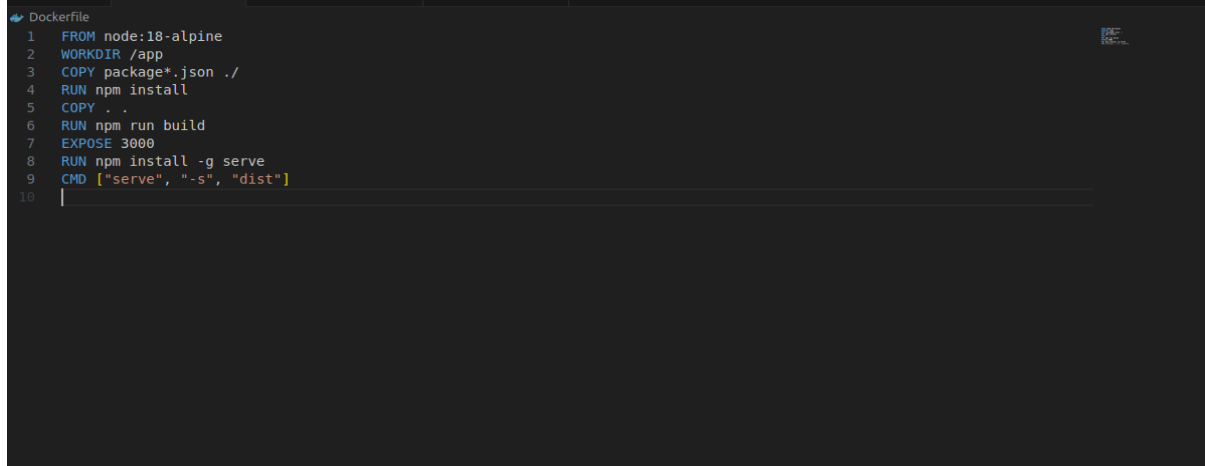


Practical-7

AIM: Setting Up Local Kubernetes Cluster – minikube

Command:

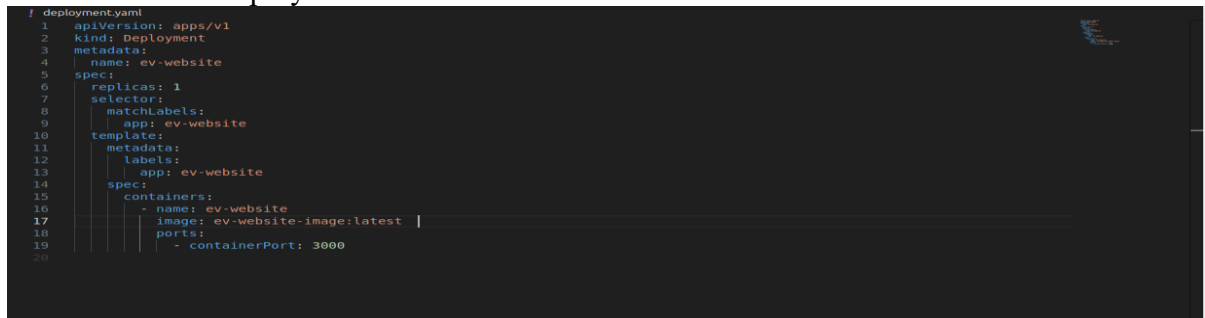
STEP 1: Create a dockerfile

A screenshot of a code editor showing a Dockerfile. The file contains the following instructions: FROM node:18-alpine, WORKDIR /app, COPY package*.json ./, RUN npm install, COPY . ., RUN npm run build, EXPOSE 3000, RUN npm install -g serve, and CMD ["serve", "-s", "dist"].

```
1 FROM node:18-alpine
2 WORKDIR /app
3 COPY package*.json ./
4 RUN npm install
5 COPY . .
6 RUN npm run build
7 EXPOSE 3000
8 RUN npm install -g serve
9 CMD ["serve", "-s", "dist"]
10
```

