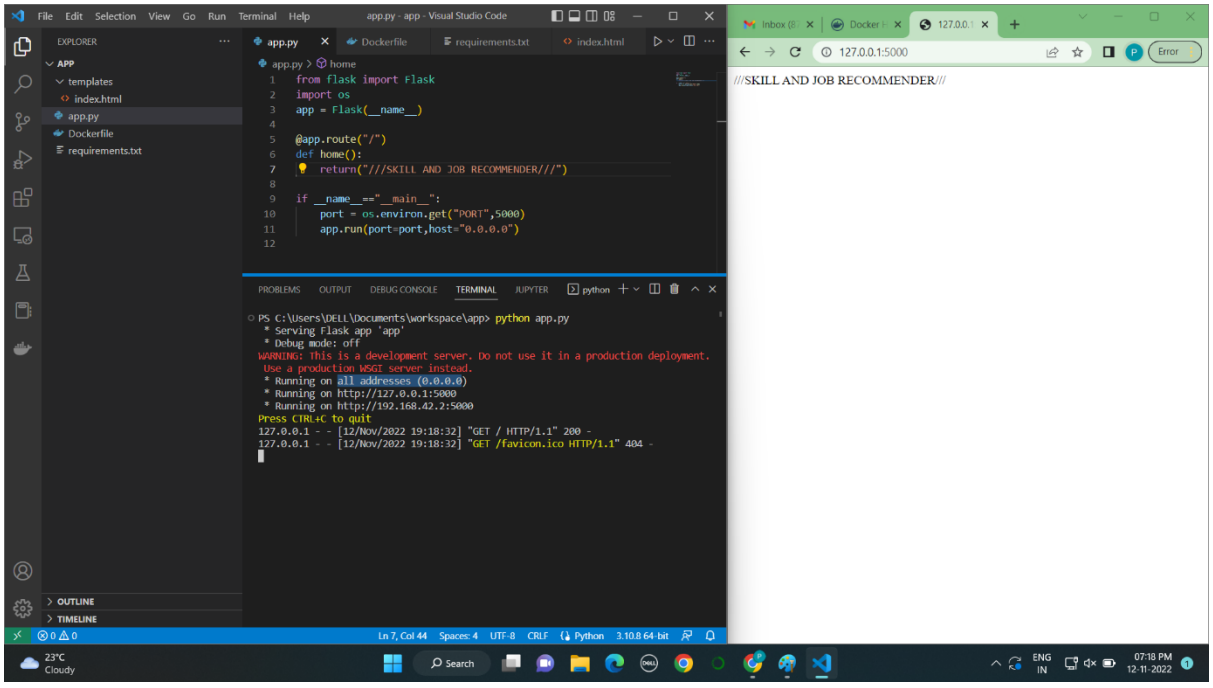
ASSIGNMENT-IV

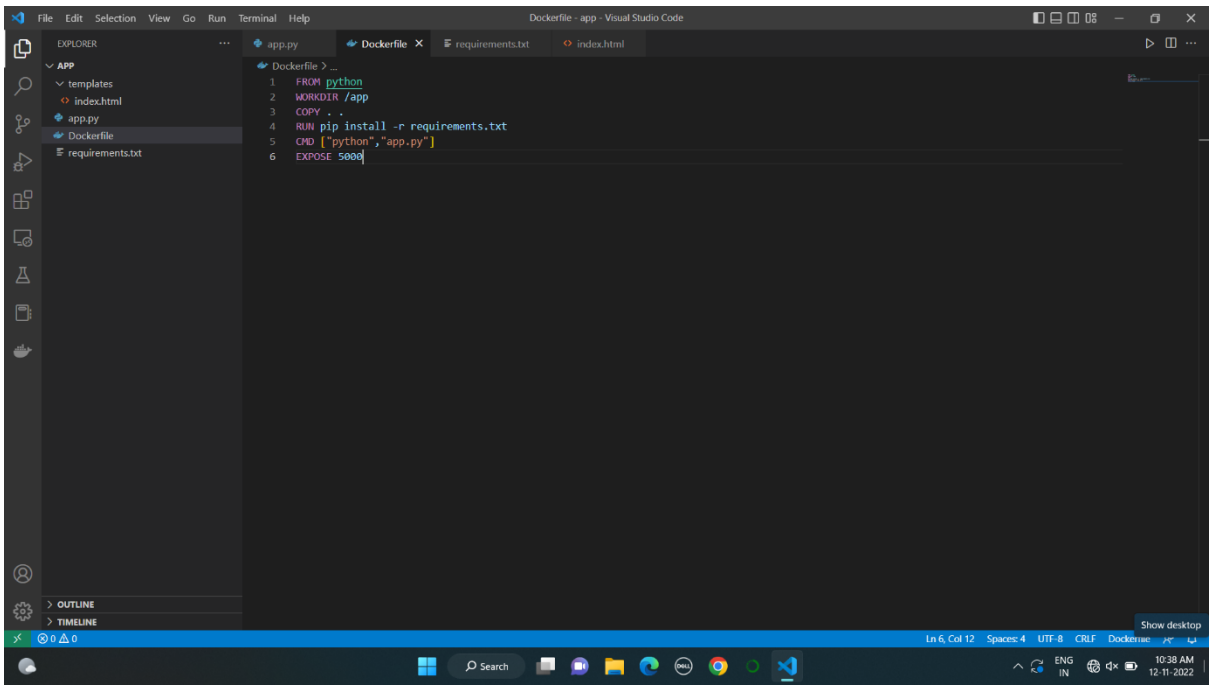
DOCKER & KUBERNETES

Student Name	Priyadharshini
Student Roll Number	731719205015
Maximum Marks	2 Marks

