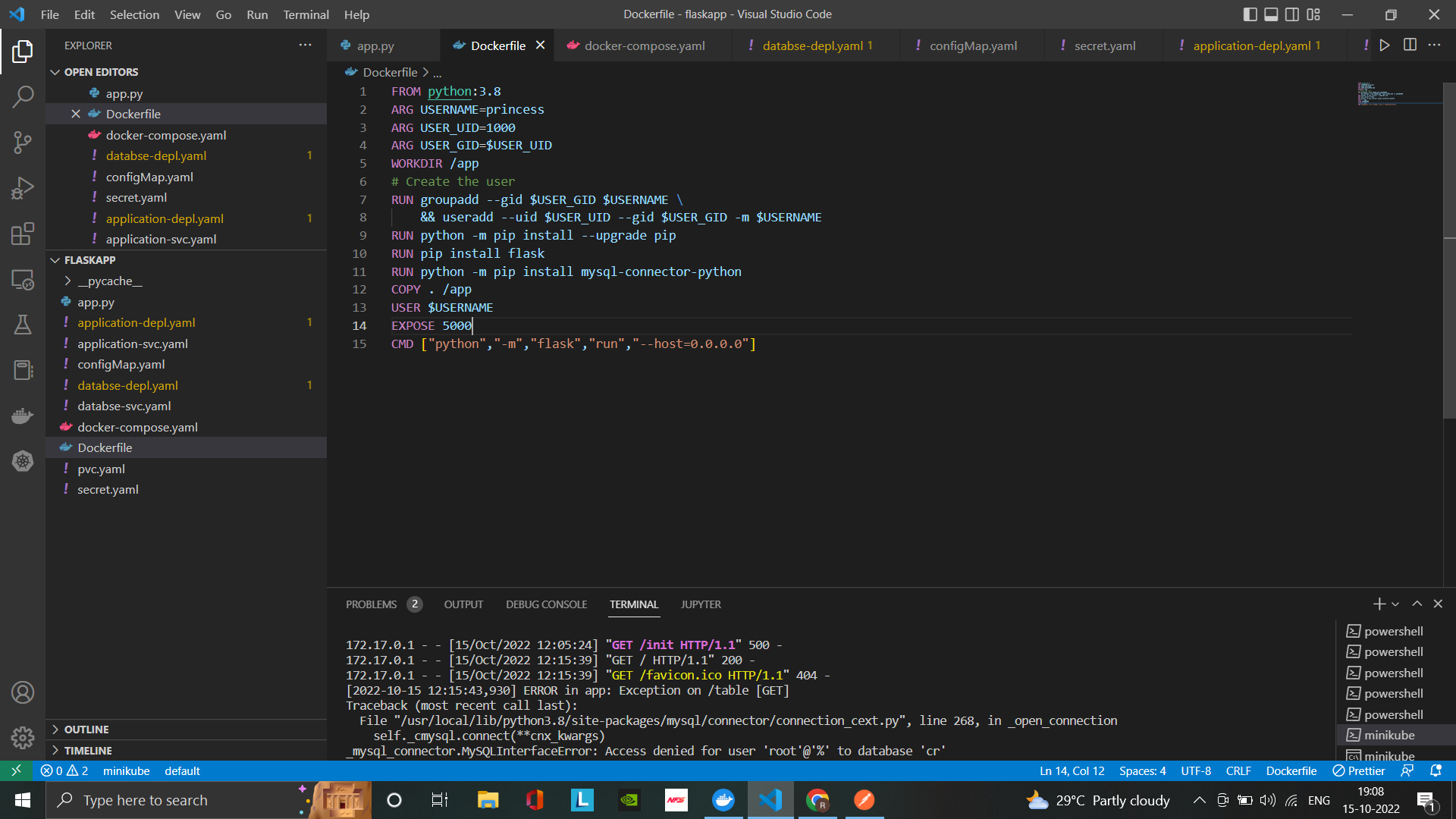
Directory structure:

* App.py
* Dockerfile
* docker-compose.yaml
* application-depl.yaml - Deployment file for flask application
* application-svc.yaml - Service file for flask application
* databse-depl.yaml - Deployment file for mysql application
* databse-svc.yaml - Service file
* configMap.yaml
* Secret.yaml
* pvc.yaml

