

Execution Steps for Deploying a Web App with Docker & Minikube

Step 1: Build and Push Docker Image

1. Build your Docker image

Navigate to the project directory where your `Dockerfile` is located and run:

```
bash
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docker build -t mahashwinv/task2 .
```

2. Tag the Docker image

```
bash
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docker tag mahashwinv/task2:latest mahashwinv/task2:6
```

3. Login to Docker Hub (if not already logged in)

```
bash
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docker login
```

4. Push the image to Docker Hub

```
bash
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docker push mahashwinv/task2:6
```

- The repository "**mahashwinv/task2**" is shown in your Docker Hub, confirming that the image is successfully pushed.

Step 2: Install & Set Up Minikube

1. Install Minikube (if not installed)

```
bash
CopyEdit
curl -LO
https://storage.googleapis.com/minikube/releases/latest/minikube-linux-
amd64
sudo install minikube-linux-amd64 /usr/local/bin/minikube
```

2. Start Minikube with Docker as the driver

```
bash
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minikube start --driver=docker
```

3. Verify Minikube Installation

```
bash
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minikube version
kubectl version --client
```

Step 3: Deploy the Application on Minikube

1. Create a Kubernetes Deployment file (deployment.yaml)

```
yaml
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apiVersion: apps/v1
kind: Deployment
metadata:
  name: online-shop
spec:
  replicas: 1
  selector:
    matchLabels:
      app: online-shop
  template:
    metadata:
      labels:
        app: online-shop
    spec:
      containers:
        - name: online-shop
          image: mahashwini/task2:6
          ports:
            - containerPort: 8000
```

2. Apply the Deployment

```
bash
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kubectl apply -f deployment.yaml
```

3. Expose the Deployment using a Service (service.yaml)

```
yaml
CopyEdit
apiVersion: v1
kind: Service
metadata:
  name: online-shop-service
spec:
  selector:
    app: online-shop
  ports:
    - protocol: TCP
```



