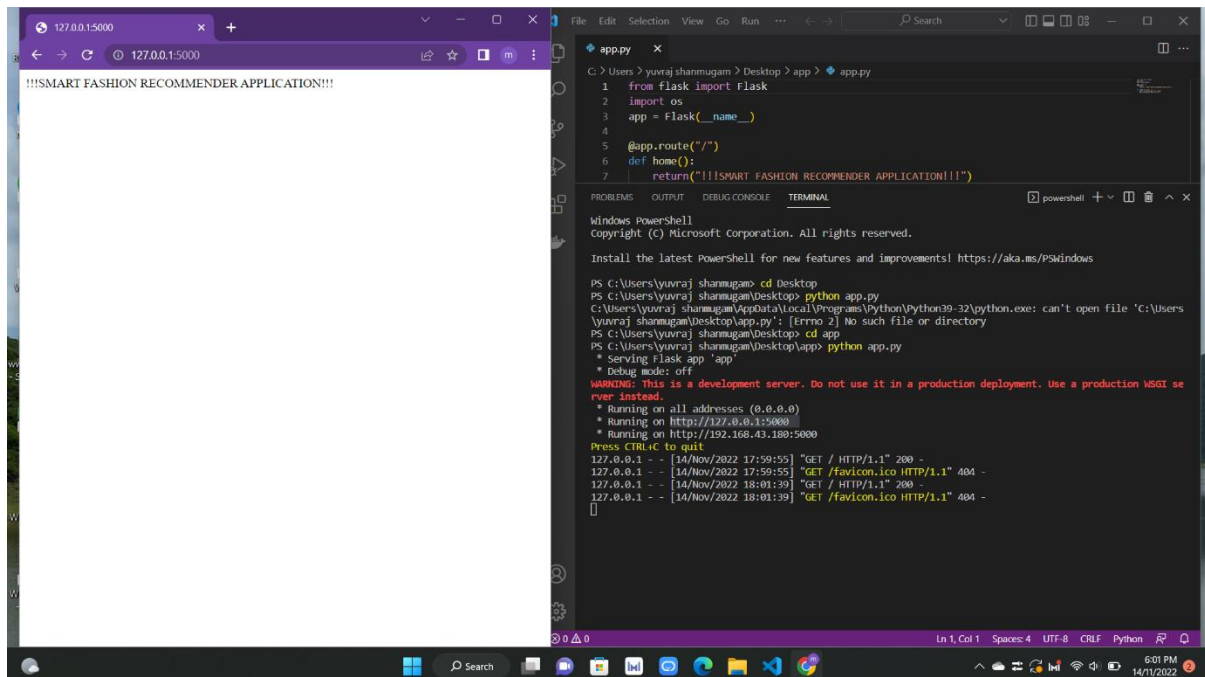


ASSIGNMENT-IV

DOCKER & KUBERNETES

Student Name	P.Malarvizhi
Student Roll Number	731719205009
Maximum Marks	2 Marks

app.py



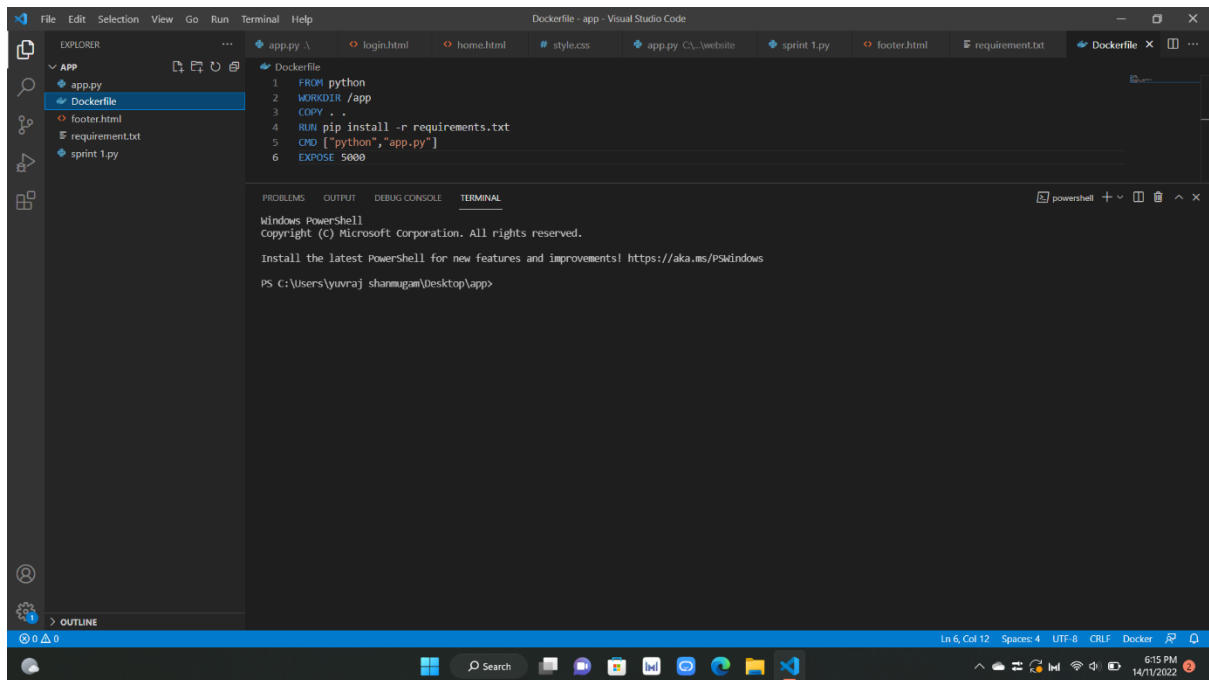
The screenshot shows a web browser on the left and a code editor on the right. The browser displays the text "!!!SMART FASHION RECOMMENDER APPLICATION!!!". The code editor shows the following Python code in `app.py`:

```
1 from flask import Flask
2 import os
3 app = Flask(__name__)
4
5 @app.route("/")
6 def home():
7     return("!!!SMART FASHION RECOMMENDER APPLICATION!!!")
```

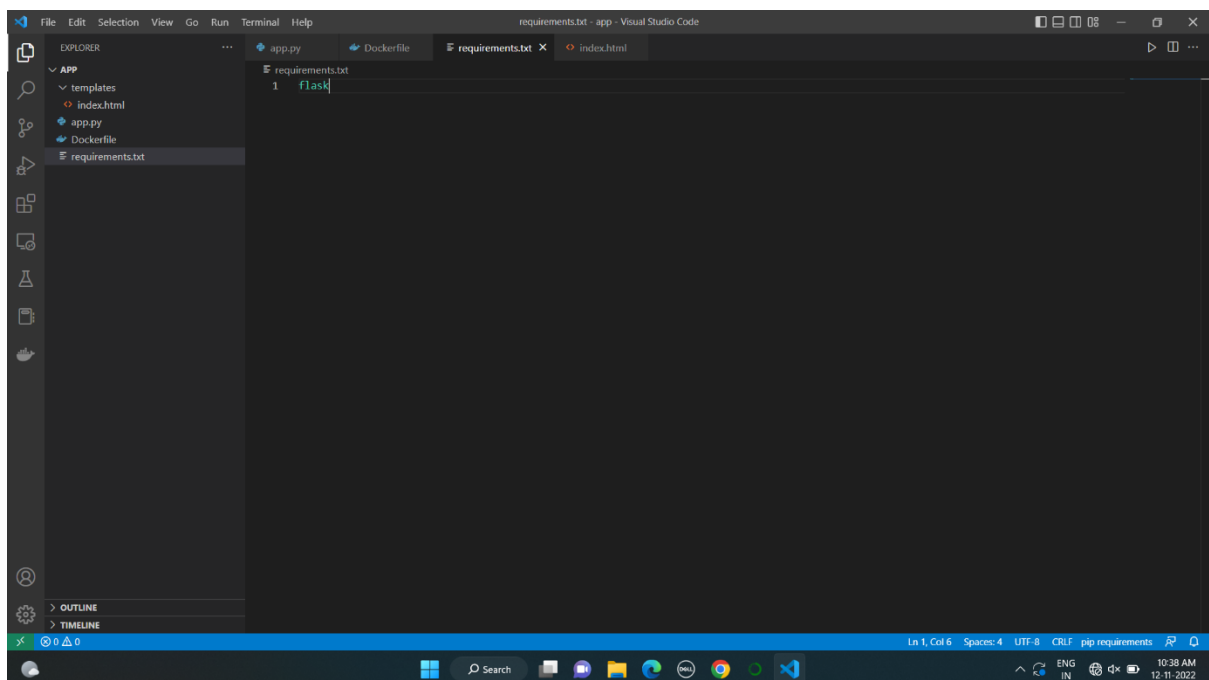
The terminal output in the code editor shows the following commands and results:

```
PS C:\Users\yuvraj shanmugan> cd Desktop
PS C:\Users\yuvraj shanmugan\Desktop> python app.py
C:\Users\yuvraj shanmugan\AppData\Local\Programs\Python\Python39-32\python.exe: can't open file 'C:\Users\yuvraj shanmugan\Desktop\app.py': [errno 2] no such file or directory
PS C:\Users\yuvraj shanmugan\Desktop> cd app
PS C:\Users\yuvraj shanmugan\Desktop\app> python app.py
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on https://127.0.0.1:5000
* Running on http://192.168.43.180:5000
Press CTRL+C to quit
127.0.0.1 - - [14/Nov/2022 17:59:55] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [14/Nov/2022 17:59:55] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [14/Nov/2022 18:01:39] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [14/Nov/2022 18:01:39] "GET /favicon.ico HTTP/1.1" 404 -
```