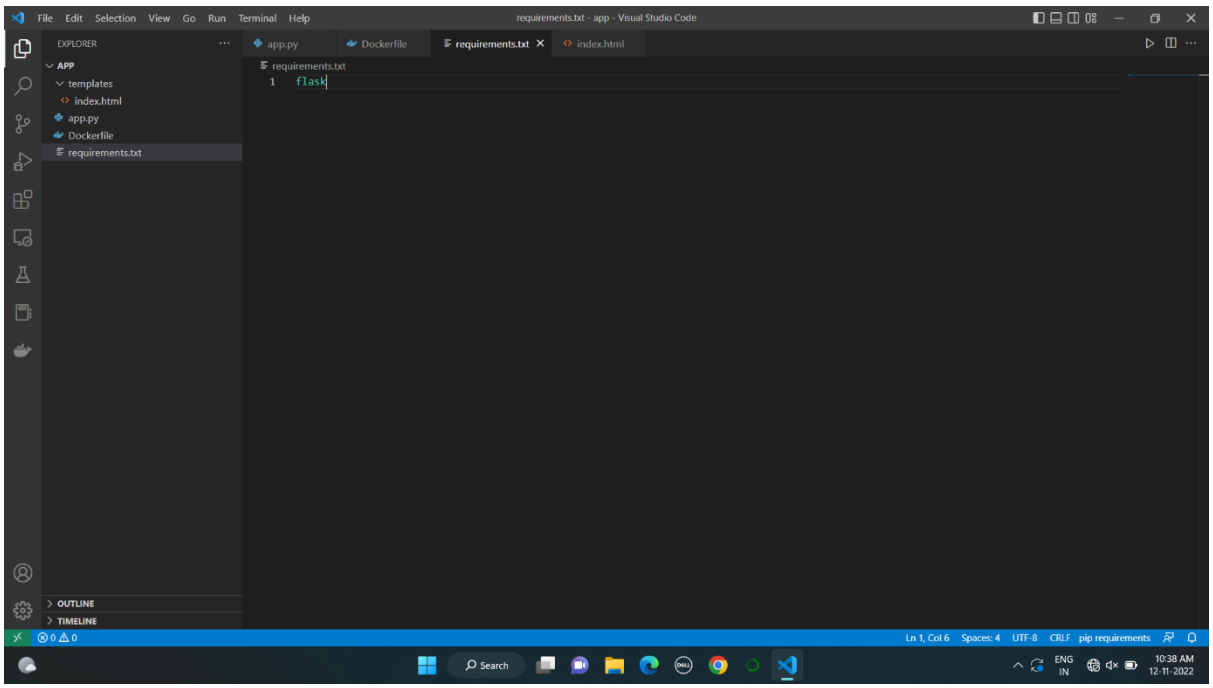
app.py



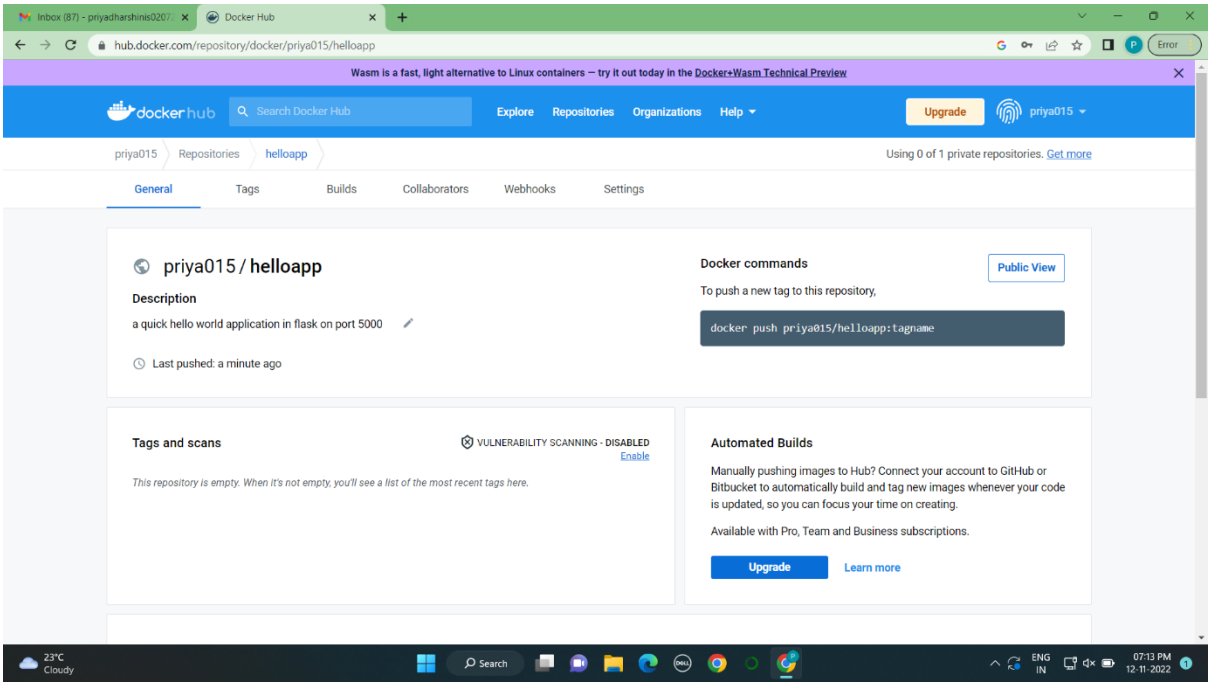
Dockerfile

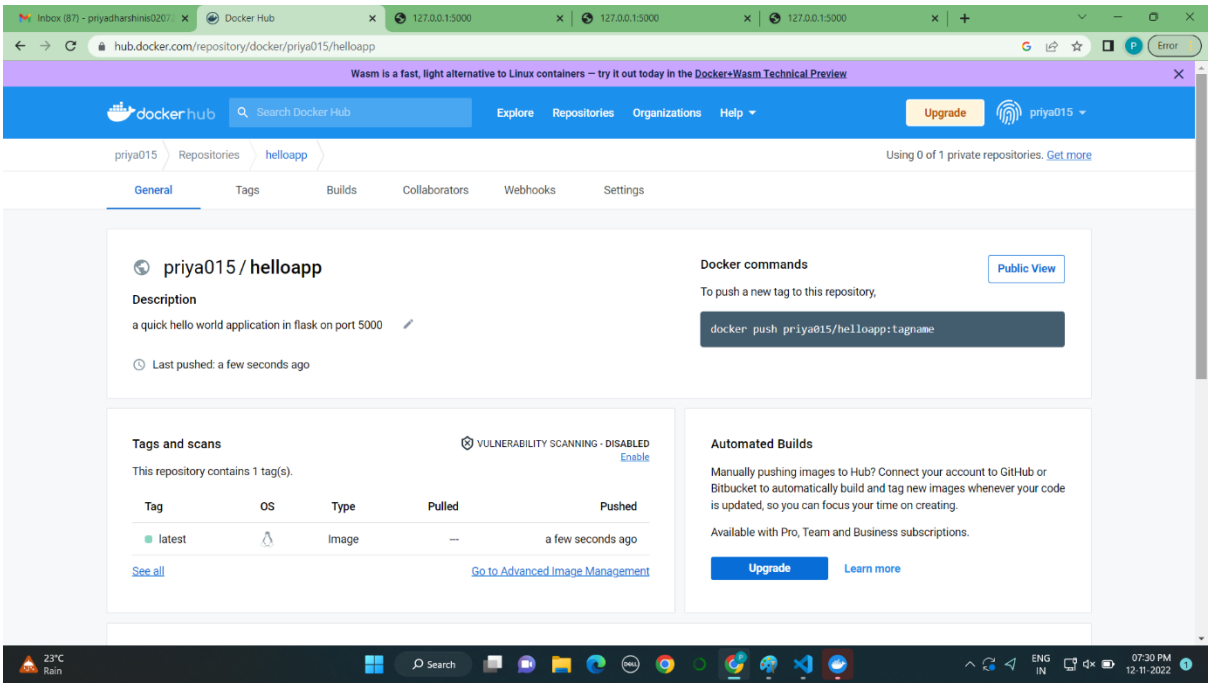


Requirements.txt

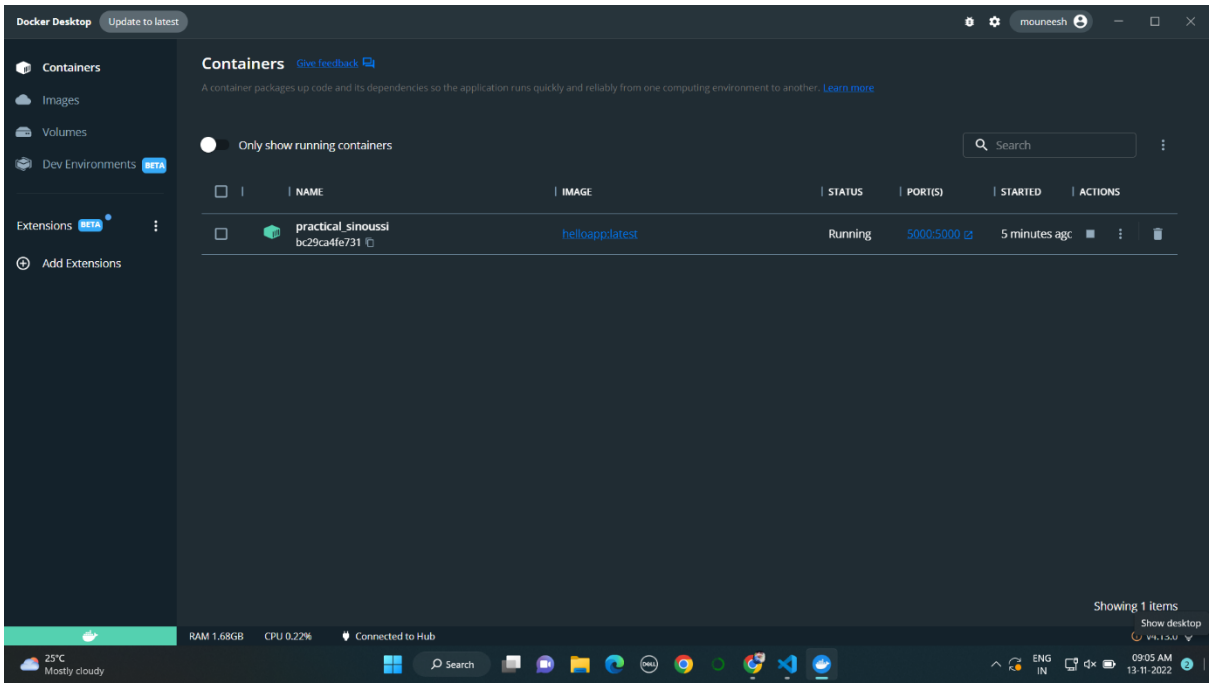


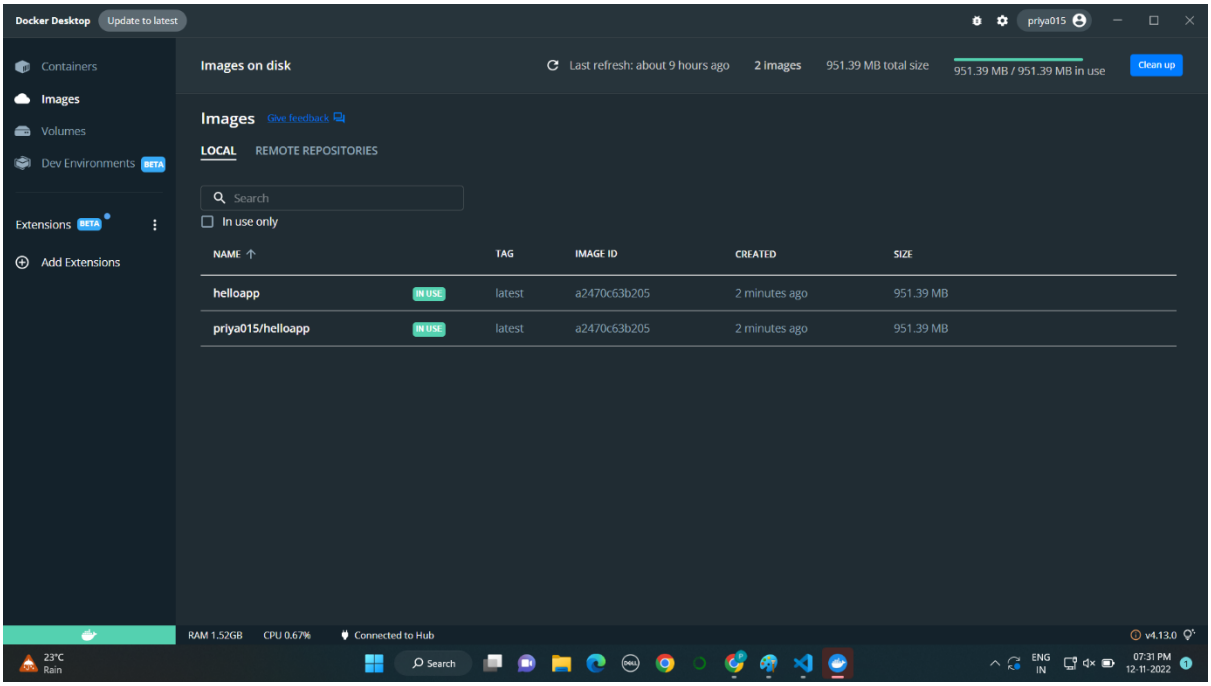
Docker hub

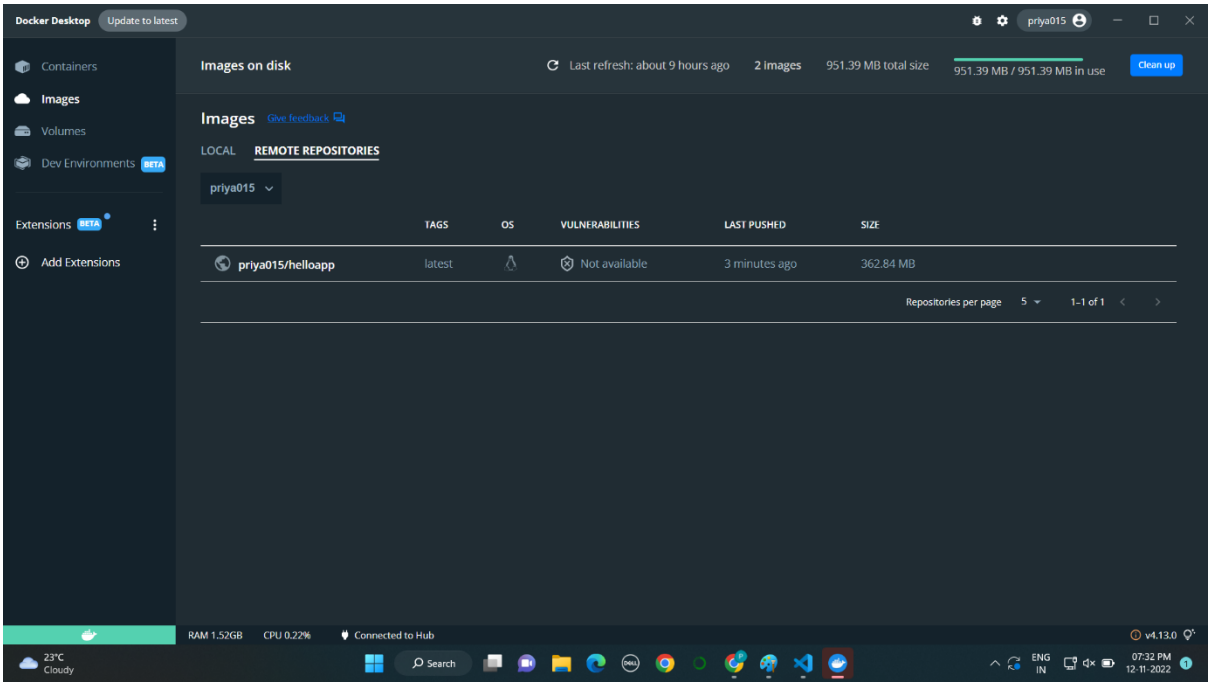

Inbox (87) - priyadharshinis0207
Docker Hub
hub.docker.com/repository/docker/priya015/helloapp
Wasm is a fast, light alternative to Linux containers — try it out today in the Docker+Wasm Technical Preview
docker hub
Search Docker Hub
Explore
Repositories
Organizations
Help
Upgrade
priya015
priya015
Repositories
helloapp
Using 0 of 1 private repositories. Get more
General
Tags
Builds
Collaborators
Webhooks
Settings
priya015 / helloapp
Description
a quick hello world application in flask on port 5000
