TASK – 3

1. Installation

Install Minikube and kubectl:

sudo apt update && sudo apt install -y curl

curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64

sudo install minikube-linux-amd64 /usr/local/bin/minikube

sudo apt install -y kubectl

Start Minikube:

minikube start

2. Docker Image Creation

Build Docker Image:

docker build -t ecommerce:latest .

Verify Image:

docker images

3. Kubernetes Deployment

Apply Deployment and Service:

kubectl apply -f deployment.yaml

Check Pods and Services:

kubectl get pods

kubectl get services

Describe and Debug:

kubectl describe pod <pod-name>

kubectl logs <pod-name>

4. Port Forwarding

Expose Service:

kubectl port-forward service/react-ecommerce-deployment 8080:80

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]
⭐ Enabled addons:
^C
vboxuser@Ubuntu:~$ su
Password:
root@Ubuntu:/home/vboxuser# mkdir task3
root@Ubuntu:/home/vboxuser# cd task3
root@Ubuntu:/home/vboxuser/task3# git clone https://github.com/Jervinjeno/E-Commerce.git
Cloning into 'E-Commerce'...
remote: Enumerating objects: 43, done.
remote: Counting objects: 100% (43/43), done.
remote: Compressing objects: 100% (37/37), done.
remote: Total 43 (delta 10), reused 37 (delta 4), pack-reused 0 (from 0)
Receiving objects: 100% (43/43), 722.22 KiB | 715.00 KiB/s, done.
Resolving deltas: 100% (10/10), done.
root@Ubuntu:/home/vboxuser/task3# docker build -t ecommerce:latest ..
[+] Building 6.4s (1/1) FINISHED                                              docker:default
 => [internal] load build definition from Dockerfile                                    2.2s
 => => transferring dockerfile: 2B                                                       0.2s
ERROR: failed to solve: failed to read dockerfile: open Dockerfile: no such file or directory
root@Ubuntu:/home/vboxuser/task3# docker build -t ecommerce:latest .
[+] Building 6.5s (1/1) FINISHED                                              docker:default
 => [internal] load build definition from Dockerfile                                    1.5s
 => => transferring dockerfile: 2B                                                       0.1s
ERROR: failed to solve: failed to read dockerfile: open Dockerfile: no such file or directory
root@Ubuntu:/home/vboxuser/task3# mkdir e-commerce
root@Ubuntu:/home/vboxuser/task3# cd e-commerce
root@Ubuntu:/home/vboxuser/task3/e-commerce# minikube status
E0320 20:38:56.679108   55824 status.go:417] failed to get storage capacity of /var: NewSession: new client: new client: ssh: handshake failed: ssh: u
nable to authenticate, attempted methods [none publickey], no supported methods remain
E0320 20:38:56.686828   55824 status.go:179] status error: NewSession: new client: new client: ssh: handshake failed: ssh: unable to authenticate, att
empted methods [none publickey], no supported methods remain
E0320 20:38:56.704635   55824 status.go:126] status error: NewSession: new client: new client: ssh: handshake failed: ssh: unable to authenticate, att
empted methods [none publickey], no supported methods remain
root@Ubuntu:/home/vboxuser/task3/e-commerce# minikube start --force
😄 minikube v1.35.0 on Ubuntu 22.04 (vbox/amd64)
❗ minikube skips various validations when --force is supplied; this may lead to unexpected behavior
✨ Using the docker driver based on existing profile
🛑 The "docker" driver should not be used with root privileges. If you wish to continue as root, use --force.
❗ If you are running minikube within a VM, consider using --driver=none:
   https://minikube.sigs.k8s.io/docs/reference/drivers/none/
💡 Tip: To remove this root owned cluster, run: sudo minikube delete
🏆 Starting "minikube" primary control-plane node in "minikube" cluster
🚜 Pulling base image v0.0.46 ...
🔄 Updating the running docker "minikube" container ...
^C^C
```



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root@Ubuntu:/home/vboxuser/task3/e-commerce# ^C
^C
root@Ubuntu:/home/vboxuser/task3/e-commerce# ^C
root@Ubuntu:/home/vboxuser/task3/e-commerce# docker build -t ecommerce:latest
ERROR: docker: 'docker buildx build' requires 1 argument

Usage:  docker buildx build [OPTIONS] PATH | URL | -

Run 'docker buildx build --help' for more information
root@Ubuntu:/home/vboxuser/task3/e-commerce# docker build -t ecommerce:latest .
[+] Building 6.6s (1/1) FINISHED                                              docker:default
 => [internal] load build definition from Dockerfile                                    0.1s
 => => transferring dockerfile: 2B                                                       0.1s
ERROR: failed to solve: failed to read dockerfile: open Dockerfile: no such file or directory
root@Ubuntu:/home/vboxuser/task3/e-commerce# docker build -t ecommerce:latest .
[+] Building 5.2s (1/1) FINISHED                                              docker:default
 => [internal] load build definition from Dockerfile                                    0.7s
 => => transferring dockerfile: 2B                                                       0.1s
ERROR: failed to solve: failed to read dockerfile: open Dockerfile: no such file or directory
root@Ubuntu:/home/vboxuser/task3/e-commerce# docker build -t e-commerce:latest .
[+] Building 4.8s (1/1) FINISHED                                              docker:default
 => [internal] load build definition from Dockerfile                                    0.7s
 => => transferring dockerfile: 2B                                                       0.1s
ERROR: failed to solve: failed to read dockerfile: open Dockerfile: no such file or directory
root@Ubuntu:/home/vboxuser/task3/e-commerce# systemctl status docker
● docker.service - Docker Application Container Engine
     Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
     Active: active (running) since Thu 2025-03-20 13:42:28 IST; 7h ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
   Main PID: 1098 (dockerd)
      Tasks: 79
     Memory: 132.6M
        CPU: 3min 59.999s
     CGroup: /system.slice/docker.service
             ├─1098 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock
             ├─2130 /usr/bin/docker-proxy -proto tcp -host-ip 0.0.0.0 -host-port 5432 -container-ip 172.18.0.3 -container-port 5432 -use-listen-fd
             ├─2137 /usr/bin/docker-proxy -proto tcp -host-ip :: -host-port 5432 -container-ip 172.18.0.3 -container-port 5432 -use-listen-fd
             ├─4298 /usr/bin/docker-proxy -proto tcp -host-ip 127.0.0.1 -host-port 32768 -container-ip 192.168.49.2 -container-port 22 -use-listen-fd
             ├─4305 /usr/bin/docker-proxy -proto tcp -host-ip 127.0.0.1 -host-port 32769 -container-ip 192.168.49.2 -container-port 2376 -use-listen-
             ├─4314 /usr/bin/docker-proxy -proto tcp -host-ip 127.0.0.1 -host-port 32770 -container-ip 192.168.49.2 -container-port 5000 -use-listen-
             ├─4322 /usr/bin/docker-proxy -proto tcp -host-ip 127.0.0.1 -host-port 32771 -container-ip 192.168.49.2 -container-port 8443 -use-listen-
             └─4331 /usr/bin/docker-proxy -proto tcp -host-ip 127.0.0.1 -host-port 32772 -container-ip 192.168.49.2 -container-port 32443 -use-listen
Mar 20 20:37:00 Ubuntu dockerd[1098]: time="2025-03-20T20:37:00.488847482+05:30" level=error msg=moby.buildkit.v1.Control/Solve error="rpc error: co
Mar 20 20:37:24 Ubuntu dockerd[1098]: 2025/03/20 20:37:24 http2: server: error reading preface from client @: read unix /run/docker.sock->@: read: co
Mar 20 20:37:29 Ubuntu dockerd[1098]: time="2025-03-20T20:37:29.586343111+05:30" level=error msg=moby.buildkit.v1.frontend.LLBBridge/Solve error="rp
```



