

Assignment -4

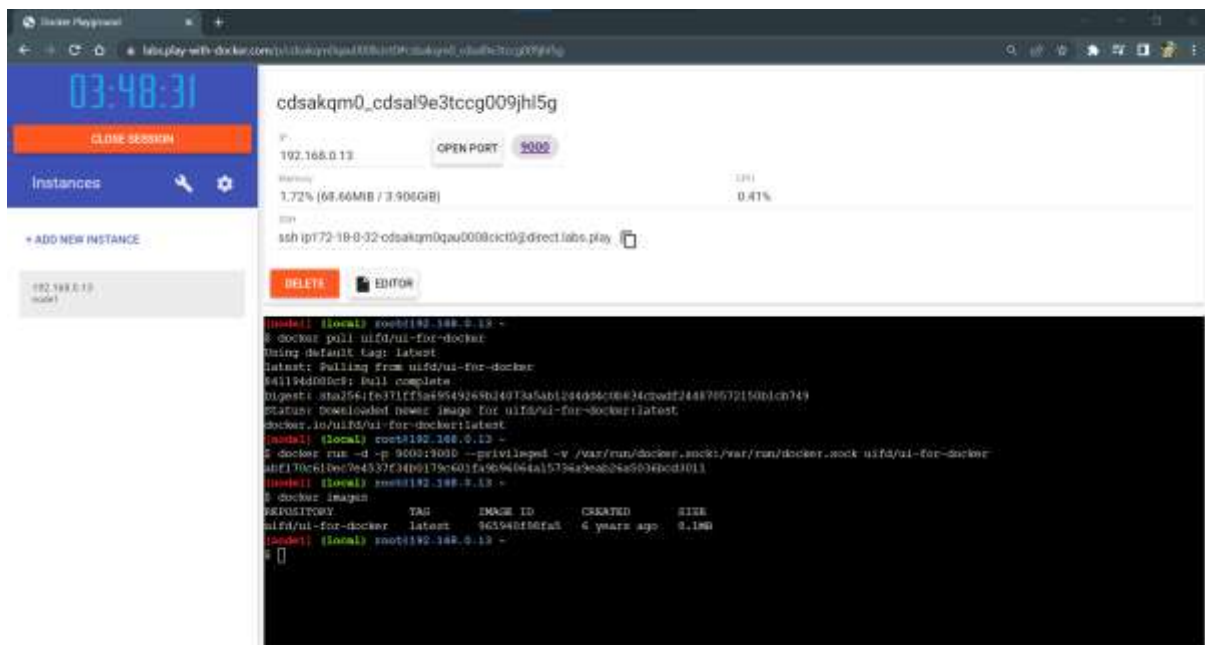
Kubernetes / Docker

Assignment Date	21 November 2022
Student Name	Delfin D
Student Roll Number	962219104046
Maximum Marks	2 Marks

Question-1:

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

Solution:

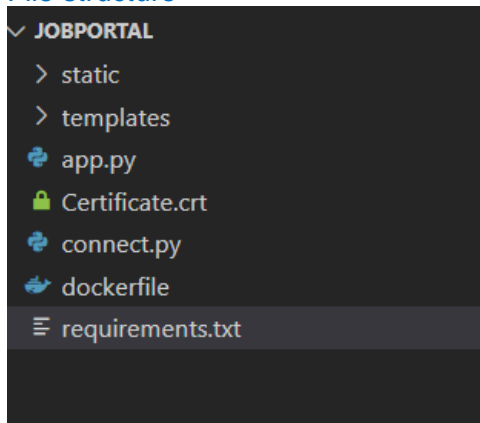


Question-2:

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

Solution:

File structure



Docker File

```
dockerfile X
dockerfile > ...
1 FROM python
2 WORKDIR /jobportalapp
3 COPY . .
4 RUN pip install -r requirements.txt
5 EXPOSE 5000
6 CMD ["python", "app.py"]
```

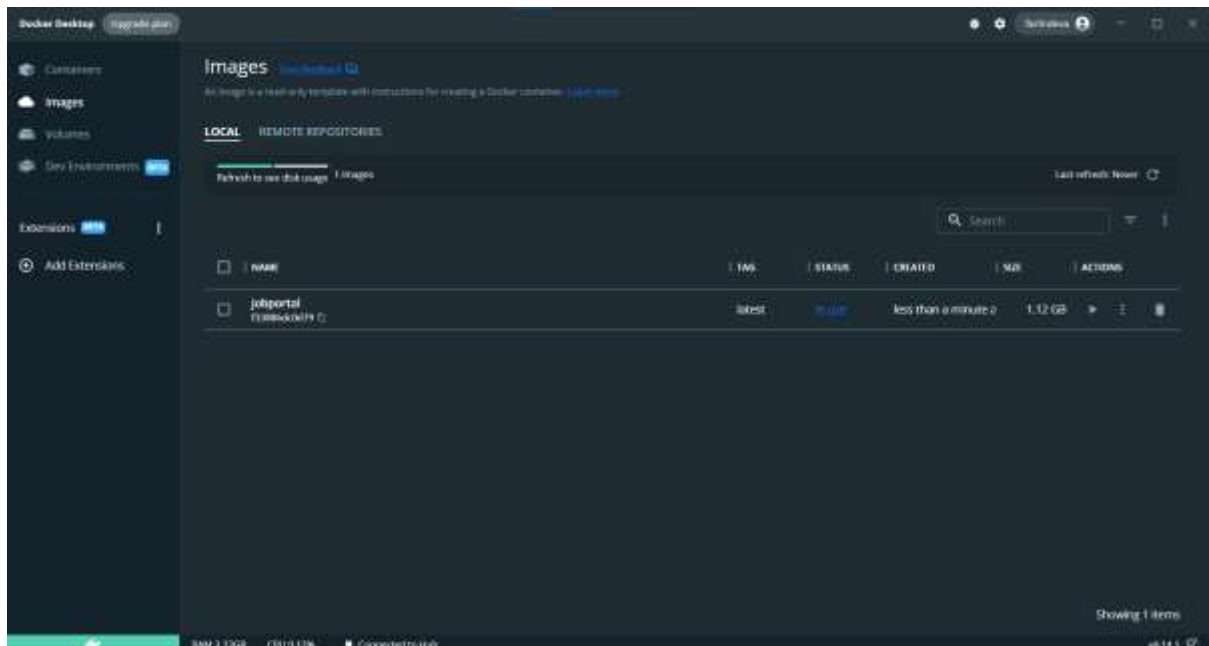
Requirements file

```

≡ requirements.txt ✕
≡ requirements.txt
1  Flask==2.2.2
2  ibm-db==3.1.3