Last pushed: a minute ago
Docker commands
Public View
To push a new tag to this repository,
docker push priya015/helloapp:tagname
Tags and scans
VULNERABILITY SCANNING - DISABLED
Enable
This repository is empty. When it's not empty, you'll see a list of the most recent tags here.
Automated Builds
Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.
Available with Pro, Team and Business subscriptions.
Upgrade
Learn more
23°C
Cloudy
Search
ENG
IN
07:13 PM
12-11-2022


Inbox (87) - priyadharshinis0207
Docker Hub
127.0.0.1:5000
127.0.0.1:5000
127.0.0.1:5000
hub.docker.com/repository/docker/priya015/helloapp
Wasm is a fast, light alternative to Linux containers — try it out today in the Docker+Wasm Technical Preview
docker hub
Search Docker Hub
Explore
Repositories
Organizations
Help
Upgrade
priya015
priya015
Repositories
helloapp
Using 0 of 1 private repositories. Get more
General
Tags
Builds
Collaborators
Webhooks
Settings
priya015 / helloapp
Description
a quick hello world application in flask on port 5000
Last pushed: a few seconds ago
Docker commands
Public View
To push a new tag to this repository,
docker push priya015/helloapp:tagname
Tags and scans
VULNERABILITY SCANNING - DISABLED
Enable
This repository contains 1 tag(s).
Tag
OS
Type
Pulled
Pushed
latest
Image
---
a few seconds ago
See all
Go to Advanced Image Management
Automated Builds
Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.
Available with Pro, Team and Business subscriptions.
Upgrade
Learn more
23°C
Rain
Search
ENG
IN
07:30 PM
12-11-2022

