**FINAL PROJECT**

**Java Application Minikube Deployment:**

**Commands:**

**a. visudo:**

1. sudo visudo

2. Add jenkins ALL=(ALL) NOPASSWD: ALL

**b. ssh installtion:**

1. sudo systemctl restart ssh.service

2. sudo systemctl restart sshd.service

3. sudo apt update

4. sudo apt install openssh-server

5. sudo systemctl restart ssh

6. sudo systemctl status ssh

7. ls /etc/systemd/system/sshd.service or ls /usr/lib/systemd/system/sshd.service

8. sudo systemctl daemon-reload

9. sudo systemctl status ssh

**c. Deployment:**

1. cd ~/.kube

2. ls

3. cat config

4. sudo vi config

5. i

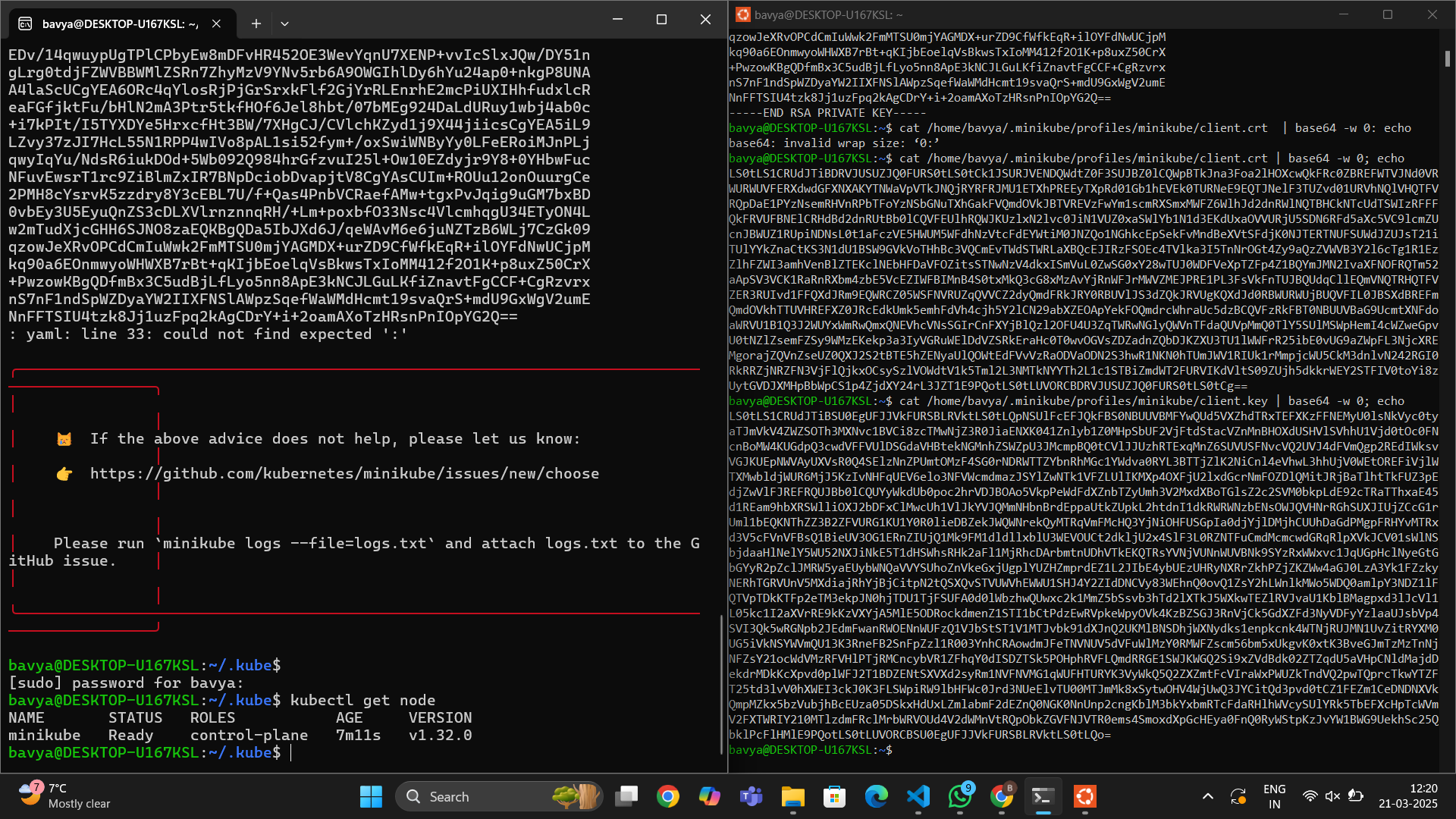
6. -data

7. cat url | base64 -w 0; echo

8. minikube start

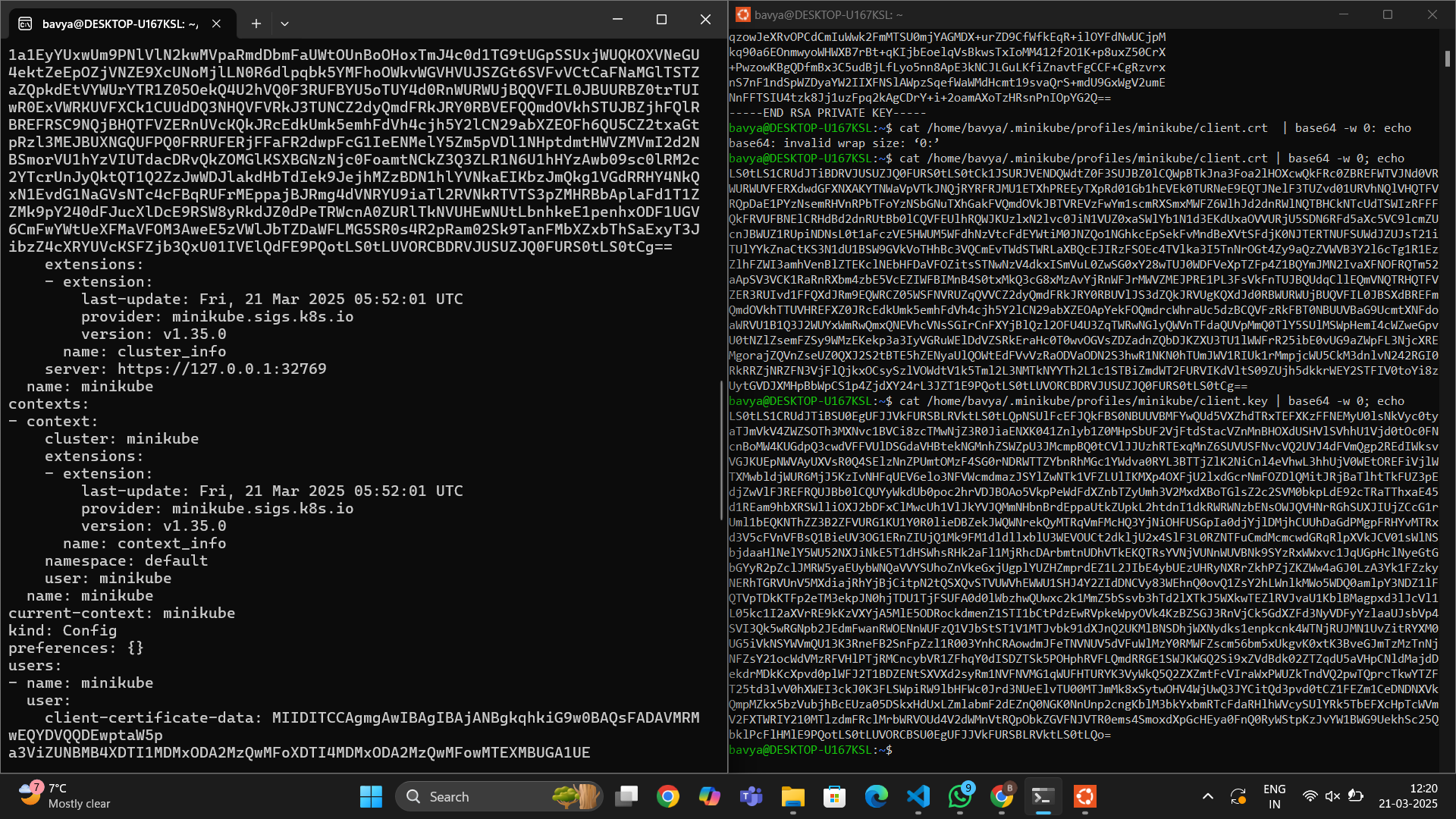
9. kubectl get node

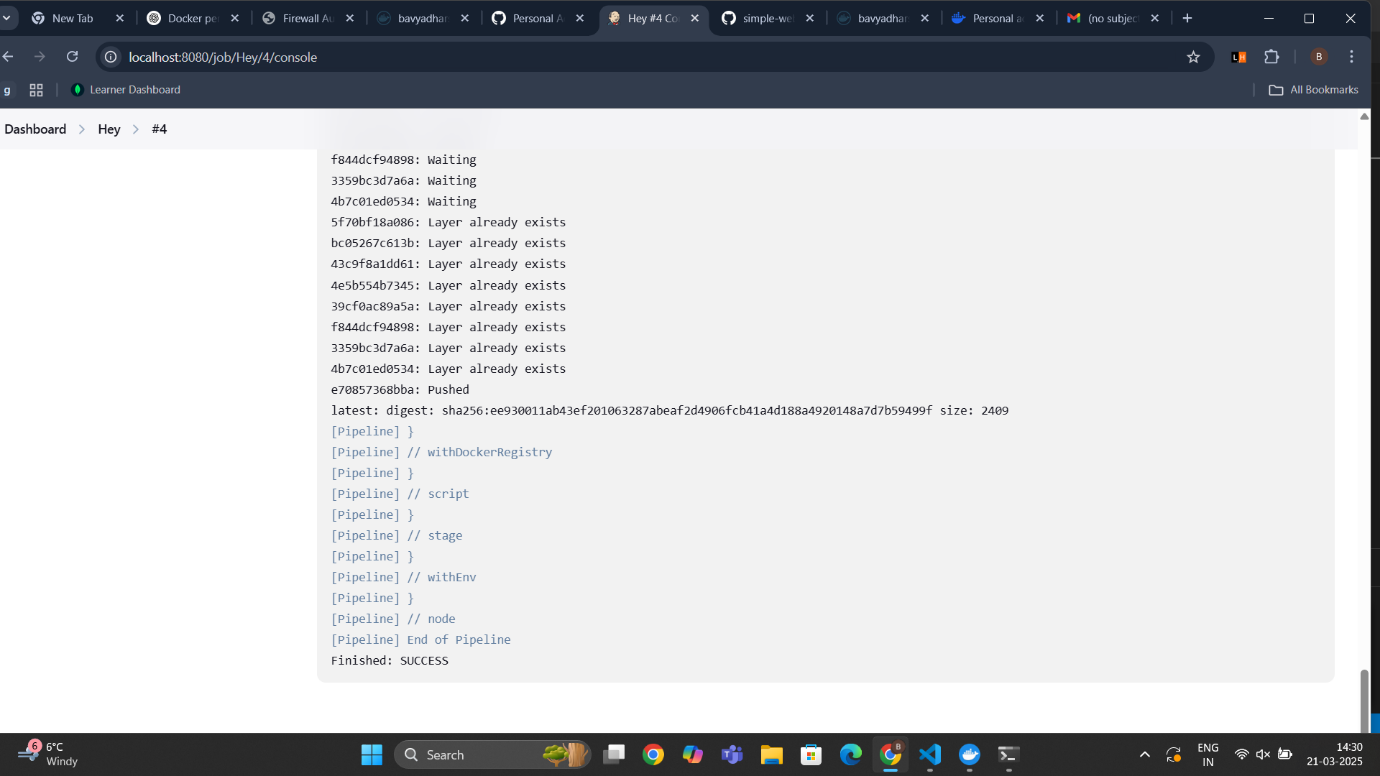
**d. Pipeline Script:**  
pipeline {  
    agent any  
  
    stages {  
        stage('SCM Checkout') {  
            steps {  
                git branch: 'main', url: '<https://github.com/DEEPIKAS22CSR040/simple-web>'  
            }  
        }  
  
        stage('Build') {  
            steps {  
                sh 'mvn clean'  
                sh 'mvn install'  
            }  
        }  
  
        stage('Build Docker Image') {  
            steps {  
                script {  
                    sh 'docker build -t deepika/simplewebapp .'  
                }  
            }  
        }  
  
        stage('Push to Docker Hub') {  
            steps {  
                script {  
                    withDockerRegistry(credentialsId: 'Docker\_cred', url: '<https://index.docker.io/v1/>') {  
                        sh 'docker push deepika/simplewebapp'  
                    }  
                }  
            }  
             
