Q. Docker container

devops-commontrack-mocktest/question5 at main · KPkm25/devops-commontrack-mocktest

1. Cloning the Github Repository using the following command

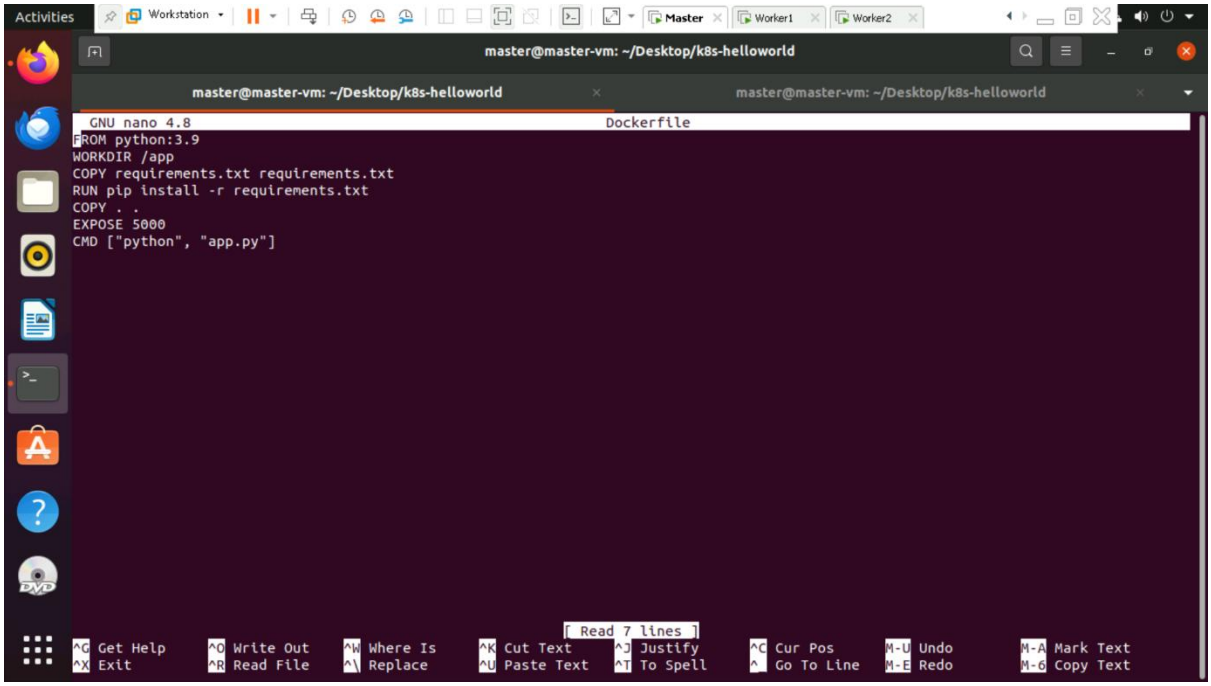
Git clone git@hgithub.com:devops-experience/k8s-helloworld.git

```
master@master-vm:~/Desktop$ git clone git@github.com:devops-experience/k8s-helloworld.git
Cloning into 'k8s-helloworld'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 9 (delta 2), reused 1 (delta 1), pack-reused 4 (from 1)
Receiving objects: 100% (9/9), done.
Resolving deltas: 100% (2/2), done.
```