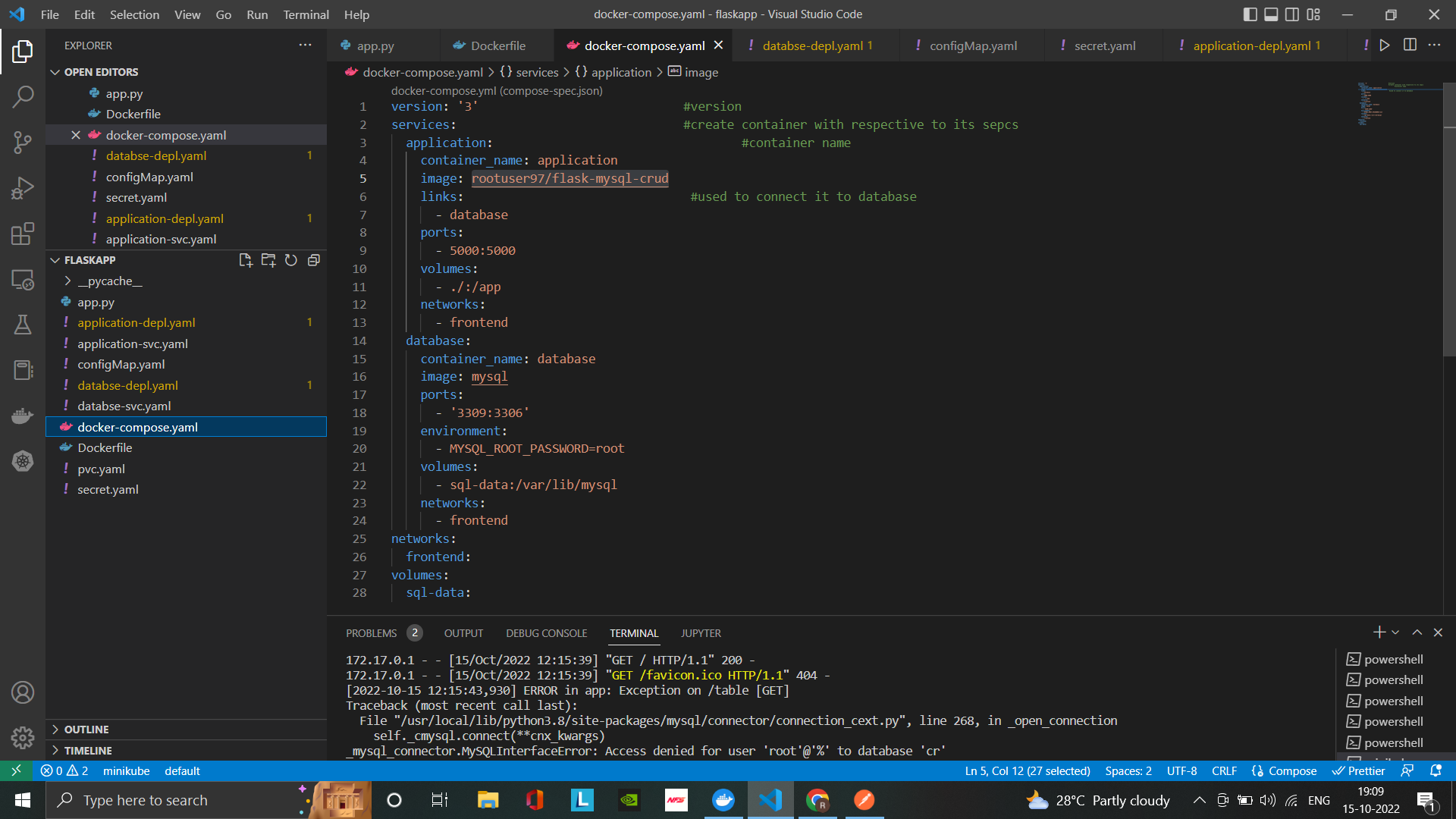
App.py



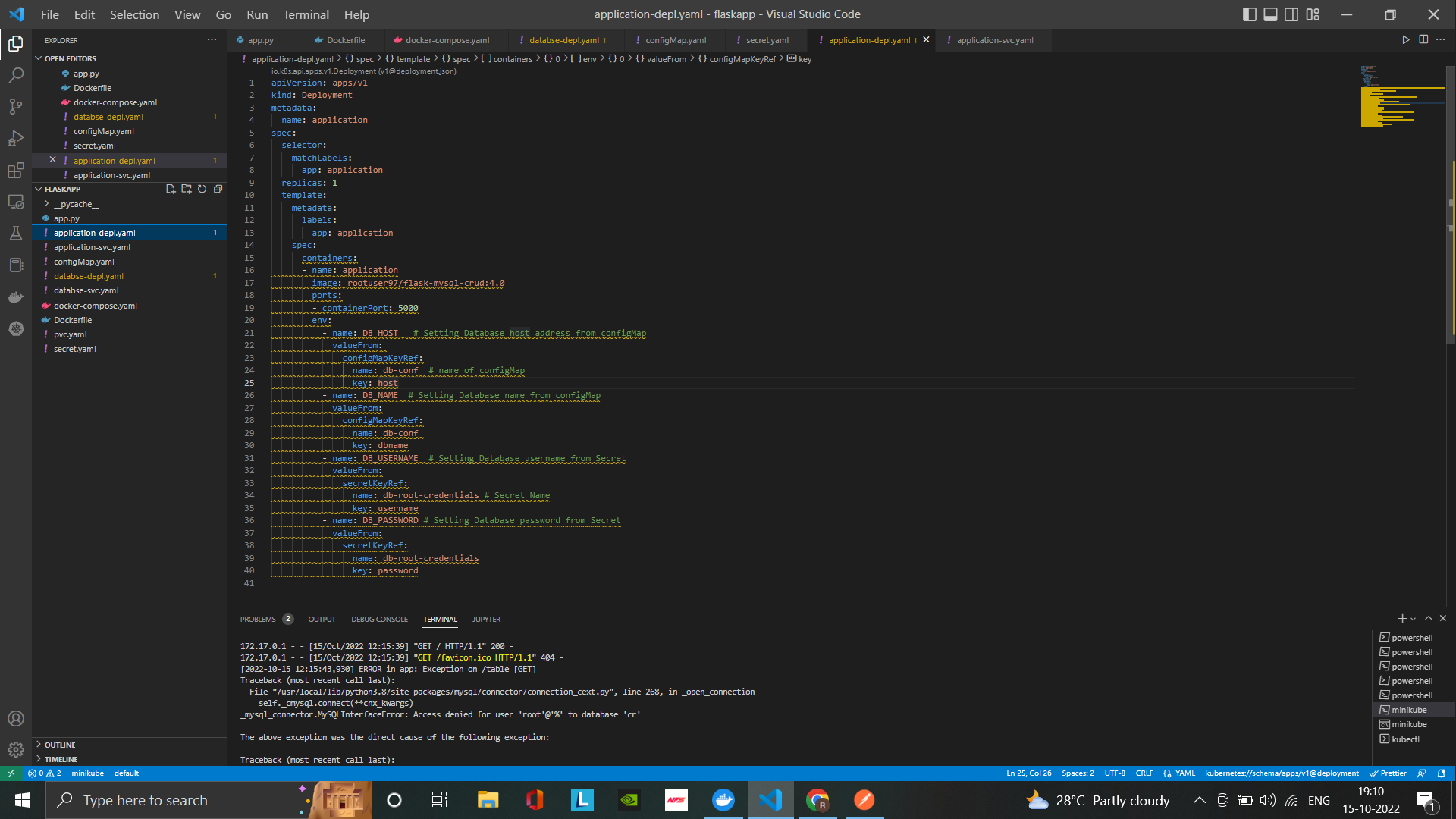
Dockerfile



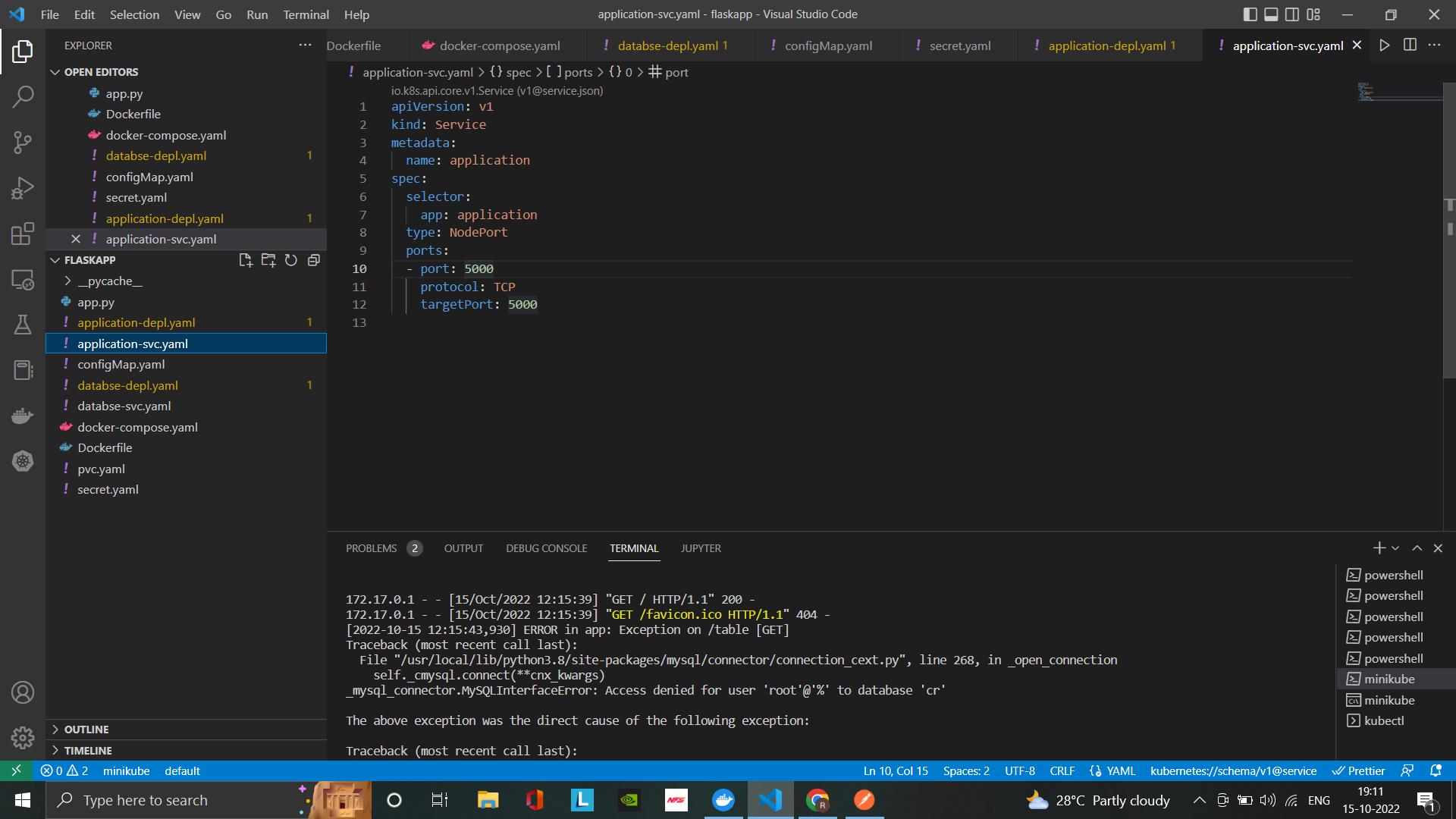