        }  
        stage('test') {  
            steps {  
                withKubeConfig(caCertificate: '', clusterName: 'minikube', contextName: 'minikube', credentialsId: 'minikube\_cred', namespace: '', restrictKubeConfigAccess: false, serverUrl: '[https://192.168.39.226:8443](https://192.168.39.226:8443/)')  
                sh 'kubectl apply -f deployment.yml --validate=false'  
            }  
            }  
    }  
}



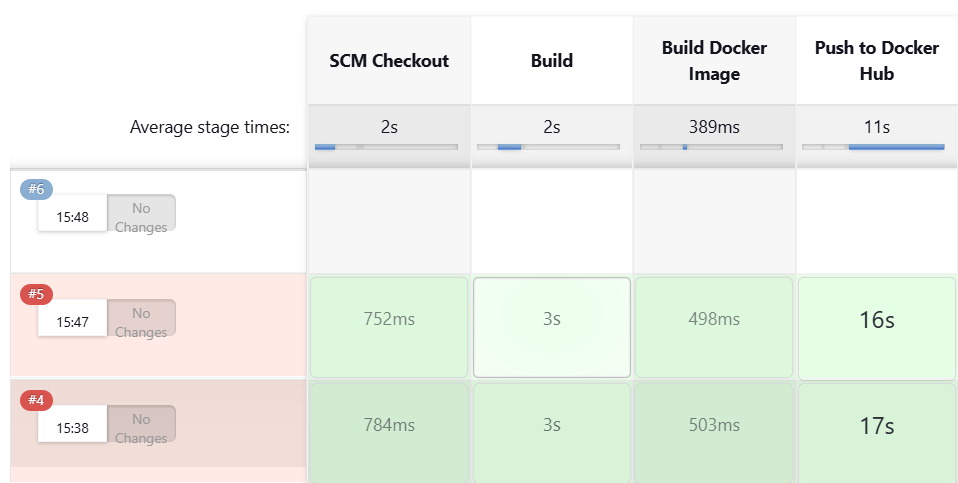
Deployment of Yml

sudo vi config