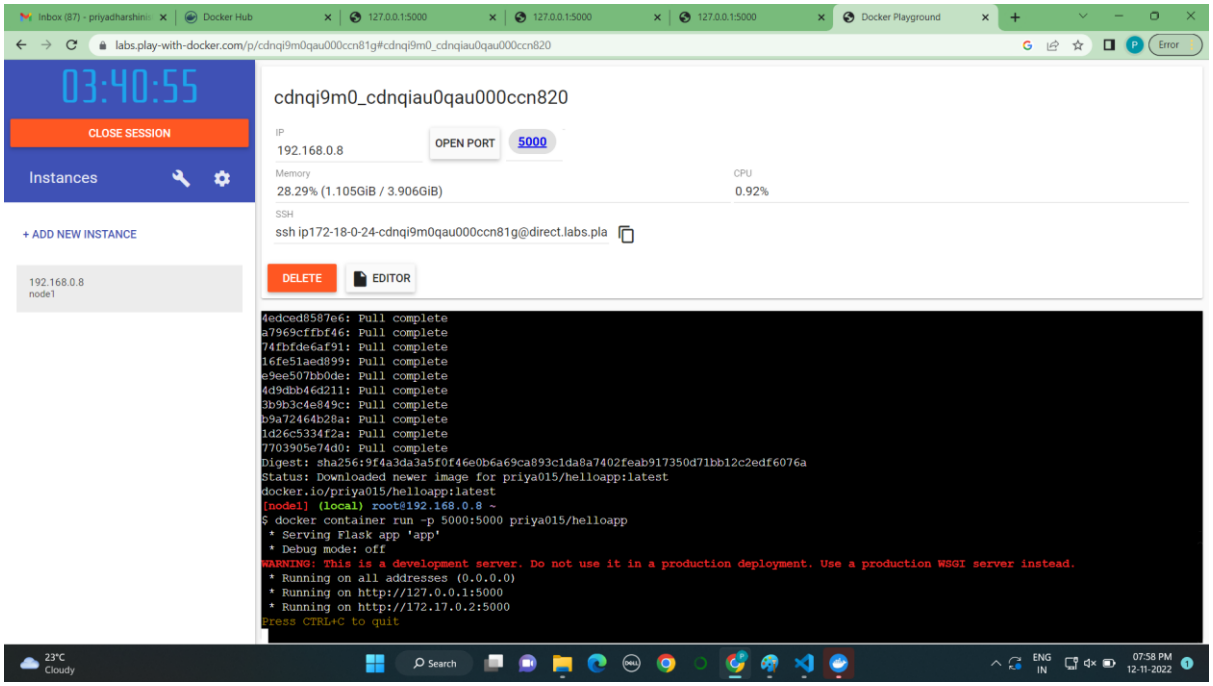
Docker

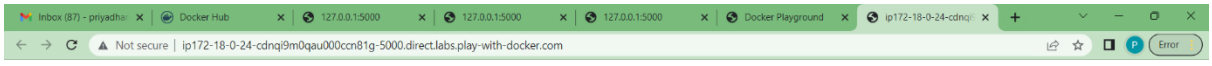

Docker Desktop
Update to latest
mouneesh
Containers
Images
Volumes
Dev Environments
BETA
Extensions
BETA
Add Extensions
Containers
Give feedback
A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more
Only show running containers
Search
NAME
IMAGE
STATUS
PORT(S)
STARTED
ACTIONS
practical_sinoussi
bc29ca4fe731
helloapp:latest
Running
5000:5000
5 minutes ago
Showing 1 items
RAM 1.68GB
CPU 0.22%
Connected to Hub
Show desktop
25°C
Mostly cloudy
Search
ENG
IN
09:05 AM
13-11-2022

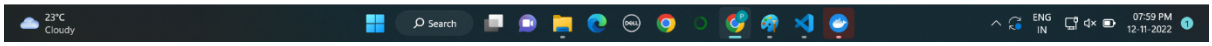

Docker Desktop
Update to latest
priya015
Containers
Images
Volumes
Dev Environments
BETA
Extensions
BETA
Add Extensions
Images on disk
Last refresh: about 9 hours ago
2 images
951.39 MB total size
951.39 MB / 951.39 MB in use
Clean up
Images
Give feedback
LOCAL
REMOTE REPOSITORIES
Search
In use only
NAME
TAG
IMAGE ID
CREATED
SIZE
helloapp
IN USE
latest
a2470c63b205
2 minutes ago
951.39 MB
priya015/helloapp
IN USE
latest
a2470c63b205
2 minutes ago
951.39 MB
RAM 1.52GB
CPU 0.67%
Connected to Hub
v4.13.0
23°C
Rain
Search
ENG
IN
07:31 PM
12-11-2022