2. Creating the Dockerfile using the following command

Cd k8s-helloworld

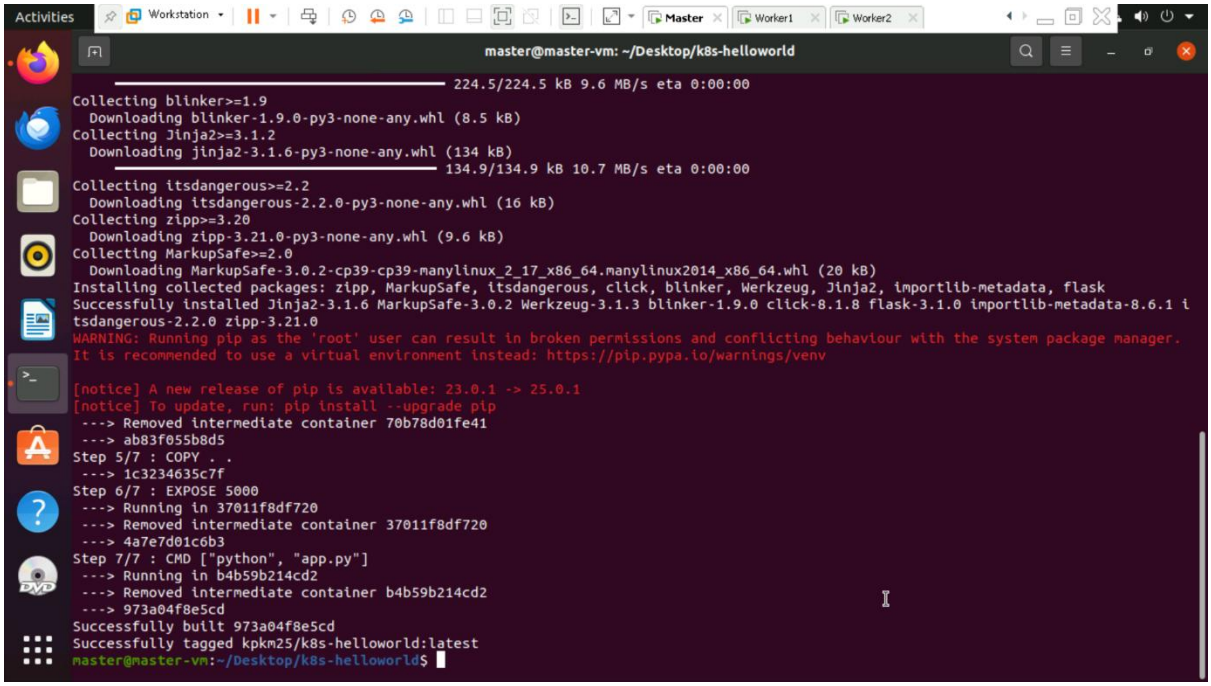
Nano Dockerfile

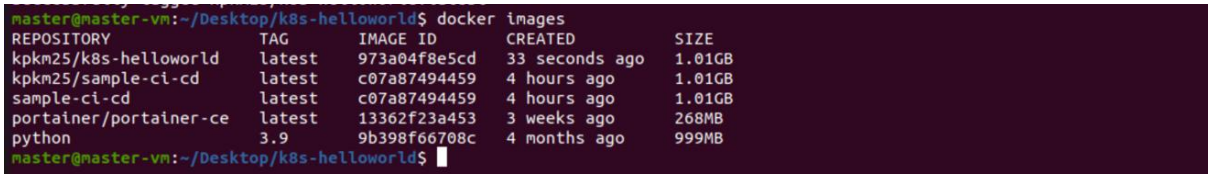


3. Building the Docker image using the following command

Docker build -t kpkm25/k8s-helloworld

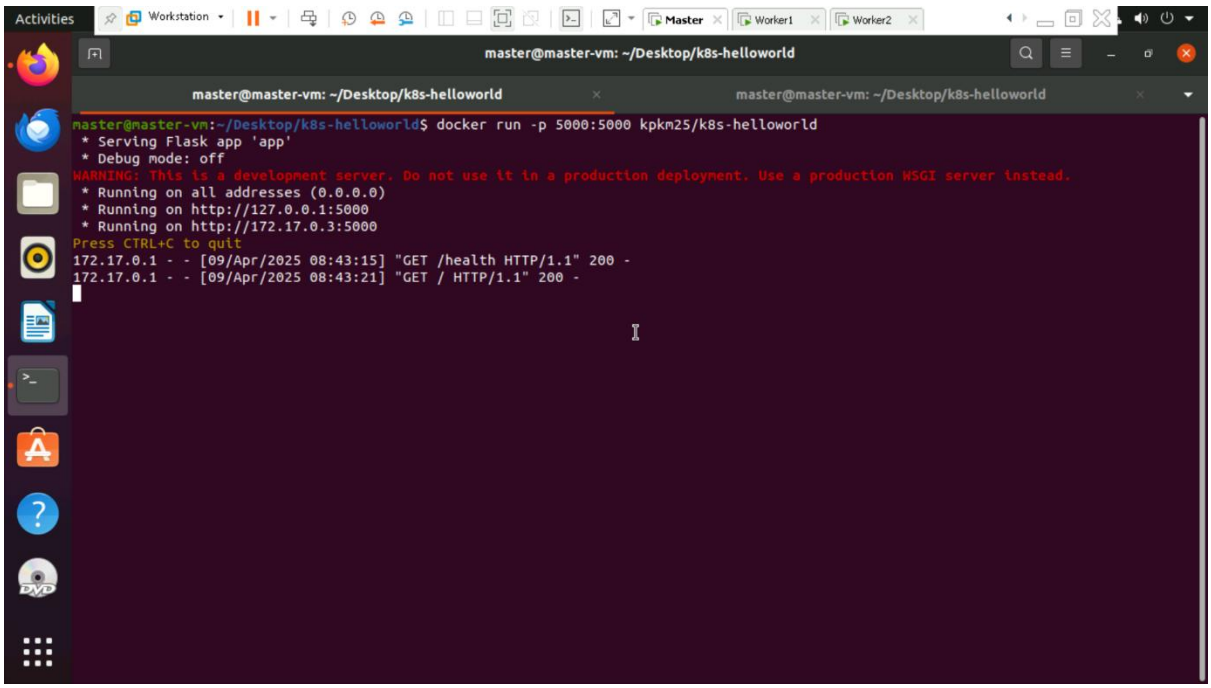
```
master@master-vm:~/Desktop/k8s-helloworld$ nano Dockerfile
master@master-vm:~/Desktop/k8s-helloworld$ nano requirements.txt
master@master-vm:~/Desktop/k8s-helloworld$ docker build -t kpkm25/k8s-helloworld .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  8.704kB