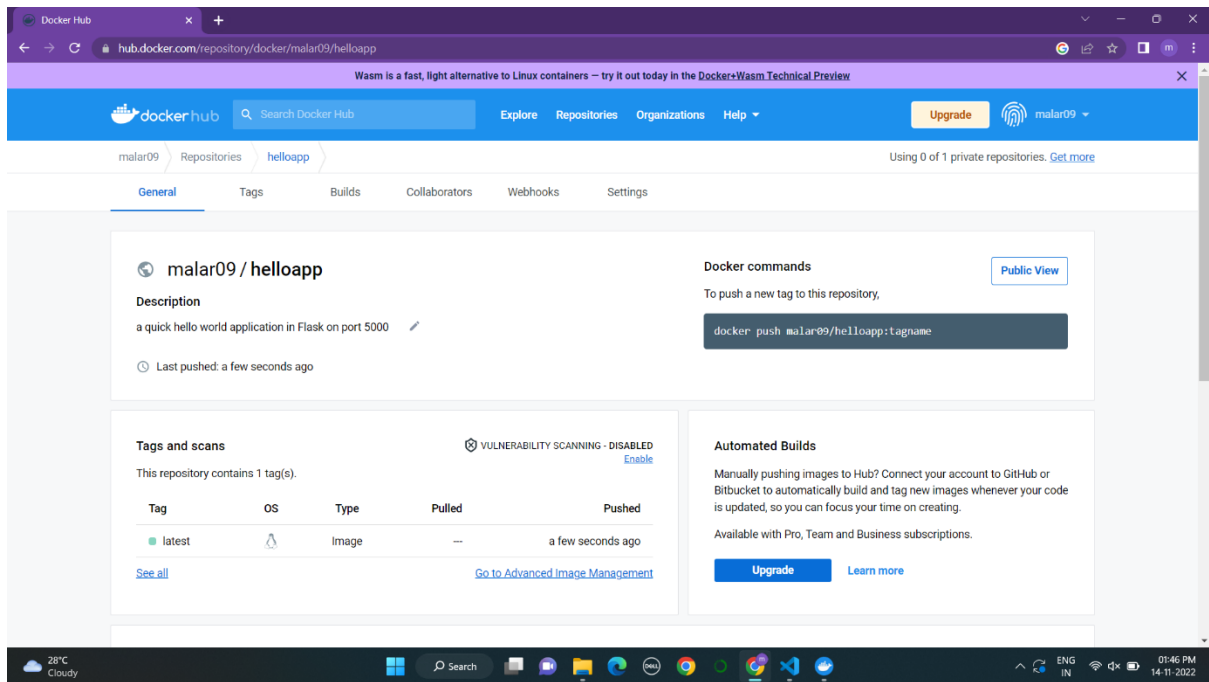
Dockerfile