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Command 'e' not found, but can be installed with:
apt install e-wrapper
root@Ubuntu:/home/vboxuser/task3/E-Commerce# minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

root@Ubuntu:/home/vboxuser/task3/E-Commerce# kubectl get deployment
No resources found in default namespace.
root@Ubuntu:/home/vboxuser/task3/E-Commerce# minikube image load ecommerce:latest
❗ Executing "docker container inspect minikube --format={{.State.Status}}" took an unusually long time: 2.43763367s
💡 Restarting the docker service may improve performance.
root@Ubuntu:/home/vboxuser/task3/E-Commerce# kubectl apply -f deployment.yml
deployment.apps/react-ecommerce-deployment created
root@Ubuntu:/home/vboxuser/task3/E-Commerce# ^C
root@Ubuntu:/home/vboxuser/task3/E-Commerce# kubectl get deployment
NAME                         READY   UP-TO-DATE   AVAILABLE   AGE
react-ecommerce-deployment   2/2     2            2           117s
root@Ubuntu:/home/vboxuser/task3/E-Commerce# ^C
root@Ubuntu:/home/vboxuser/task3/E-Commerce# kubectl get pods
NAME                                          READY   STATUS    RESTARTS   AGE
react-ecommerce-deployment-849768b4c6-9gtx7   1/1     Running   0          4m7s
react-ecommerce-deployment-849768b4c6-qgpdk   1/1     Running   0          4m7s
root@Ubuntu:/home/vboxuser/task3/E-Commerce# kubectl get deployment
NAME                         READY   UP-TO-DATE   AVAILABLE   AGE
react-ecommerce-deployment   2/2     2            2           4m55s
root@Ubuntu:/home/vboxuser/task3/E-Commerce# kubectl apply -f deployment.yml
deployment.apps/react-ecommerce-deployment unchanged
root@Ubuntu:/home/vboxuser/task3/E-Commerce# kubectl apply -f Nodeport.yaml
service/react-ecommerce-service created
root@Ubuntu:/home/vboxuser/task3/E-Commerce# minikube service react-ecommerce-service
|-----------|-------------------------|-------------|---------------------------|
| NAMESPACE |          NAME           | TARGET PORT |            URL            |
|-----------|-------------------------|-------------|---------------------------|
| default   | react-ecommerce-service |     80      | http://192.168.58.2:30007 |
|-----------|-------------------------|-------------|---------------------------|
🎉 Opening service default/react-ecommerce-service in default browser...

(gio open:78885): GLib-GIO-CRITICAL **: 22:17:28.123: g_dbus_connection_flush: assertion 'G_IS_DBUS_CONNECTION (connection)' failed
[78890:78890:0320/221731.005645:ERROR:zygote_host_impl_linux.cc(105)] Running as root without --no-sandbox is not supported. See https://crbug.com/638
180.
```