**TASK-5 DEVOPS -Build a Kubernetes Cluster Locally with Minikube**

**COMMANDS USED**

### 1. Install Docker

```bash

sudo apt update

sudo apt install -y docker.io

sudo usermod -aG docker $USER

newgrp docker

2.Install kubectl

bash

curl -sL https://dl.k8s.io/release/stable.txt # get latest version

curl -LO https://dl.k8s.io/release/v1.33.1/bin/linux/amd64/kubectl

chmod +x kubectl

sudo mv kubectl /usr/local/bin/

kubectl version –client

3. Install Kind

bash

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curl -Lo ./kind https://kind.sigs.k8s.io/dl/v0.22.0/kind-linux-amd64

chmod +x ./kind

sudo mv ./kind /usr/local/bin/kind

kind version

**4. Create Cluster**

bash

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kind create cluster --name dev-cluster

kubectl get nodes

**5. Create Deployment & Service**

bash

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# Apply files

kubectl apply -f deployment.yaml

kubectl apply -f service.yaml

**6. Verify Deployment**

bash

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kubectl get pods

kubectl get svc

kubectl describe pod <pod-name>

**7. Scale Deployment**

bash

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kubectl scale deployment hello-deployment --replicas=3

kubectl get pods