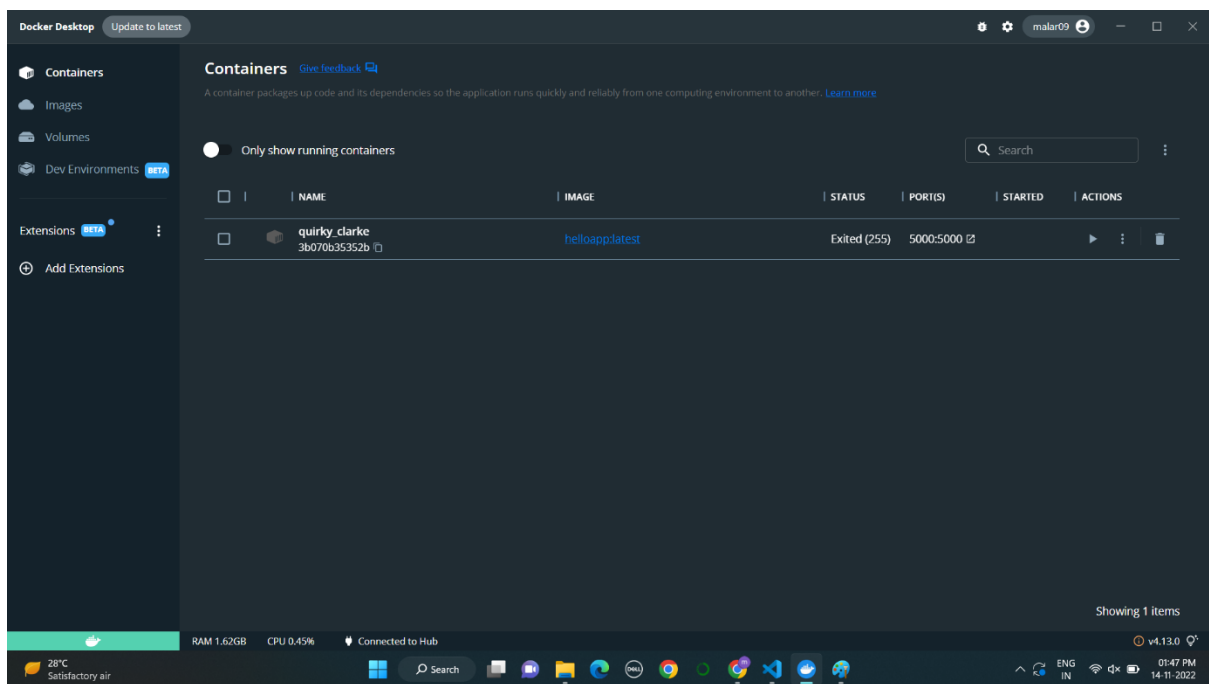
Requirements.txt