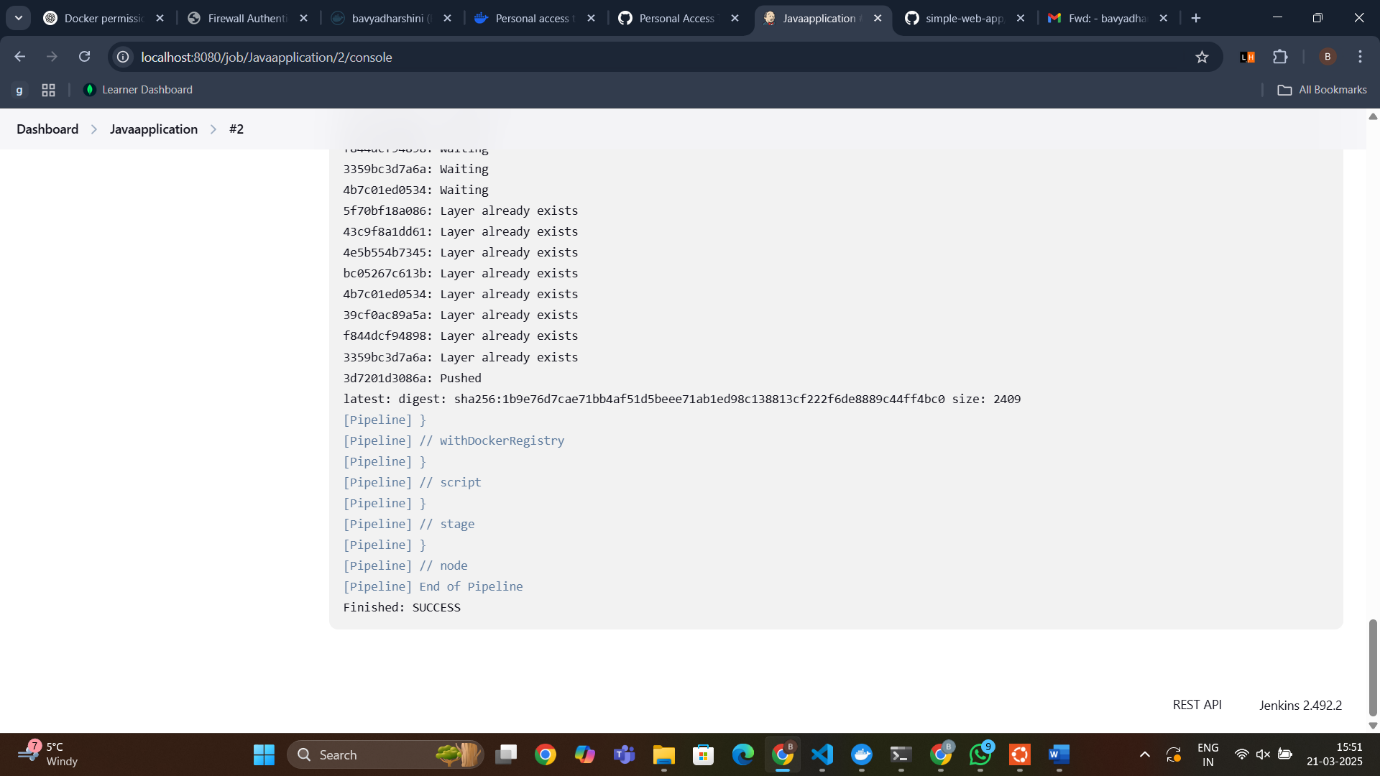




JavaApplication Success Output



Stage View of Output



Output

**Deployment:**

1. sudo nano deployment

**deployment.yml:**

apiVersion: apps/v1

kind: Deployment

metadata:

name: my-deploy

labels:

name: my-deploy

spec:

replicas: 4

selector:

matchLabels:

apptype: web-backend

strategy:

type: RollingUpdate

template:

metadata:

labels:

apptype: web-backend

spec:

containers:

- name: my-app

image: bavyadharshini/simplewebapp:latest

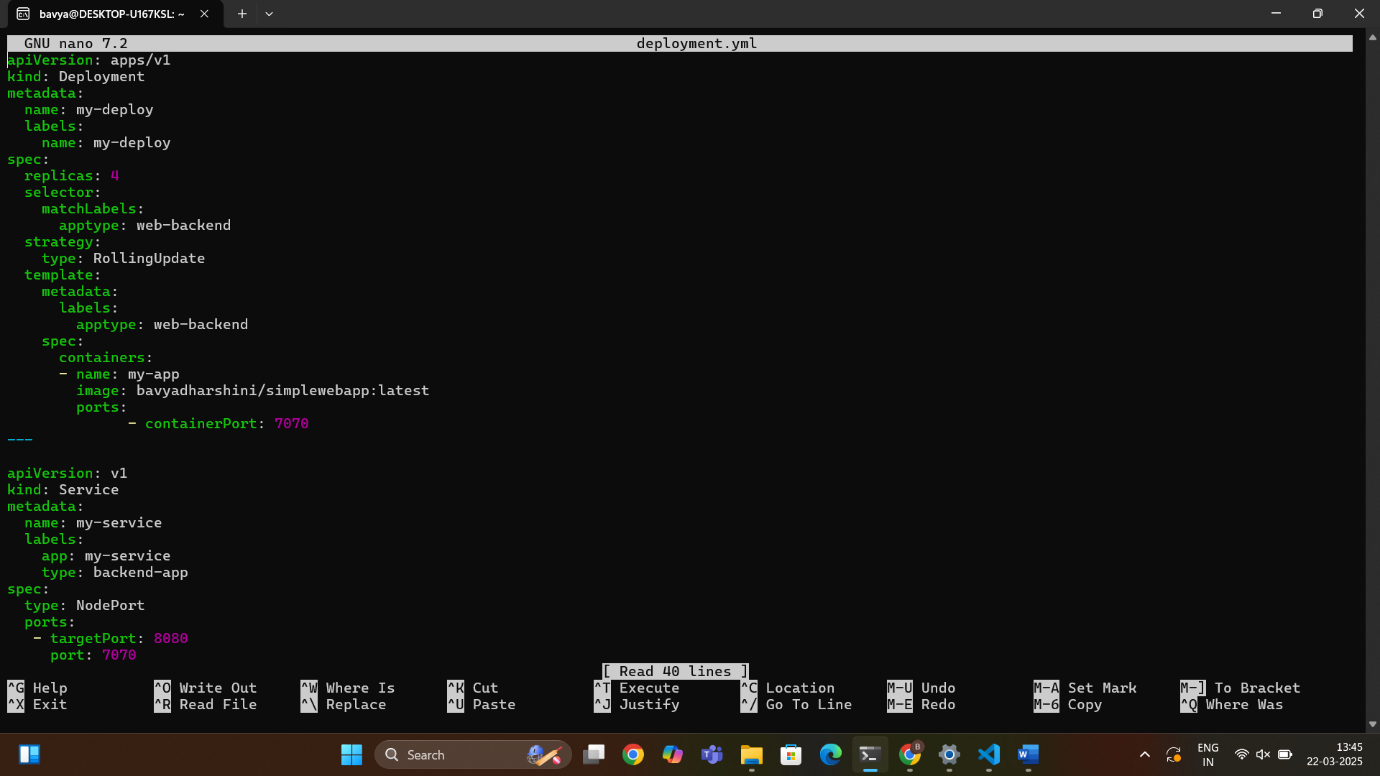
ports:

