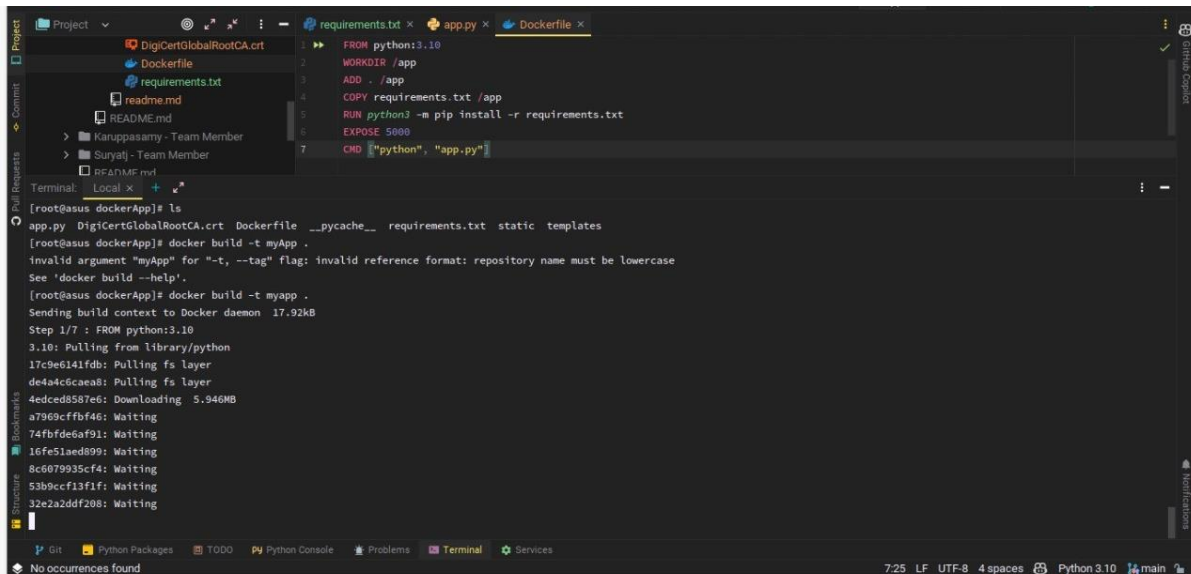


Assignment –4

Assignment Date	16 October 2022
Student Name	Aravinth
Student Roll Number	910619104006
Maximum Marks	2 Marks