Step 1/7 : FROM python:3.9
 ---> 9b398f66708c
Step 2/7 : WORKDIR /app
 ---> Using cache
 ---> 01b415d075ef
Step 3/7 : COPY requirements.txt requirements.txt
 ---> 8dadb5e74e25
Step 4/7 : RUN pip install -r requirements.txt
 ---> Running in 70b78d01fe41
Collecting flask
  Downloading flask-3.1.0-py3-none-any.whl (102 kB)
```





4. Running the container on port 5000 using the following command

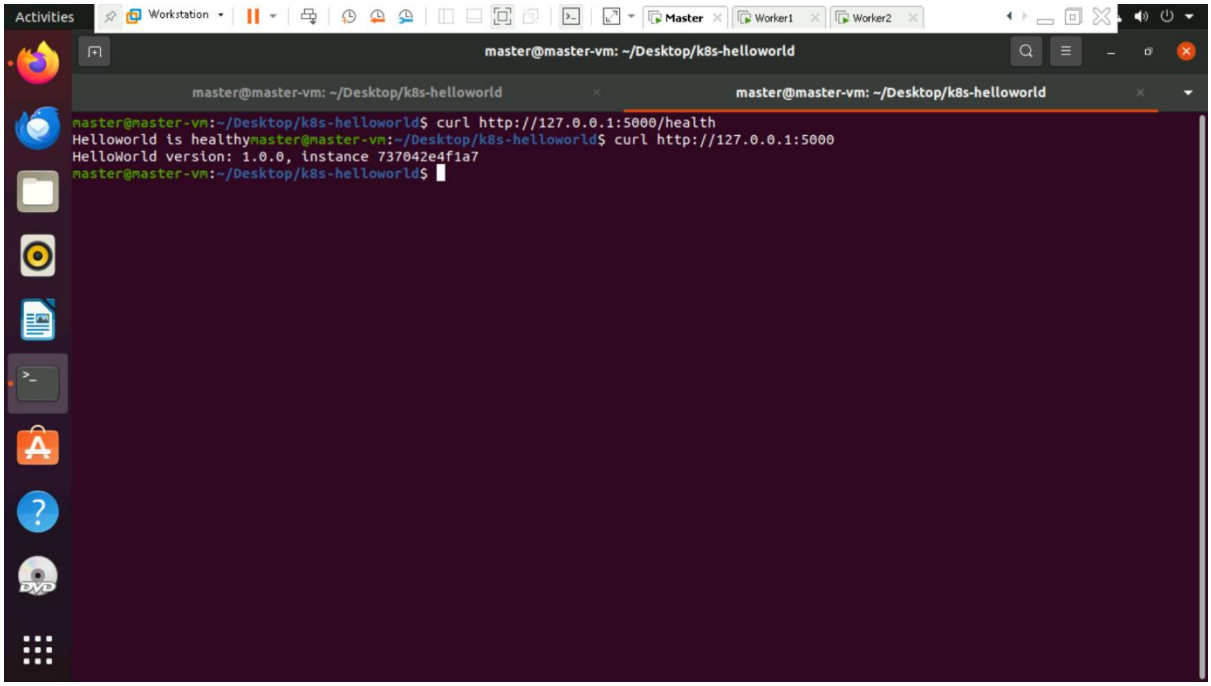
Docker run -p 5000:5000 kpkm25/k8s-helloworld