- containerPort: 7076

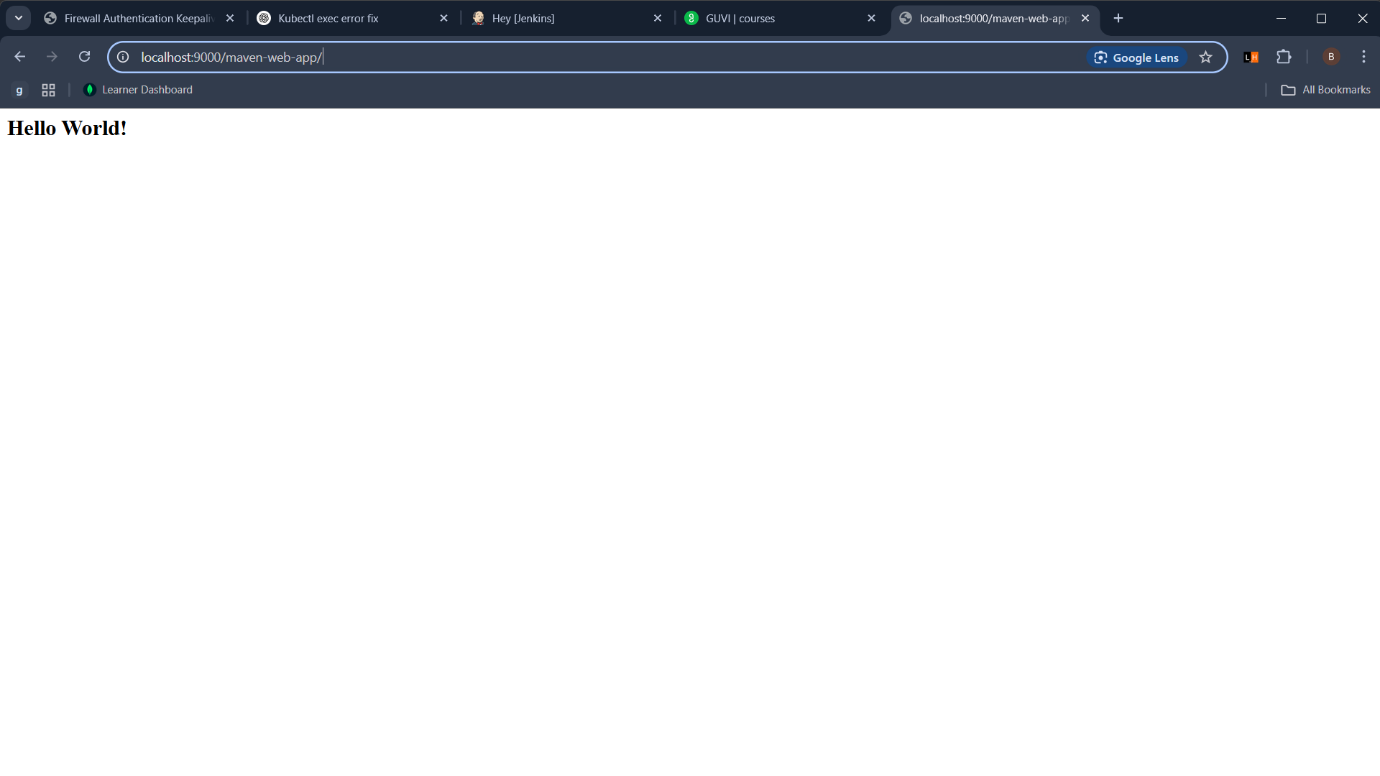
1. kubectl get pod
2. minikube service my-service
3. kubectl port-forward svc/my-service 9000:7070

URL: localhost:9000/maven-web-app/

**Output:**



deployment.yml



Output