Docker-compose.yaml



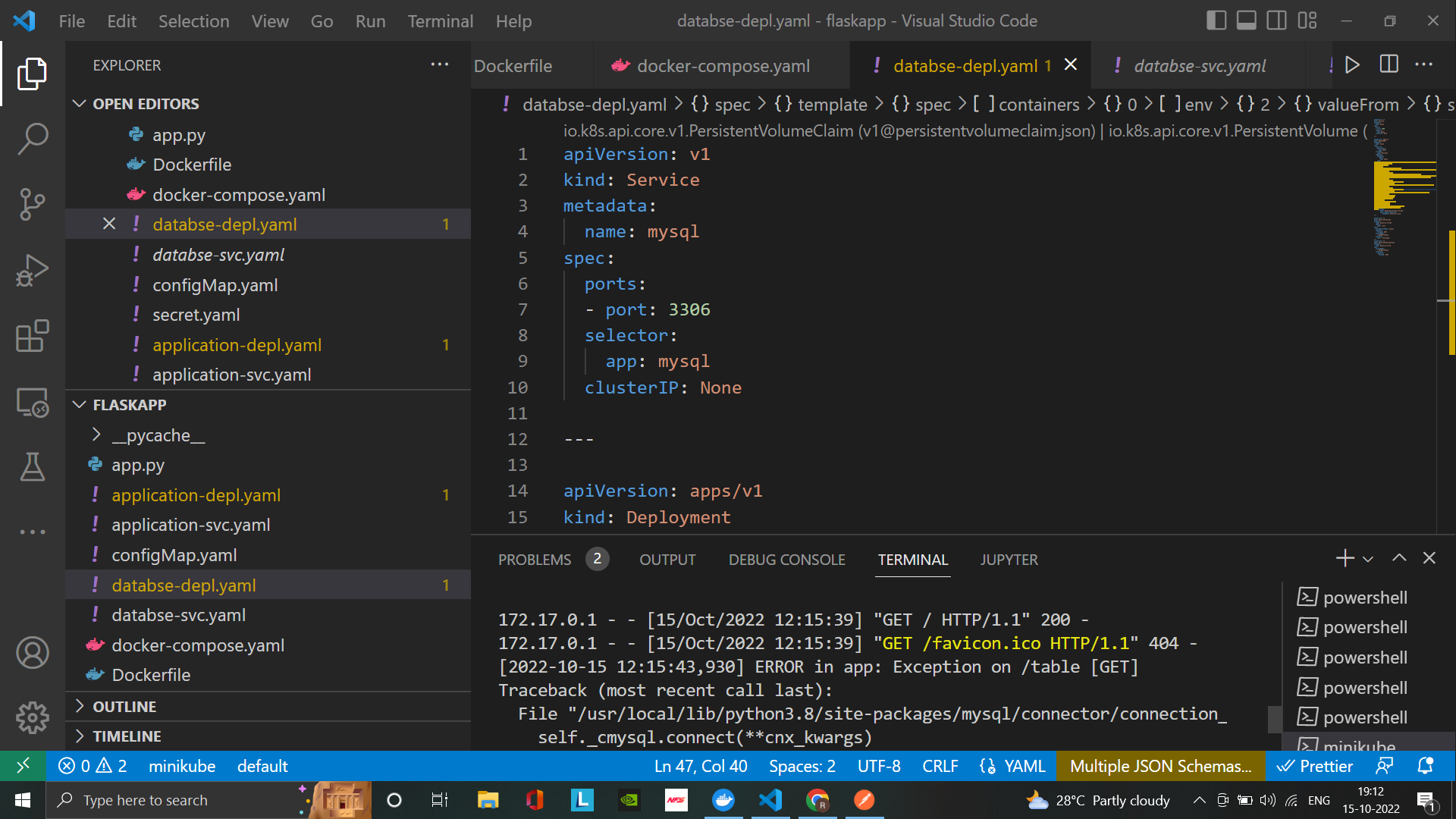
Application-depl.yaml



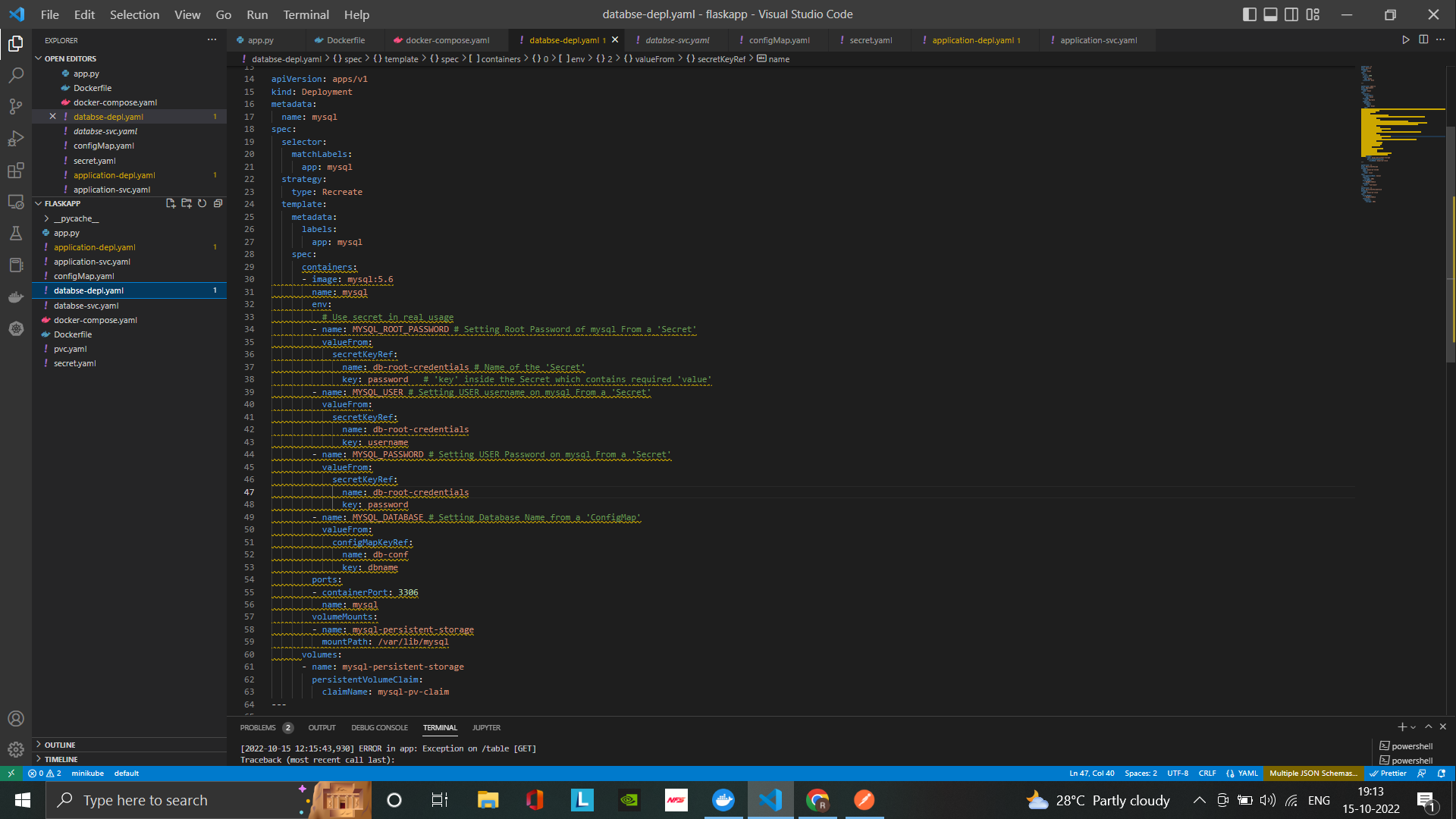
Application-svc.yaml