1. Pull an Image from docker hub and run it in docker playground.

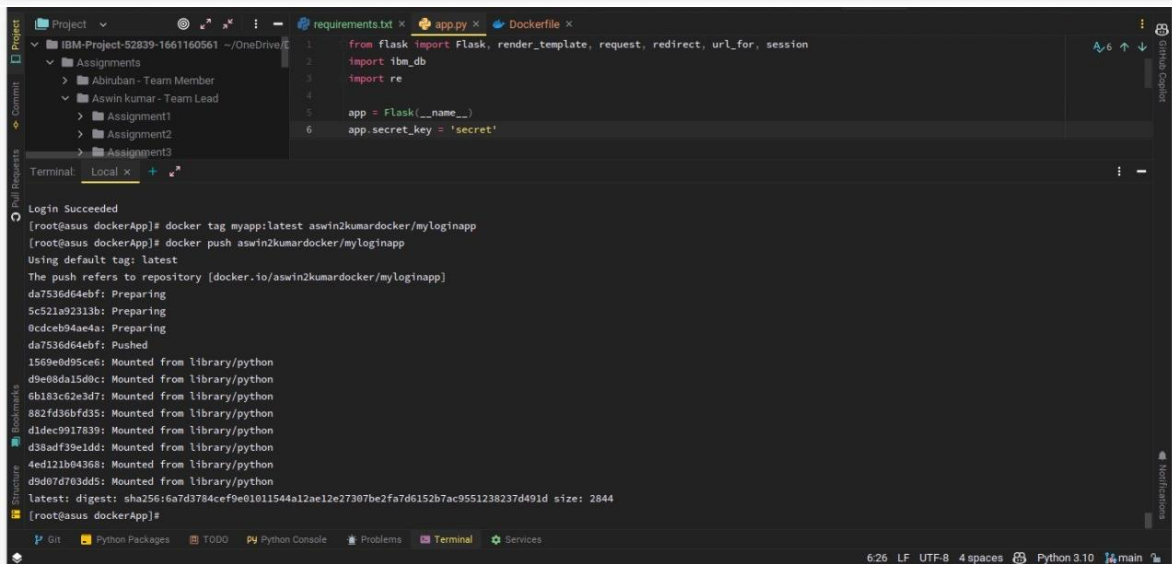


The screenshot shows a VS Code editor with a project named 'Dockerfile'. The file explorer on the left shows the project structure. The Dockerfile content is as follows:

```
FROM python:3.10
WORKDIR /app
ADD . /app
COPY requirements.txt /app
RUN python3 -m pip install -r requirements.txt
EXPOSE 5000
CMD ["python", "app.py"]
```

The terminal output shows the following commands and their results:

```
[root@asus dockerApp]# ls
app.py  DigiCertGlobalRootCA.crt  Dockerfile  __pycache__  requirements.txt  static  templates
[root@asus dockerApp]# docker build -t myApp .
invalid argument "myApp" for "-t, --tag" flag: invalid reference format: repository name must be lowercase
See 'docker build --help'.
[root@asus dockerApp]# docker build -t myapp .
Sending build context to Docker daemon 17.92kB
Step 1/7 : FROM python:3.10
3.10: Pulling from library/python
17c9e6141fdb: Pulling fs layer
de4a4c6caea8: Pulling fs layer
4edced8587e6: Downloading 5.946MB
a7969c9fbf46: Waiting
74fbfde6af91: Waiting
16fe51aed899: Waiting
8c6079935cf4: Waiting
53b9ccf13f1f: Waiting
32e2a2ddf208: Waiting
```



The screenshot shows a VS Code editor with a project named 'requirements.txt'. The file explorer on the left shows the project structure. The app.py content is as follows:

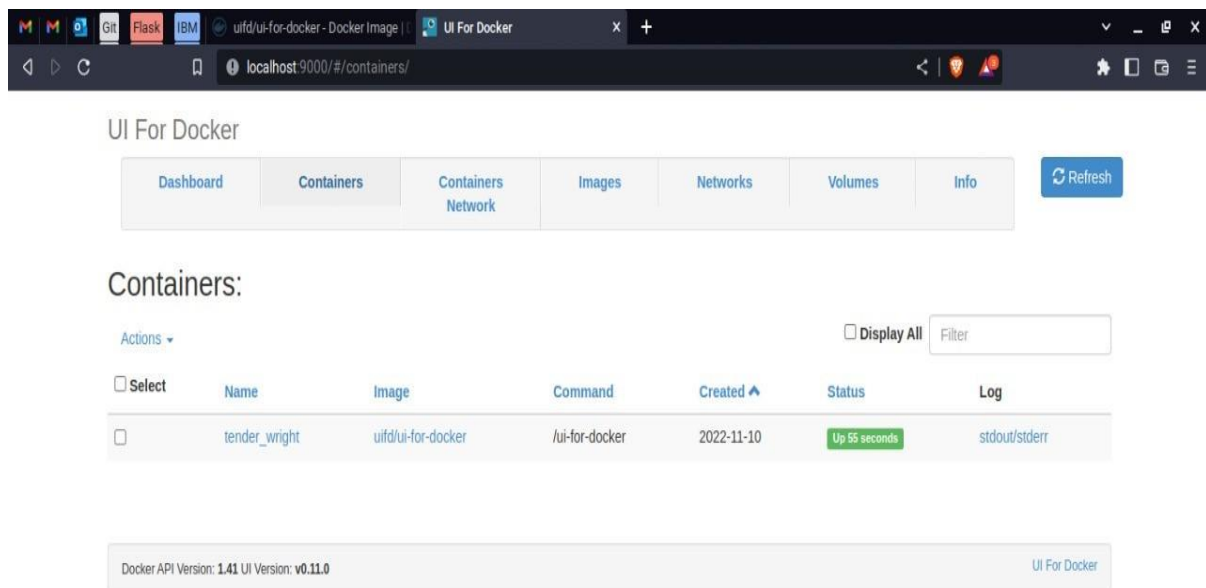
```
from flask import Flask, render_template, request, redirect, url_for, session
import ibm_db
import re

app = Flask(__name__)
app.secret_key = 'secret'
```