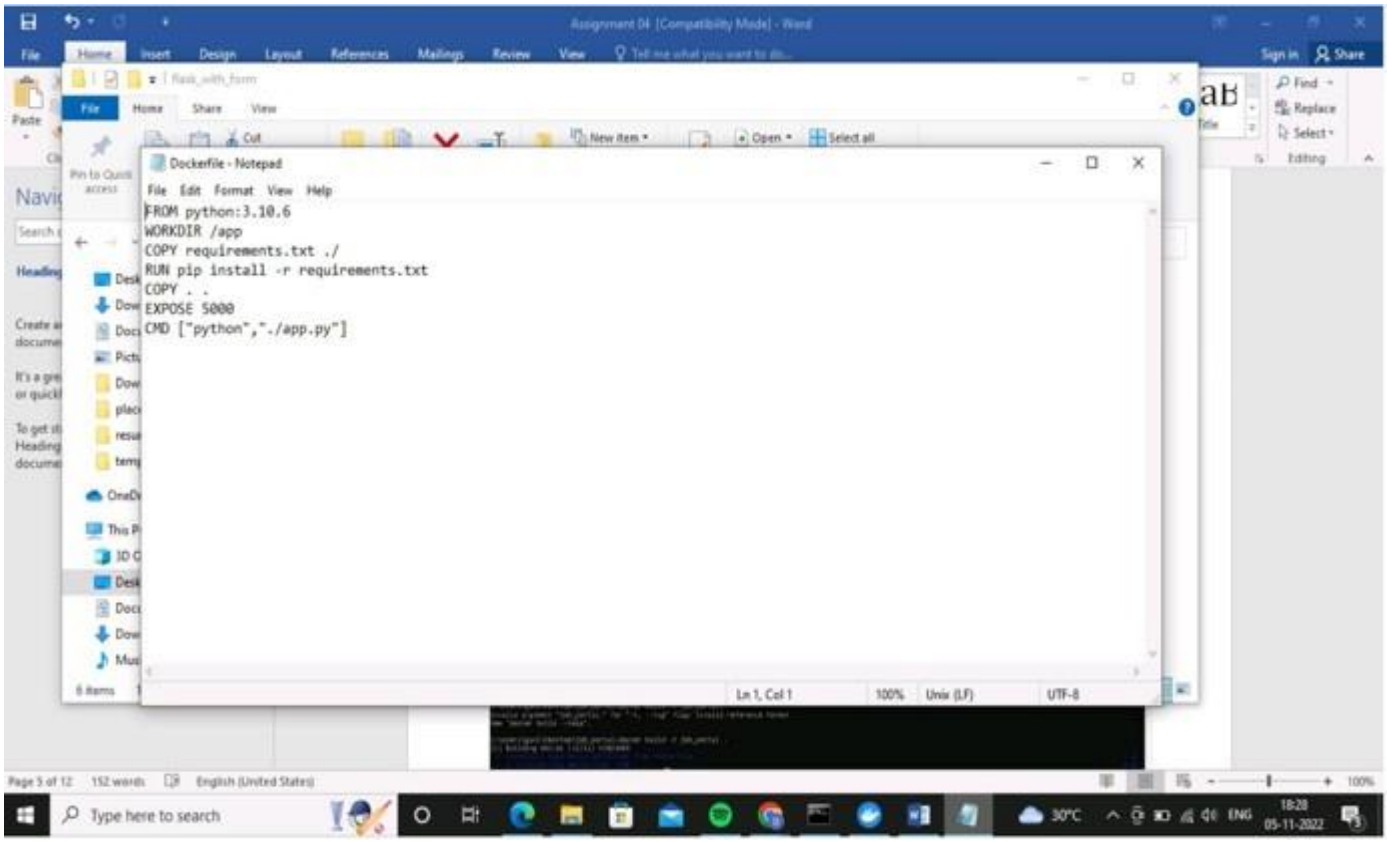
Dockerplayground



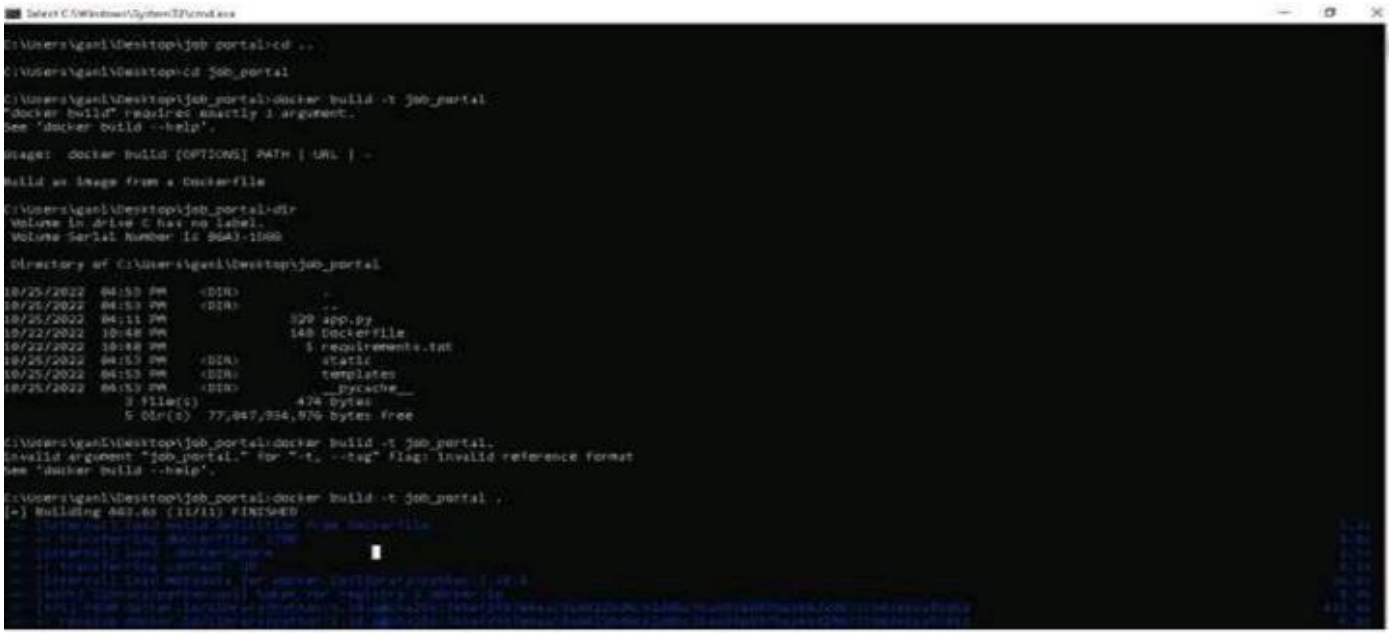




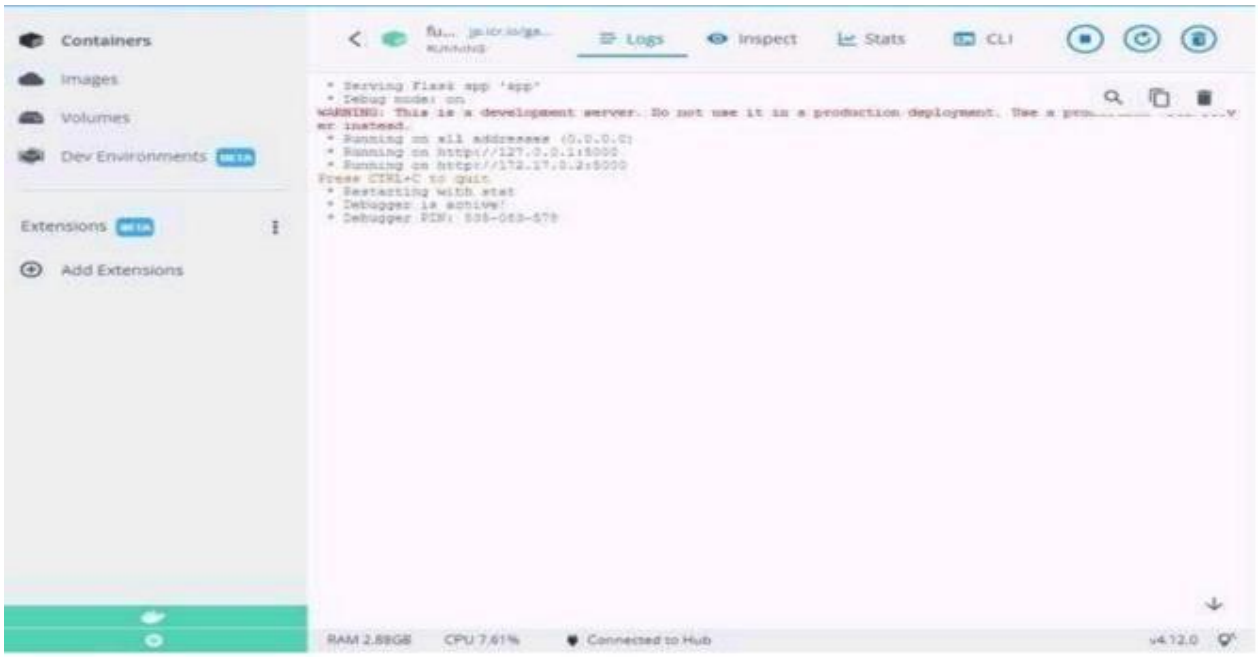
2. Create a docker file for the jobportal application and deploy it in Docker desktop application.