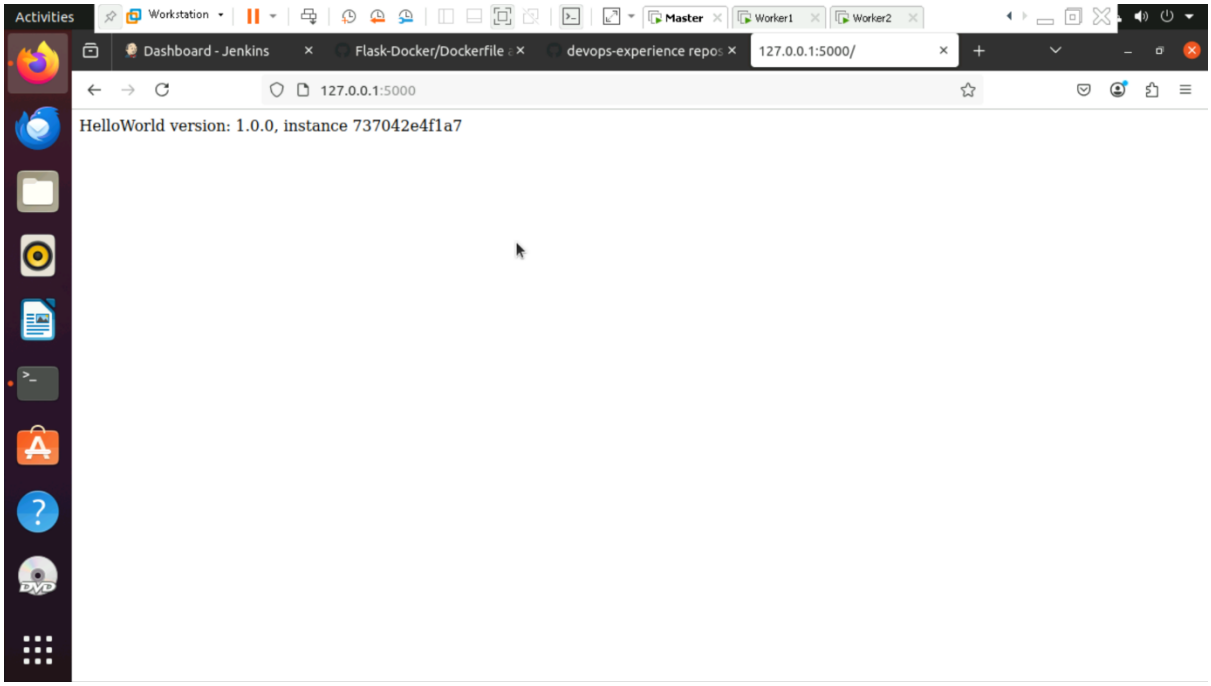


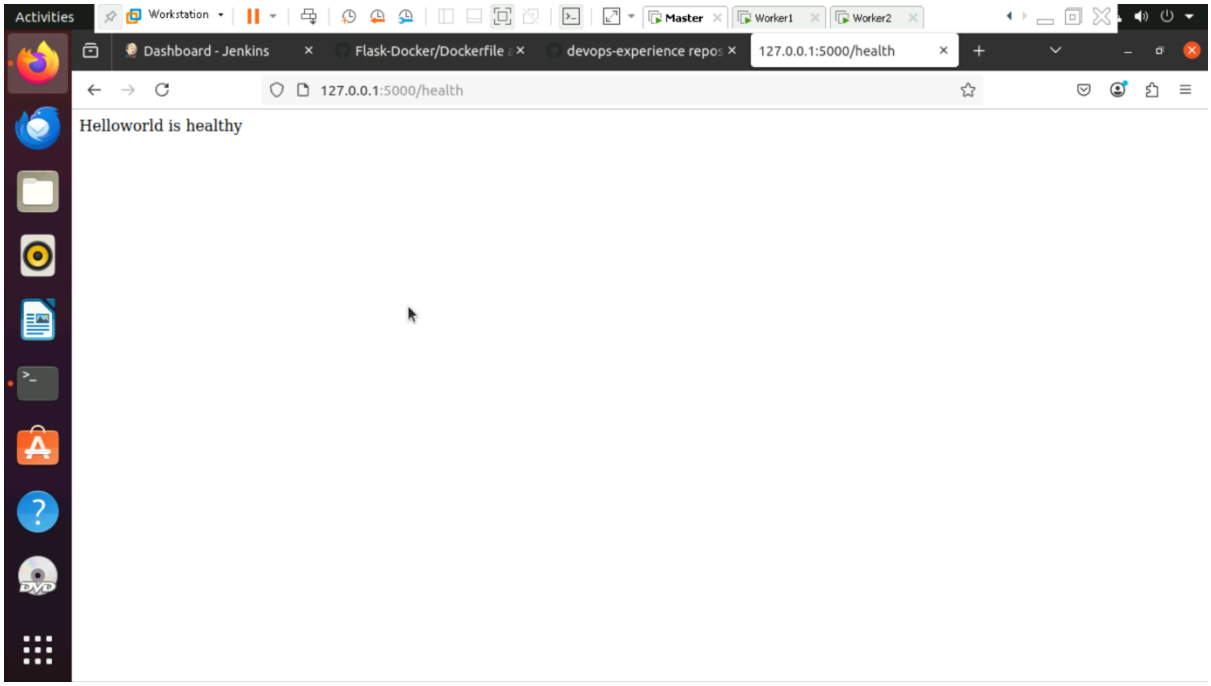
5. Testing the API endpoints using the following curl commands:

Curl http://127.0.0.1:5000

Curl 127.0.0.1:5000/health







6. To view the container ID, run the following command

Docker ps

```
master@master-vm:~/Desktop/k8s-helloworld$ docker ps
CONTAINER ID   IMAGE                          COMMAND           CREATED              STATUS              PORTS
                                                                NAMES
a526ceb9739c   kpkm25/k8s-helloworld          "python app.py"   About a minute ago   Up About a minute   0.0.0.0:5000->5000/tcp
, :::5000->5000/tcp                                                                   thirsty_banach
d5d4213131d7   portainer/portainer-ce:latest  "/portainer"      2 weeks ago          Up Less than a second   0.0.0.0:8000->8000/tcp
, :::8000->8000/tcp, 0.0.0.0:9443->9443/tcp, :::9443->9443/tcp, 9000/tcp   portainer
```

7. To view the working directory we have to go inside the container using the following command

Docker exec -it <container_id> pwd

```
master@master-vm:~/Desktop/k8s-helloworld$ docker ps
CONTAINER ID   IMAGE                          COMMAND           CREATED          STATUS              PORTS
                                                                NAMES
a526ceb9739c   kpkm25/k8s-helloworld          "python app.py"   2 minutes ago    Up 2 minutes        0.0.0.0:5000->5000/tcp, :::
5000->5000/tcp                                                                   thirsty_banach
d5d4213131d7   portainer/portainer-ce:latest  "/portainer"      2 weeks ago      Up Less than a second   0.0.0.0:8000->8000/tcp, :::
8000->8000/tcp, 0.0.0.0:9443->9443/tcp, :::9443->9443/tcp, 9000/tcp   portainer
master@master-vm:~/Desktop/k8s-helloworld$ docker exec -it a526ceb9739c pwd
/app
```

8. To view the read-write layer directory on the host, run the following command

Docker inspect <container_id> --format '{{.GraphDriver.Data.UpperDir}}'

```
master@master-vm:~/Desktop/k8s-helloworld$ docker inspect a526ceb9739c --format '{{.GraphDriver.Data.UpperDir}}'
/var/lib/docker/overlay2/5037783e364791b6bdee68b8f73123b2cc2edd977764d604cc388279245ca48c/diff
master@master-vm:~/Desktop/k8s-helloworld$
```