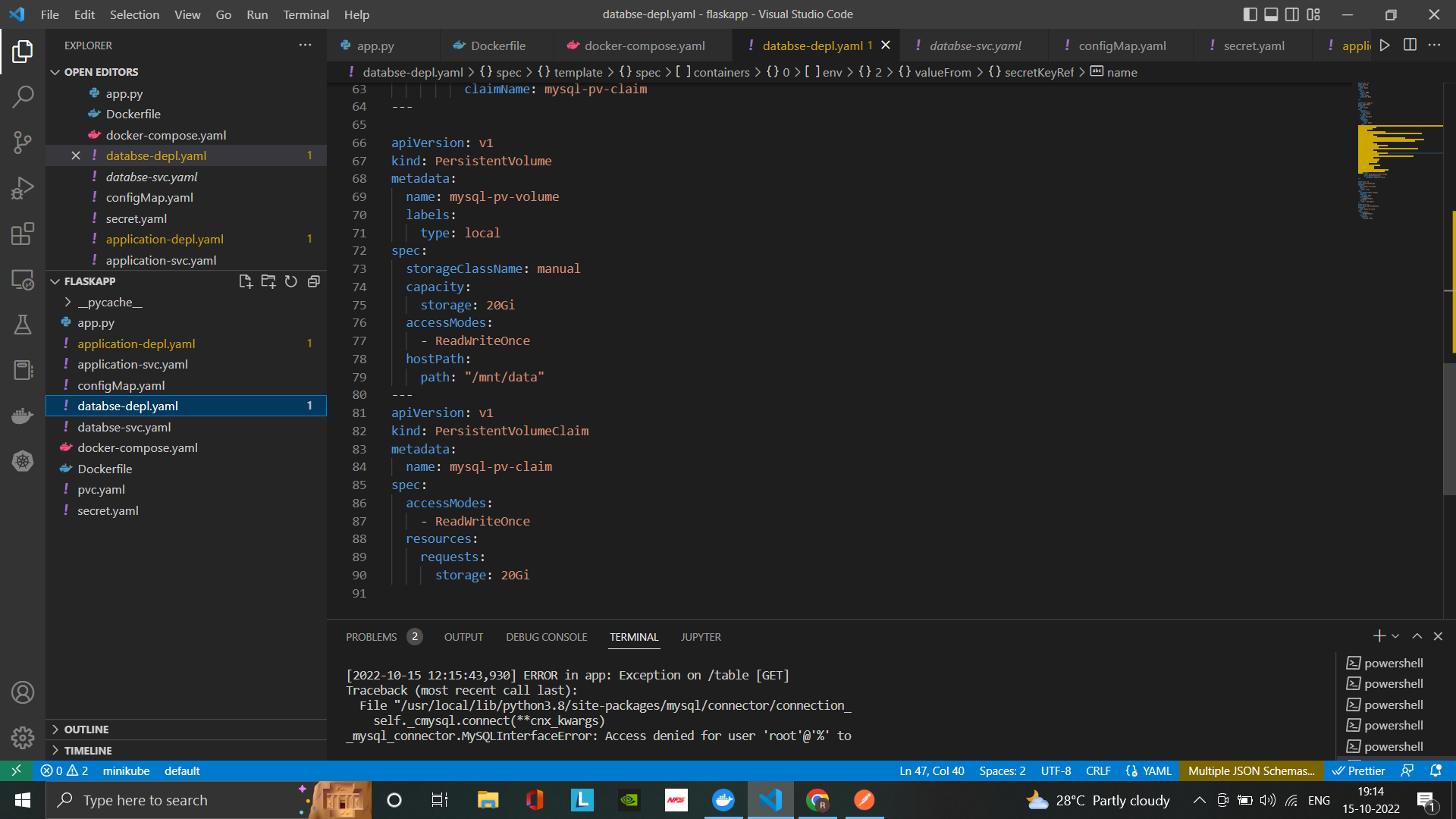
Databse-svc.yaml



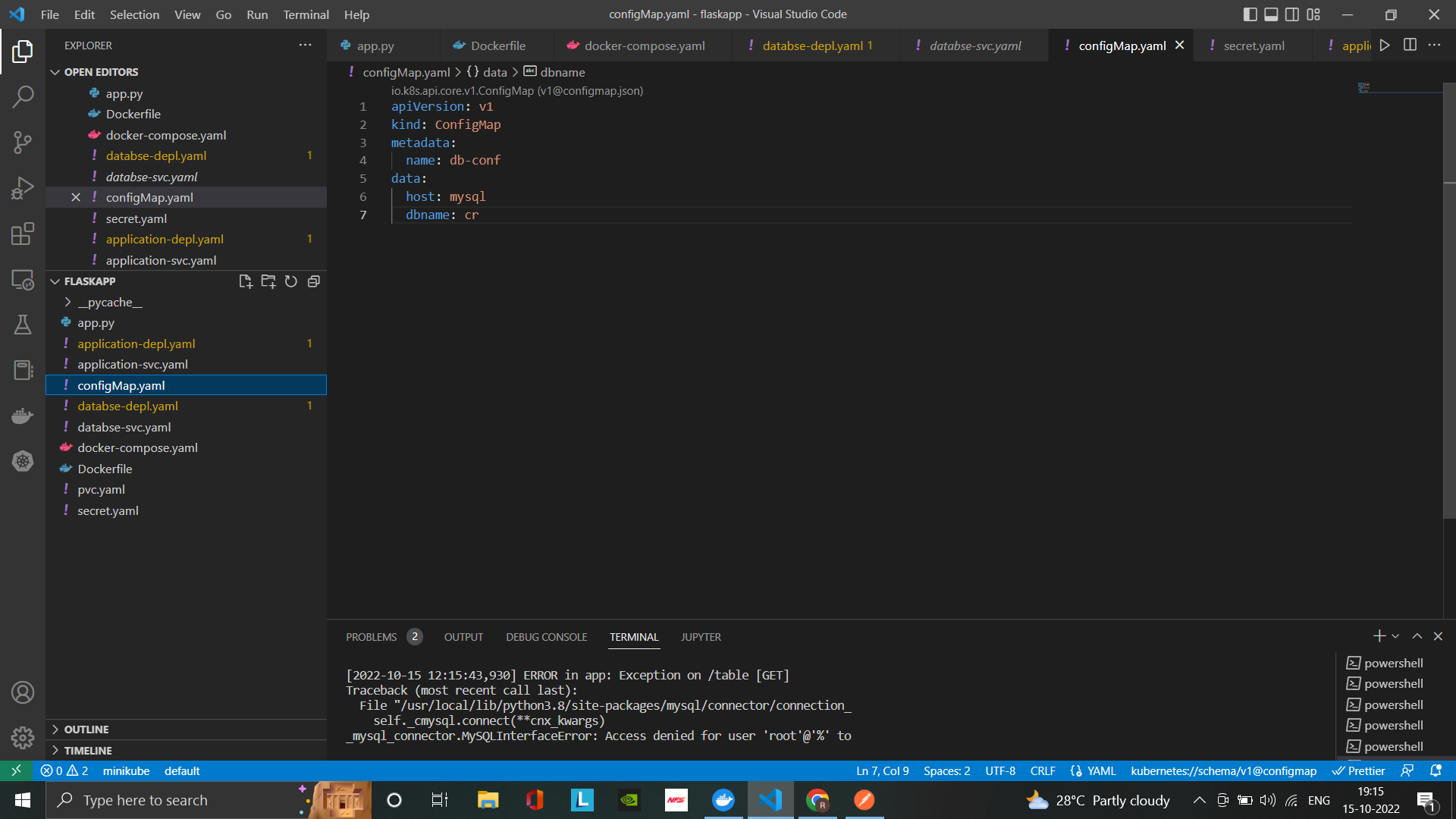
Databse-depl.yaml



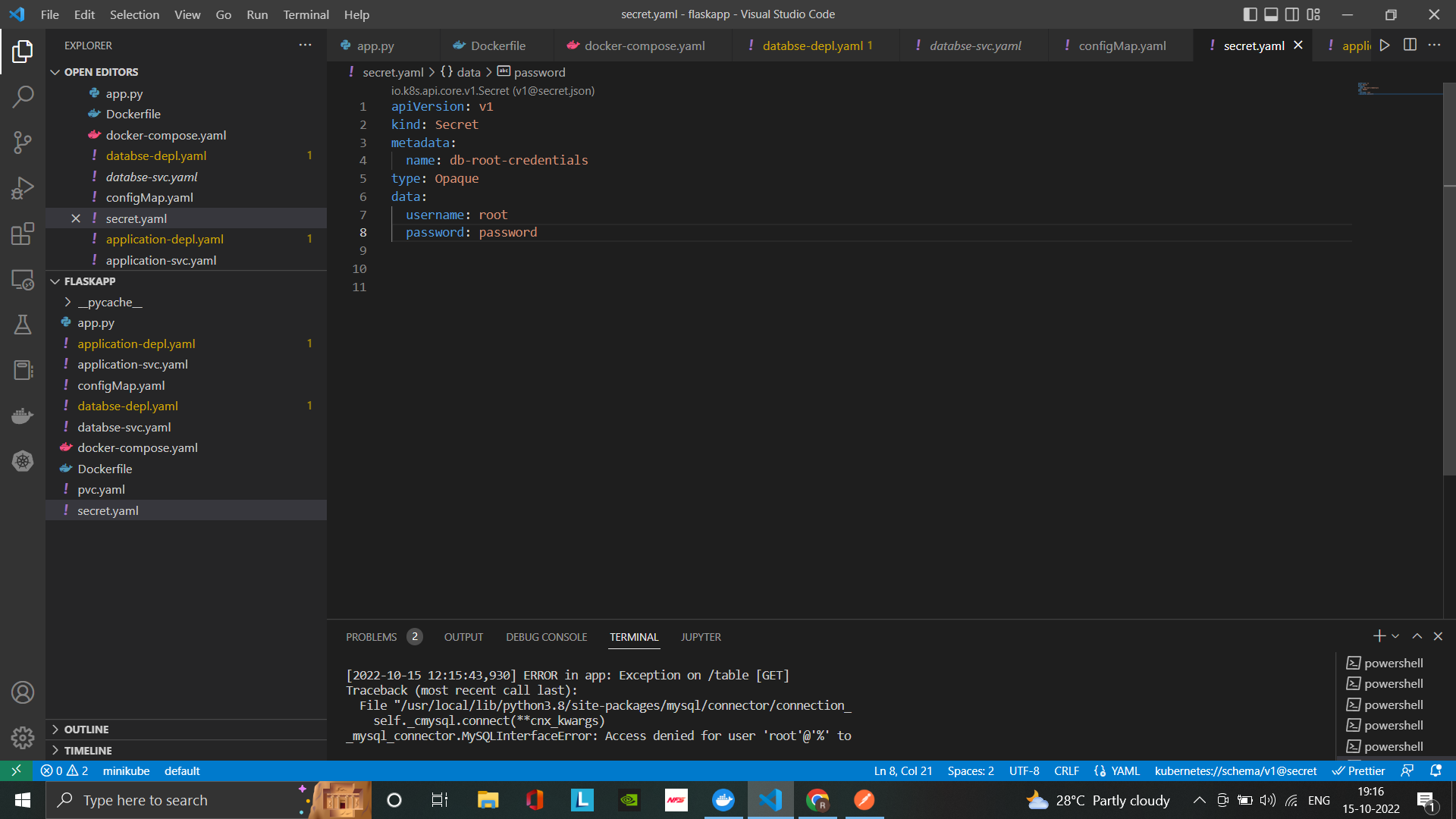