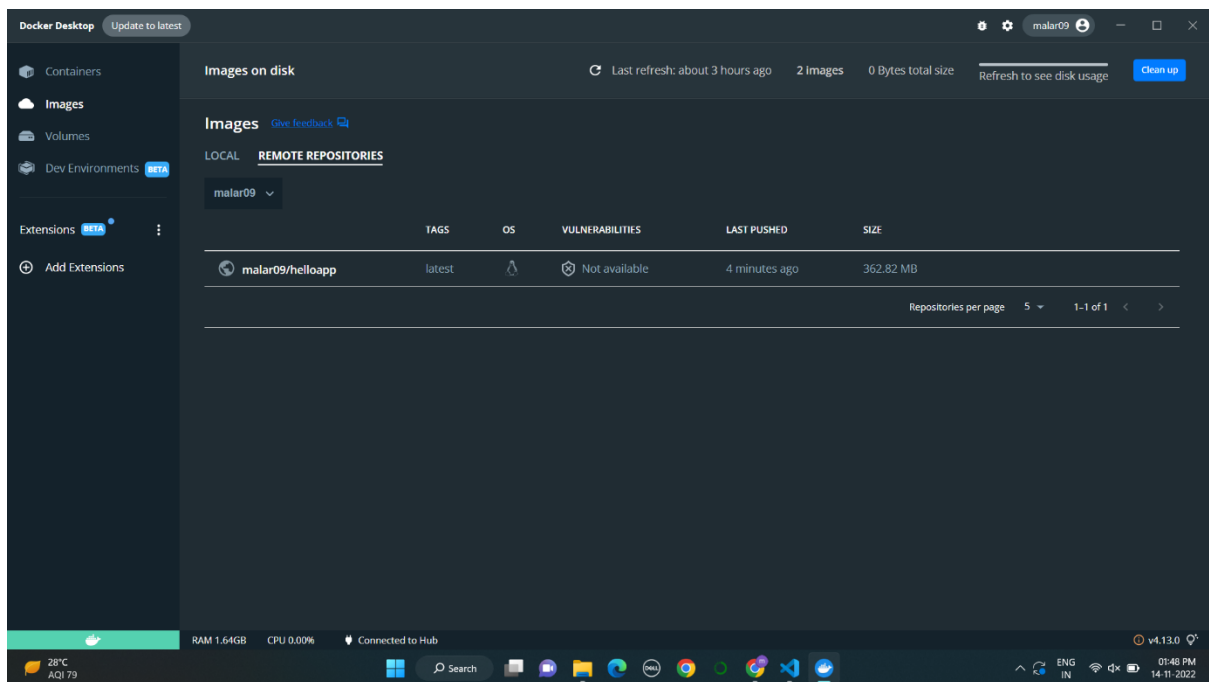
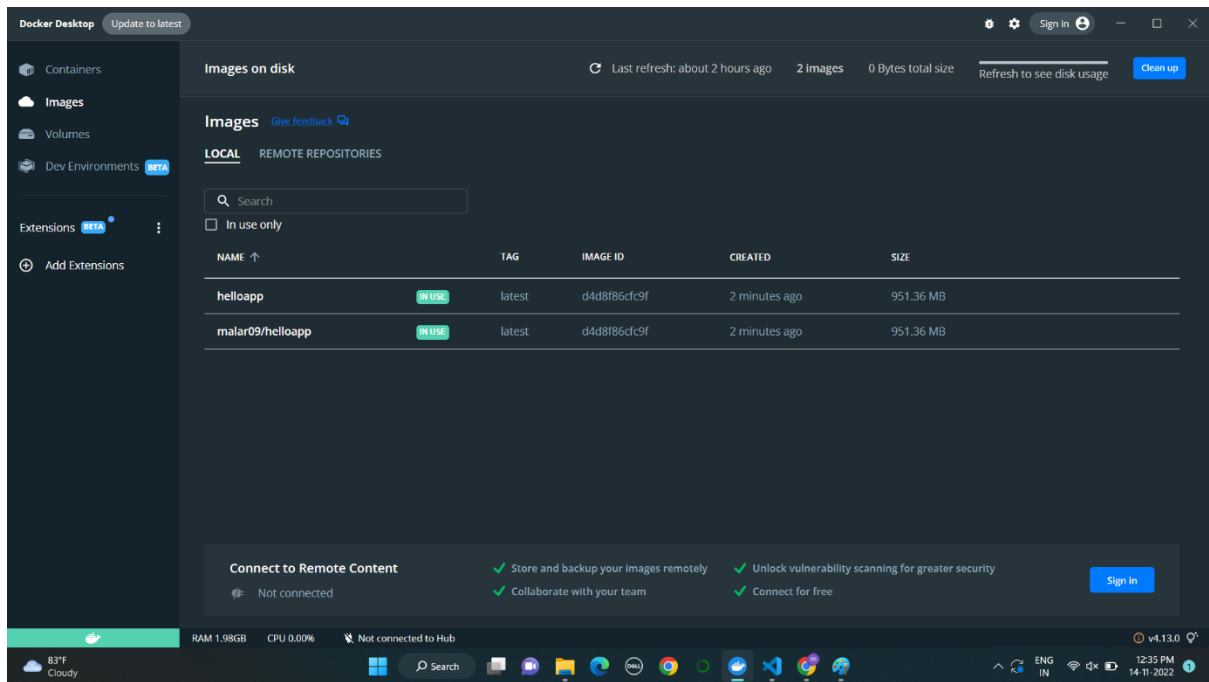