Figure 1: Created dockerfile

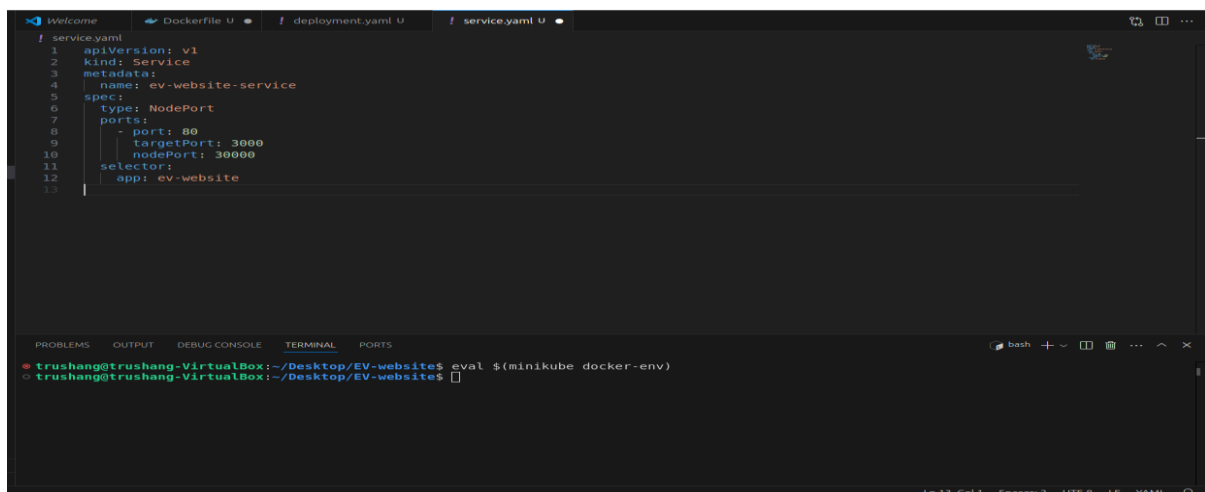
STEP 2: Create deployment file

A screenshot of a code editor showing a deployment.yaml file. The file contains the following YAML structure: apiVersion: apps/v1, kind: Deployment, metadata: {name: ev-website}, spec: {replicas: 1, selector: {matchLabels: {app: ev-website}}, template: {metadata: {labels: {app: ev-website}}, spec: {containers: [{name: ev-website, image: ev-website-image:latest, ports: [{containerPort: 3000}]}]}]}.

```
1 # deployment.yaml
2 apiVersion: apps/v1
3 kind: Deployment
4 metadata:
5   name: ev-website
6 spec:
7   replicas: 1
8   selector:
9     matchLabels:
10      app: ev-website
11   template:
12     metadata:
13       labels:
14         app: ev-website
15     spec:
16       containers:
17       - name: ev-website
18         image: ev-website-image:latest
19         ports:
20         - containerPort: 3000
```

Figure 2: Created deployment.yaml file

STEP 3: Create a Service YAML

A screenshot of a code editor showing a service.yaml file. The file contains the following YAML structure: apiVersion: v1, kind: Service, metadata: {name: ev-website-service}, spec: {type: NodePort, ports: [{port: 80, targetPort: 3000, nodePort: 30000}], selector: {app: ev-website}}. Below the code editor, a terminal window is open showing the command 'eval \$(minikube docker-env)' being executed.

```
1 # service.yaml
2 apiVersion: v1
3 kind: Service
4 metadata:
5   name: ev-website-service
6 spec:
7   type: NodePort
8   ports:
9   - port: 80
10     targetPort: 3000
11     nodePort: 30000
12   selector:
13     app: ev-website
```

```
trushang@trushang-VirtualBox:~/Desktop/EV-website$ eval $(minikube docker-env)
trushang@trushang-VirtualBox:~/Desktop/EV-website$
```

Figure 3: Created service.yaml file

STEP 4: Build the Docker image.
*Figure 4: Created docker image***STEP 5: Login in your docker account**
*Figure 5: Login into docker***STEP 6: Push docker image**
Figure 6: Push docker image

STEP 7: Apply the Deployment & service manifest to Kubernetes cluster

```

trushang@trushang-VirtualBox:~/Desktop/EV-website$ kubectl apply -f deployment.yaml
deployment.apps/ev-website unchanged
trushang@trushang-VirtualBox:~/Desktop/EV-website$ kubectl apply -f deployment.yaml
deployment.apps/ev-website unchanged
trushang@trushang-VirtualBox:~/Desktop/EV-website$ kubectl apply -f service.yaml
service/ev-website-service unchanged

```

*Figure 7: Apply Deployment and Service manifest to Kubernetes cluster***STEP 8: Access React App**

```

trushang@trushang-VirtualBox:~/Desktop/EV-website$ minikube service react-app-service --url
✗ Exiting due to SVC_NOT_FOUND: Service 'react-app-service' was not found in 'default' namespace.
You may select another namespace by using 'minikube service react-app-service -n <namespace>'. Or list out all the services using 'minikube s
ervice list'

trushang@trushang-VirtualBox:~/Desktop/EV-website$ kubectl get services
NAME                TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
ev-website-service  NodePort    10.110.211.195 <none>         80:30000/TCP     7h37m
kubernetes           ClusterIP   10.96.0.1      <none>         443/TCP          7h39m
trushang@trushang-VirtualBox:~/Desktop/EV-website$ minikube service ev-website-service --url
http://192.168.49.2:30000

✗ Exiting due to SVC_UNREACHABLE: service not available: no running pod for service ev-website-service found

```

🐱 If the above advice does not help, please let us know:
 📄 <https://github.com/kubernetes/minikube/issues/new/choose>

Please run `minikube logs --file=logs.txt` and attach logs.txt to the GitHub issue.
 Please also attach the following file to the GitHub issue:
 - /tmp/minikube_service_e8678537d0f6a7ca9a48f2112e1c2c9ed63f0d4a_0.log

Figure 8: Access the react app