Pvc.yaml



configMap.yaml

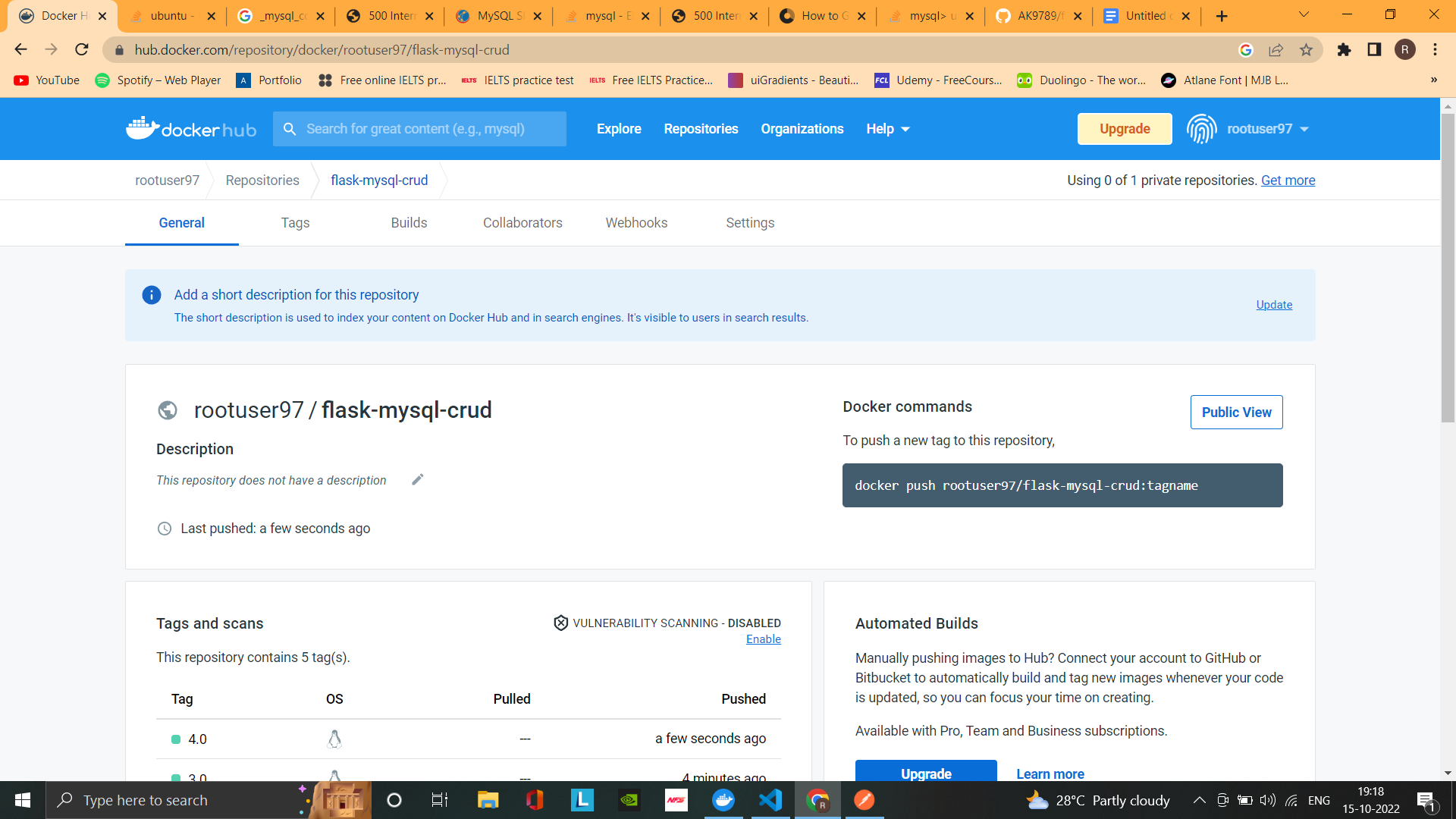


Secret.yaml



**Process:**

1. Build a docker image of our application and push it to the docker hub.
   1. *docker build . -t rootuser97/flask-mysql-crud:1.0*
   2. *docker push rootuser97/flask-mysql-crud:1.0*



1. Start the minikube cluster
   1. *minikube start*
   2. *Minikube dashboard (optional) -> to open the UI dashboard.*
2. Deploy the mysql application and its service.