The terminal output shows the following commands and their results:

```
Login Succeeded
[root@asus dockerApp]# docker tag myapp:latest aswin2kumardocker/myloginapp
[root@asus dockerApp]# docker push aswin2kumardocker/myloginapp
Using default tag: latest
The push refers to repository [docker.io/aswin2kumardocker/myloginapp]
da7536d64ebf: Preparing
5c521a92313b: Preparing
0dcce894aed4: Preparing
da7536d64ebf: Pushed
1569e0d95ce6: Mounted from library/python
d9e08da15d0c: Mounted from library/python
6b183c62e3d7: Mounted from library/python
882fd36bfd35: Mounted from library/python
d1dec9917839: Mounted from library/python
d38adf39e1dd: Mounted from library/python
4ed121b04368: Mounted from library/python
d9d07d783dd5: Mounted from library/python
latest: digest: sha256:6a7d3784cef9e01011544a12ae12e27307be2fa7d6152b7ac95512382374491d size: 2844
[root@asus dockerApp]#
```

2. Create a docker file for the jobportal application and deploy it in Docker desktop application.



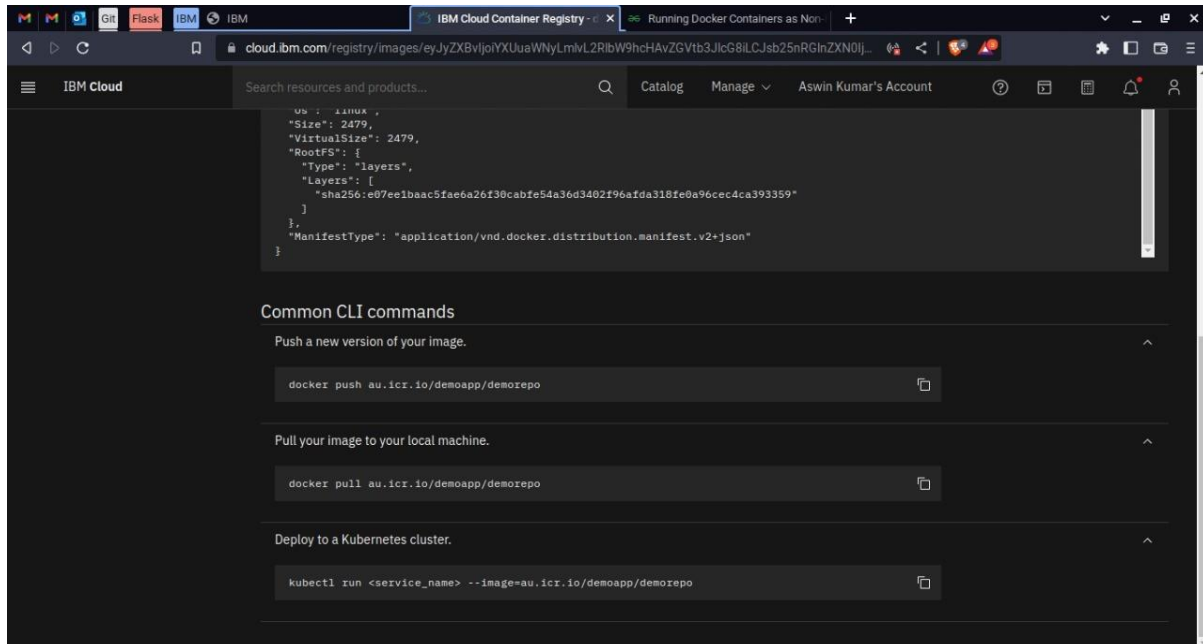
```
e07ee1baac5f: Preparing
denied: insufficient scope
[root@asus aswin]# docker tag hello-world:latest au.icr.io/demoapp/demorepo
[root@asus aswin]# docker push au.icr.io/demoapp/demorepo
The push refers to repository [au.icr.io/demoapp/demorepo]