Docker hub

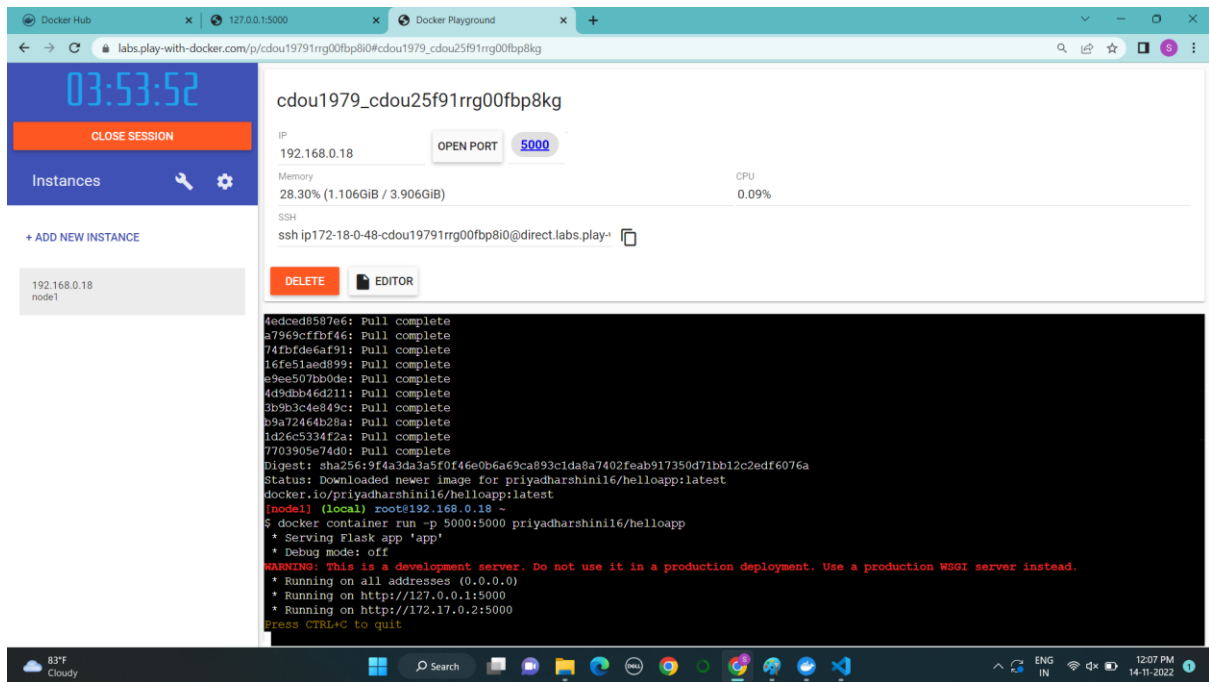


Docker

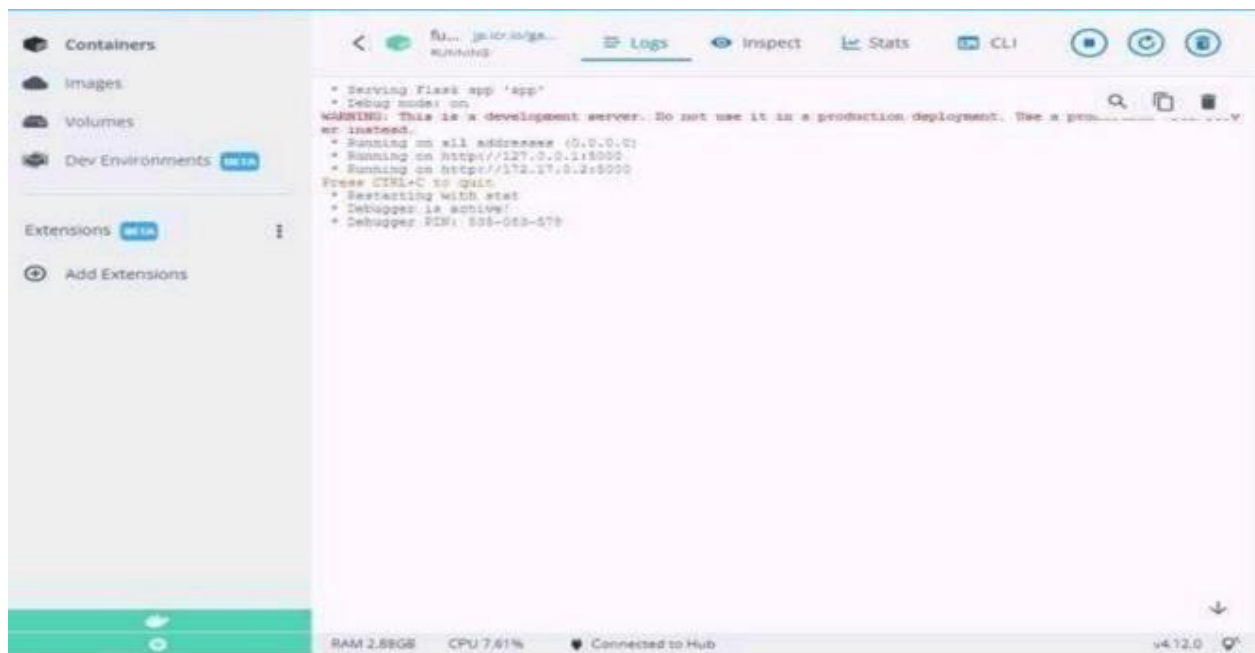




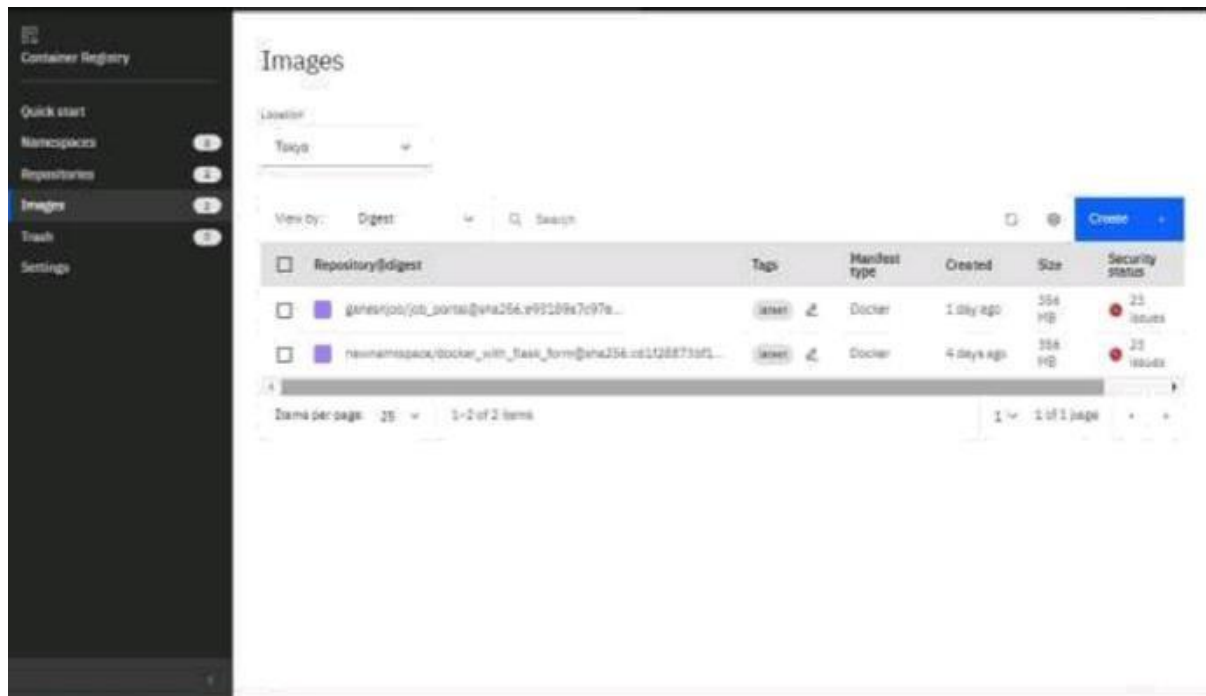
Dockerplayground



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



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



Deploy helloworld or jobportal

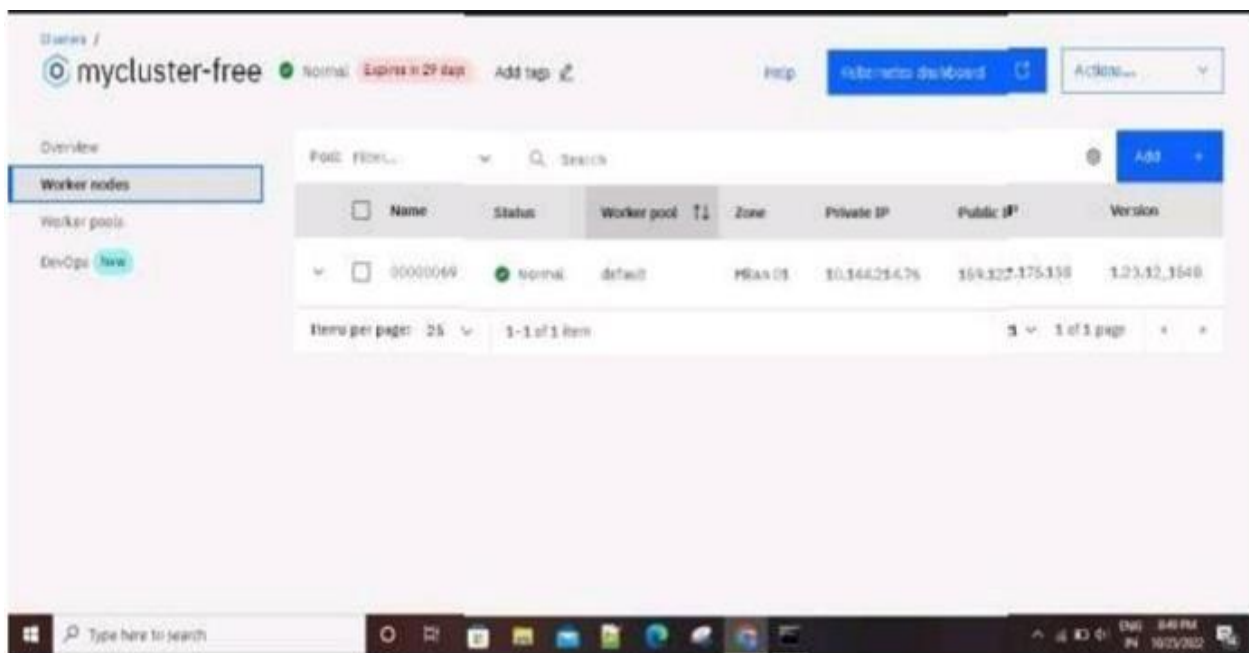
```
C:\Windows\system32\cmd.exe
8a4b5a9fa8b: Retrying in 1 second
0d51c610126f: Retrying in 1 second
0ff6e4d6744: Waiting
10901d4705a1: Waiting
055ed1b7a428: Waiting
Failed to lookup host: jp.lcr.in

C:\Users\ganesh\Desktop\job_portal>docker push jp.lcr.in/ganesh/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.in/ganesh/job_portal]
11e3b110a425: layer already exists
0ee94b5e106: layer already exists
48c2a7a4c12b: layer already exists
0072c7035466: layer already exists
0fc1d0b9196e: layer already exists
1f12106024c: layer already exists
1d0eb1112931: Pushed
100796cdf3b1: Pushed
8a4b5a9fa8b: Retrying in 1 second
0d51c610126f: Pushed
0ff6e4d6744: Pushed
10901d4705a1: Pushed
055ed1b7a428: Pushing [=====] 99.80MB/124MB
^C