Note: before deploying mysql deployment and service, make sure the mysql’s service name & app.py file’s host name are similar. For.Eg:

mydb = mysql.connector.connect( host="mysql", user="root", password="password")

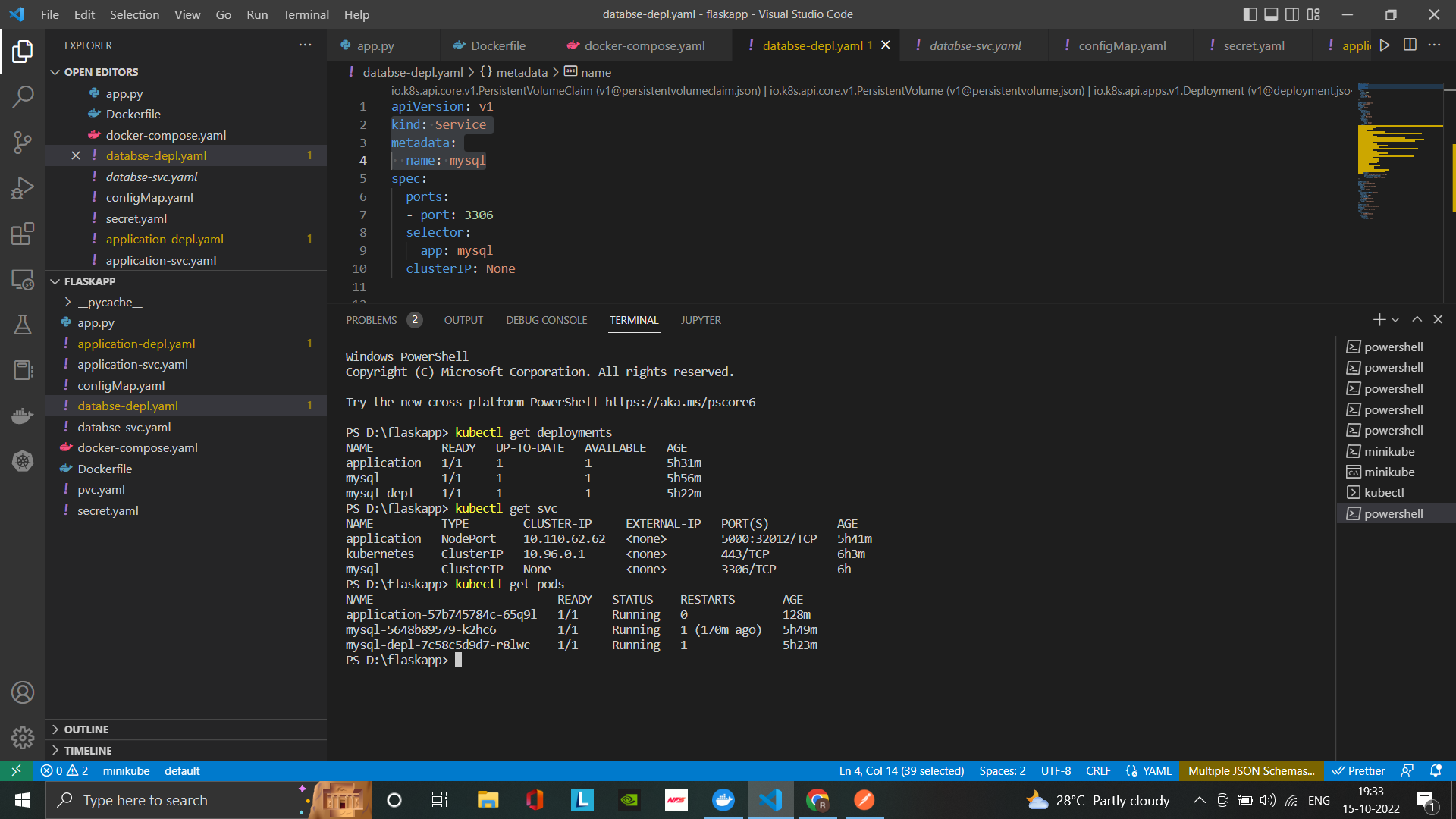
kind: Service

metadata:

name: mysql

* 1. *kubectl apply -f secret.yaml*
  2. *Kubectl apply -f configMap.yaml*
  3. *Kubectl apply -f pvc.yaml*
  4. *Kubectl apply -f databse-depl.yaml*
  5. *Kubectl apply -f database-svc.yaml*

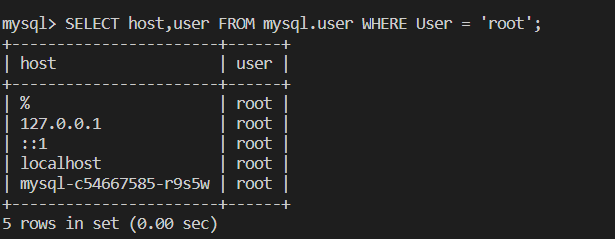
1. Deploy the application’s deployment & service.
   1. *Kubectl apply -f application-depl.yaml*
   2. *Kubectl apply -f application-svc.yaml*



1. Check the mysql & application is running or not.
   1. *kubectl describe pod <mysql\_pod\_id>*
   2. *kubectl describe pod <application\_pod\_id>*
2. Enter into the mysql’s pod.
   1. *Kubectl exec -it <mysql\_pod\_id> /bin/bash*
   2. *mysql -u root -h mysql -p root*

Note: If the password was not set, set a password and configure where it needs.

* 1. *SELECT host,user FROM mysql.user WHERE User = 'root'*; - returns the hosts that had permission to access this mysql server.



If the % is not there,

* 1. *CREATE USER 'root'@'%' IDENTIFIED BY 'some\_pass';*
  2. *GRANT ALL PRIVILEGES ON \*.\* TO 'root'@'%';*
  3. *GRANT ALL PRIVILEGES ON \*.\* TO 'root'@'%' WITH GRANT OPTION;*

The % will allow all hosts to access this mysql, server.

1. Open the application’s server.
   1. *minikube service application*