e07ee1baac5f: Pushed
latest: digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525
[root@asus aswin]# ibmcloud cr lists
FAILED
'lists' is not a registered command. Check your list of installed plug-ins. See 'ibmcloud cr help'
.

[root@asus aswin]# ibmcloud cr image-
image-digests      image-list          image-restore       image-tag
image-inspect      image-prune-untagged image-rm             image-untag
[root@asus aswin]# ibmcloud cr image-list
Listing images...

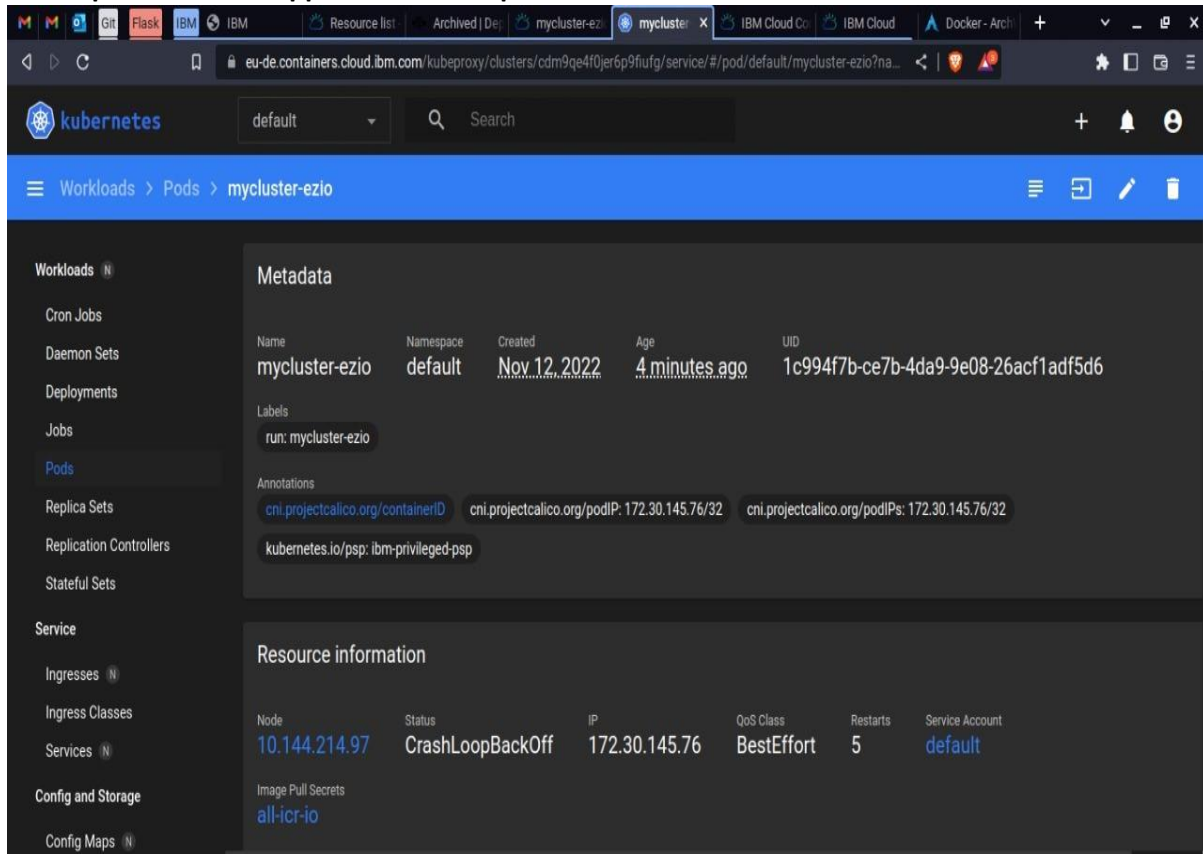
Repository          Tag      Digest      Namespace   Created      Size      Security st
atus
au.icr.io/demoapp/demorepo  latest  f54a58bc1aac  demoapp     1 year ago   2.5 kB    -

OK
```

3. Create a IBM container registry and deploy helloworld app or jobportal app



4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in nodeport.



my: x

Service

Image

SendG

docker

Pull an

Pull an

New Tab

eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdm9qe4f0jer6p9fiufg/service/#/workloads?namespace=default

kubernetes

default

Search

+ bell user

Workloads

Workloads N

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses N

Ingress Classes

Services N

Config and Storage

Config Maps N

Workload Status

Running: 1

Deployments

Running: 1

Pods