C:\Users\ganesh\Desktop\job_portal>docker push jp.lcr.in/ganesh/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.in/ganesh/job_portal]
11e3b110a425: layer already exists
0ee94b5e106: layer already exists
48c2a7a4c12b: layer already exists
0072c7035466: layer already exists
0fc1d0b9196e: layer already exists
1f12106024c: layer already exists
1d0eb1112931: layer already exists
100796cdf3b1: layer already exists
8a4b5a9fa8b: Pushed
0d51c610126f: layer already exists
0ff6e4d6744: layer already exists
10901d4705a1: layer already exists
055ed1b7a428: Pushed
latest: digest: 384250ce91109a7c97eeb0008666a54e096c61a9bda939908c87a21a7a7963fc207 size: 3952

C:\Users\ganesh\Desktop\job_portal>
C:\Users\ganesh\Desktop\job_portal>
```

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

Creating a kubernetes cluster in ibm cloud



Expose the same app to run in noteport

```

C:\Windows\System32\cmd.exe
10/16/2022 12:28 PM 3,721 windows shortcut.txt
08/25/2022 08:40 PM 2,897 YouTube.lnk
24 File(s) 804,677,196 bytes
9 Dir(s) 79,221,886,976 bytes free

C:\Users\gani\Desktop>cd deploy
The system cannot find the path specified.

C:\Users\gani\Desktop>kubectl apply -f kubernetes/depoly.yaml
error: the path "kubernetes/depoly.yaml" does not exist

C:\Users\gani\Desktop>kubectl apply -f depoly.yaml
error: the path "depoly.yaml" does not exist

C:\Users\gani\Desktop>kubectl apply -f C:\Users\gani\Desktop\deploy.yaml
deployment.apps/flask-app created

C:\Users\gani\Desktop>

```

```

C:\Windows\system32\cmd.exe
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
Error from server (AlreadyExists): services "flask-service" already exists
C:\Windows\system32\
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
^C
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl proxy
Starting to serve on 127.0.0.1:8001
^C
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
^C
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl -n kubernetes-dashboard get pods
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
Error from server (AlreadyExists): services "flask-service" already exists
C:\Windows\system32\kubectl get ing
NAME          CLASS    HOSTS      ADDRESS      PORTS      AGE
flask-app-ingress  <none>   *          *            80         27m
C:\Windows\system32\kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP    PORT(S)      AGE

```