```

[illegible]



Question-3:

Create a IBM container registry and deploy helloworld app or jobportalapp

Solution:

```

C:\Users\Bhaskar> docker run --rm --name registry registry:2
Plg-In "container-registry[cr] 1.6.0" failed in repeating "IBMCloud"
Attempting to download the binary file...
11:56 PM / 11:56 PM [=====] 100.0%
1155616 bytes downloaded
Installing binary...

Plg-In "container-registry 1.6.1" was successfully installed into C:\Users\Bhaskar\AppData\Local\Programs\container-registry. Use "docker plugin show container-registry" to view its details.
C:\Users\Bhaskar> docker login --u https://cloud.ibm.com
API endpoint: https://cloud.ibm.com
Email: farlin.10111@acme.edu.in
Password:
Authenticating...

Targeted account: farlin.10111@acme.edu.in (b6d7c310c44b6d0d1f11556d570d)

Select a region (or press enter to skip):
1. us-south
2. us-east
3. eu-central
4. eu-west
5. us-east
6. us-west
7. eu-central
8. eu-west
9. us-east
10. us-west
11. us-east
Enter a number >
Targeted region: us-east

API endpoint: https://cloud.ibm.com
Region: us-east
Email: farlin.10111@acme.edu.in
Account: farlin.10111@acme.edu.in (b6d7c310c44b6d0d1f11556d570d)
Resource group: No resource group targeted, use "IBMCloud target -g RESOURCER_GROUP"
API endpoint:
Org:
Space:
  
```


mycluster-free - IBM Cloud

cloud.ibm.com/kubernetes/clusters/ctq0nldq5q2f1qu00/overview

IBM Cloud

Clusters / mycluster-free Preparing master, workers... Expires in 30 days Add tags

Overview

Worker nodes

Worker pools

DevOps New

Expires in 30 days:
Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a [standard cluster](#).

Node status: 1 of 1 Pending [Details](#)

Add-on status: 0 of 0 Normal [Details](#)

Master status: Unknown [Docs](#)

Ingress status: Pending [Docs](#)

Details

Cluster ID	Version	Infrastructure	Zones
ctq0nldq5q2f1qu00	1.24.7_1542	Classic	Milan 01

mycluster-free - IBM Cloud

cloud.ibm.com/kubernetes/clusters/ctq0nldq5q2f1qu00/nodes

IBM Cloud

Clusters / mycluster-free Preparing master, workers... Expires in 30 days Add tags

Overview

Worker nodes

Worker pools

DevOps New

Pool: Filter... Search Add

<input type="checkbox"/>	Name	Status	Worker pool	Zone	Private IP	Public IP	Version
<input checked="" type="checkbox"/>	00000032	Normal	default	Milan 01	10.144.185.58	169.51.203.185	1.24.7_1543

Items per page: 25 1-1 of 1 item 1 of 1 page

kubernetes

default Search

Overview

Workloads

Workload Status

Pending Deployments Pending Pods Pending Replica Sets

Deployments

Overview

Workloads

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses

Ingress Classes

Services

Config and Storage

Deployments

Name	Images	Labels	Pods	Created ↑
jobportalapp	Show all	Show all	1 / 1	54 seconds ago

Pods

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created ↑
jobportalapp-9d26hsE77Q5mg6	Show all	Show all	10.144.185.58	Running	0	-	-	54 seconds ago

Replica Sets

Name	Images	Labels	Pods	Created ↑
jobportalapp-9d26hsE77Q5mg6	Show all	Show all	1 / 1	55 seconds ago

Edit a resource

YAMLJSON

50 spec:

51 ports:

52 - name: tcp-5000-488-ct4tf

53 protocol: TCP

54 port: 5000

55 targetPort: 5000

56 nodePort: 32576

57 selector:

58 k8s-app: jobportalapp

59 clusterIP: 172.21.63.60

60 clusterIPs:

61 - 172.21.63.60

62 type: NodePort

63 sessionAffinity: None

64 externalTrafficPolicy: Cluster

65 ipFamilies:

66 - IPv4

67 ipFamilyPolicy: SingleStack

68 allocateLoadBalancerNodePorts: true

69 internalTrafficPolicy: Cluster

70 status:

71 loadBalancer: {}

72

Update

Cancel