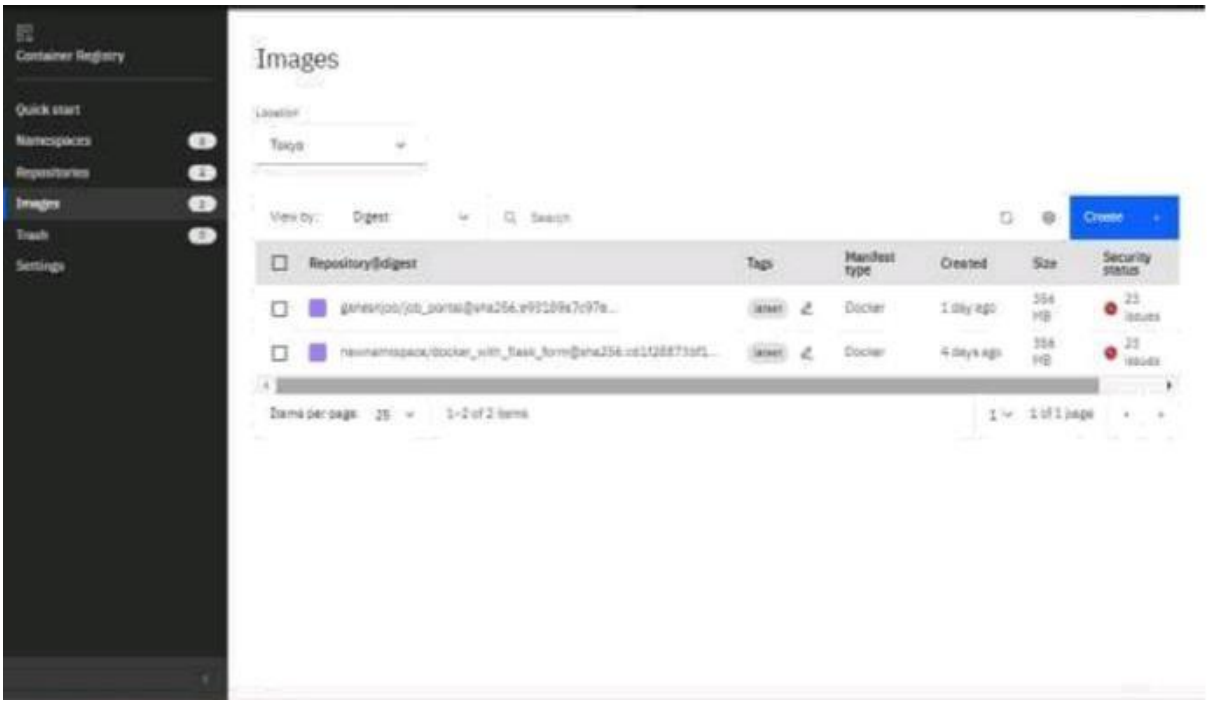
Deploy in docker application



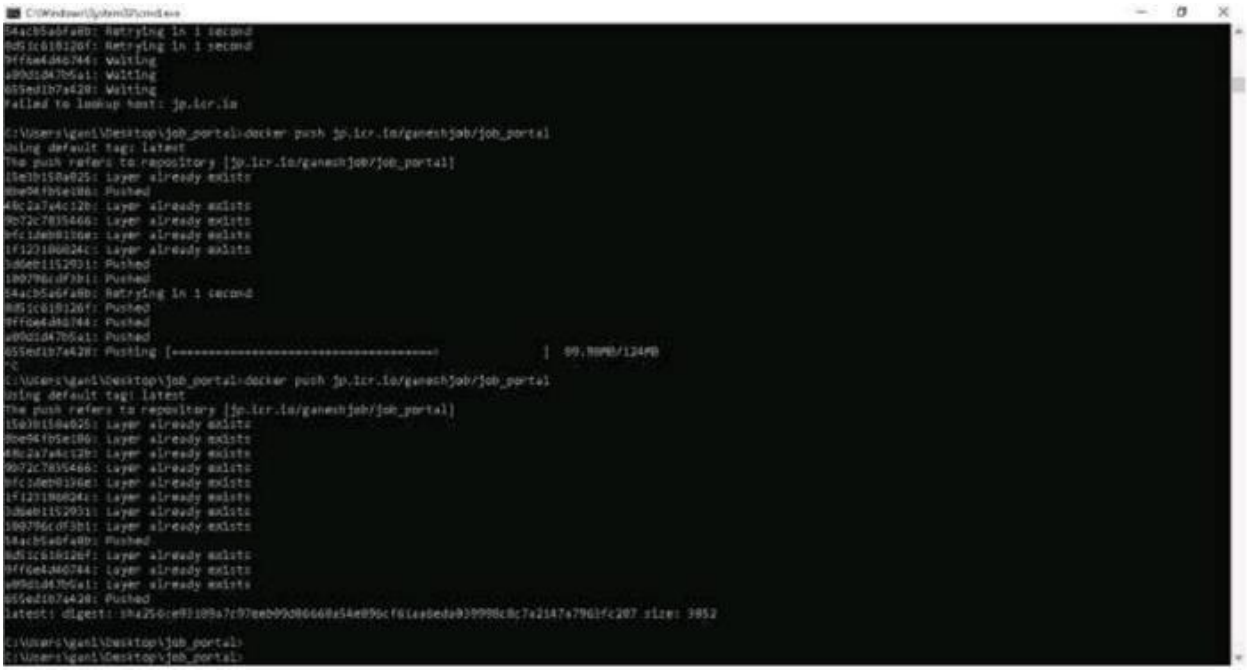
Running in docker desktop



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

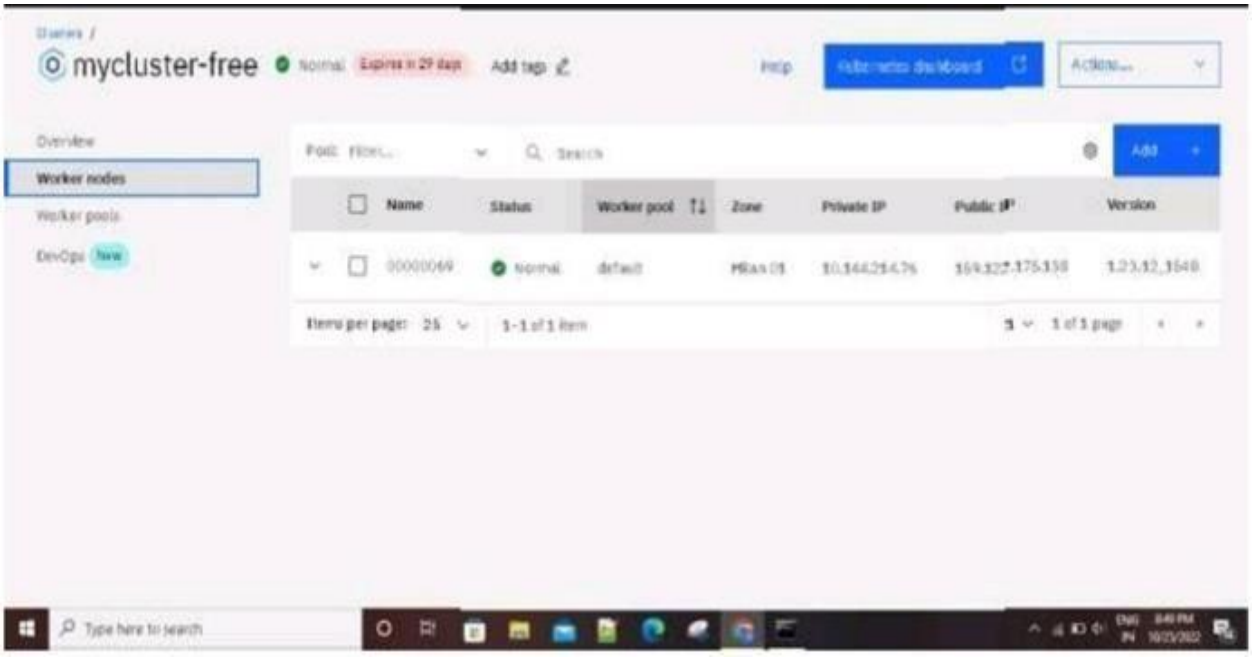


Deploy helloworld or jobportal

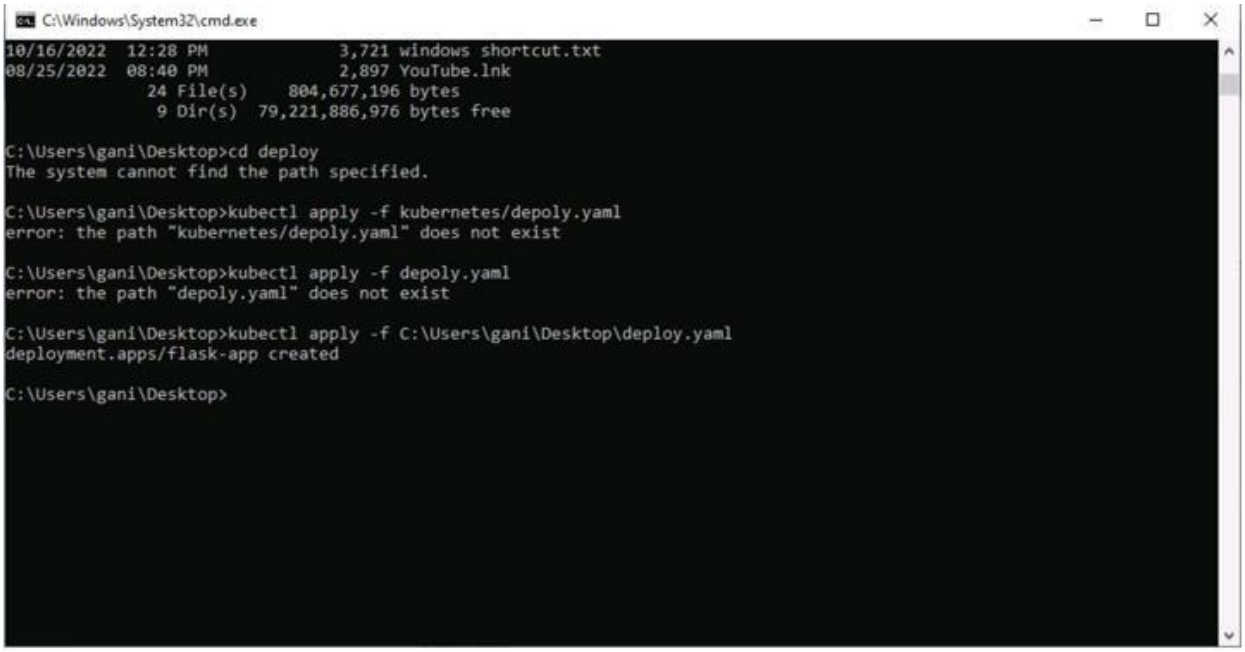


4.Create a Kubernetes cluster in IBM cloud and deploy helloworld imageor jobportal image and also expose the same app to run in nodeport.

Creating a kubernetes cluster in ibm cloud



Expose the same app to run in noteport



C:\Windows\System32\cmd.exe

```
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 depploy
^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 deplou
^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
```