

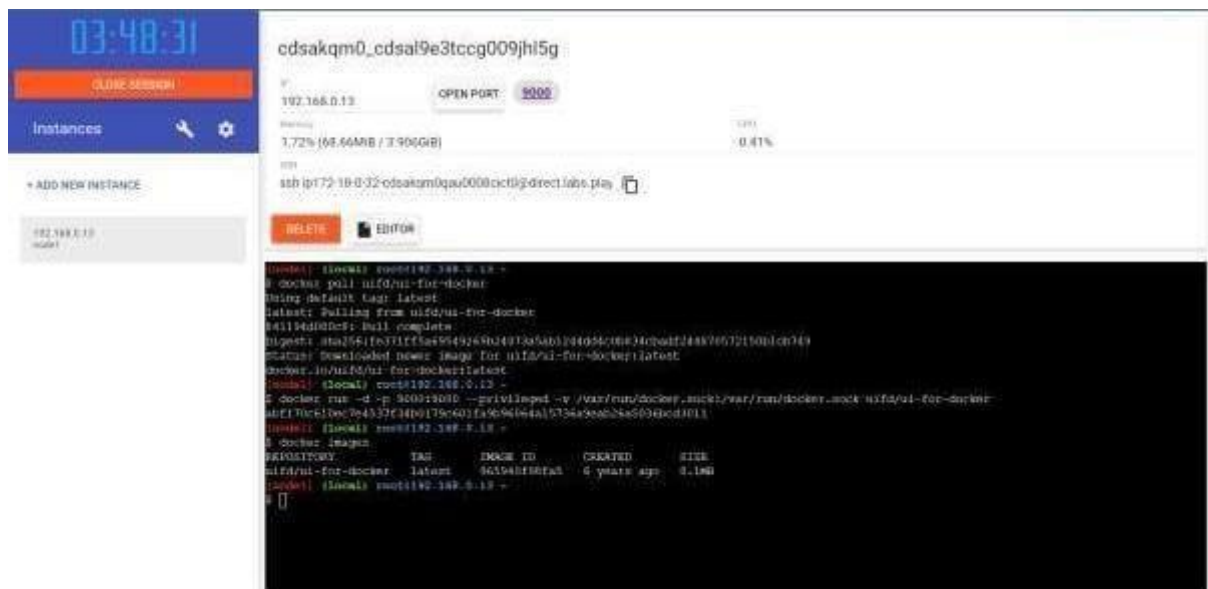
Assignment -4
Kubernetes / Docker

Assignment Date	26 November 2022
Student Name	Archa H
Student Roll Number	962219104020
Maximum Marks	2 Marks

Question-1:

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

Solution:

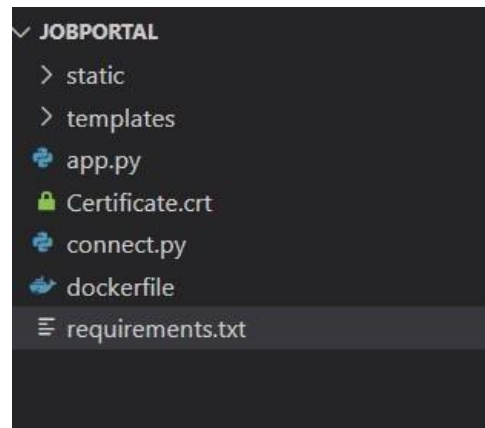


Question-2:

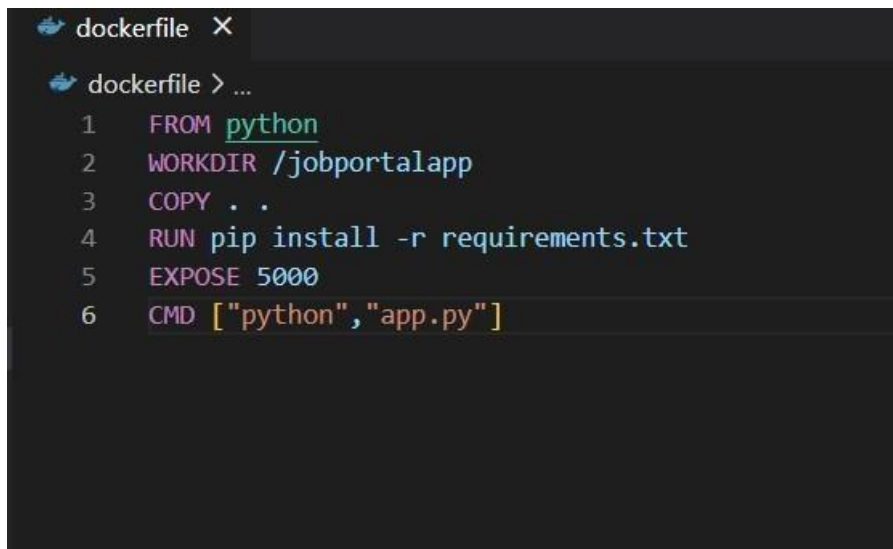
Create a docker file for the jobportal application and deploy it in Docker desktop application

Solution:

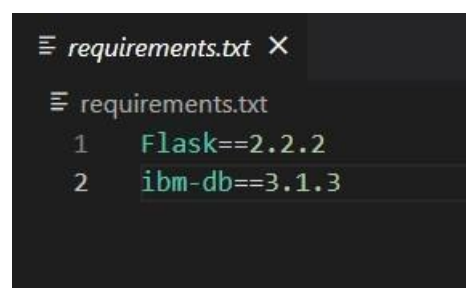
File structure



Docker File



Requirements file



the 'black box' to run deep tests against bugs to find vulnerabilities and learn how to fix them



Create a IBM container registry and deploy helloworld app or jobportalapp

Solution:

```

C:\Users\Frank>
Flag-In 'container-registry[crd] 1.0.0' found in repository 'IBM Cloud'
Attempting to download the binary file...
[11.09 MB / 11.08 MB] [=====] 100.00%
10476616 bytes downloaded
Installing binary...
Flag-In 'container-registry 1.0.0' was successfully installed into C:\Users\Computer\bin\cloud\plugins\container-registry. Use 'ibmcloud plugin show container-registry' to show its details.
C:\Users\Computer\bin\cloud> login -u https://cloud.ibm.com
API endpoint: https://cloud.ibm.com
Email: farlin.10100@source.edu.in
Password:
Authenticating...
Targeted account Farlin Dev Binodha's Account (ba4d633bc3470aada11105f8a57128)

Select a region (or press enter to skip):
1. us-east
2. us-west
3. jp-tok
4. jp-tok
5. us-iso
6. eu-de
7. eu-gb
8. us-tor
9. us-west
10. us-east
11. us-east
Enter a number: 4
Targeted region jp-tok

API endpoint: https://cloud.ibm.com
Region: jp-tok
Email: farlin.10100@source.edu.in
Password:
Targeted Farlin Dev Binodha's Account (ba4d633bc3470aada11105f8a57128)
Resource group: In resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
API endpoint:
API:
Open:

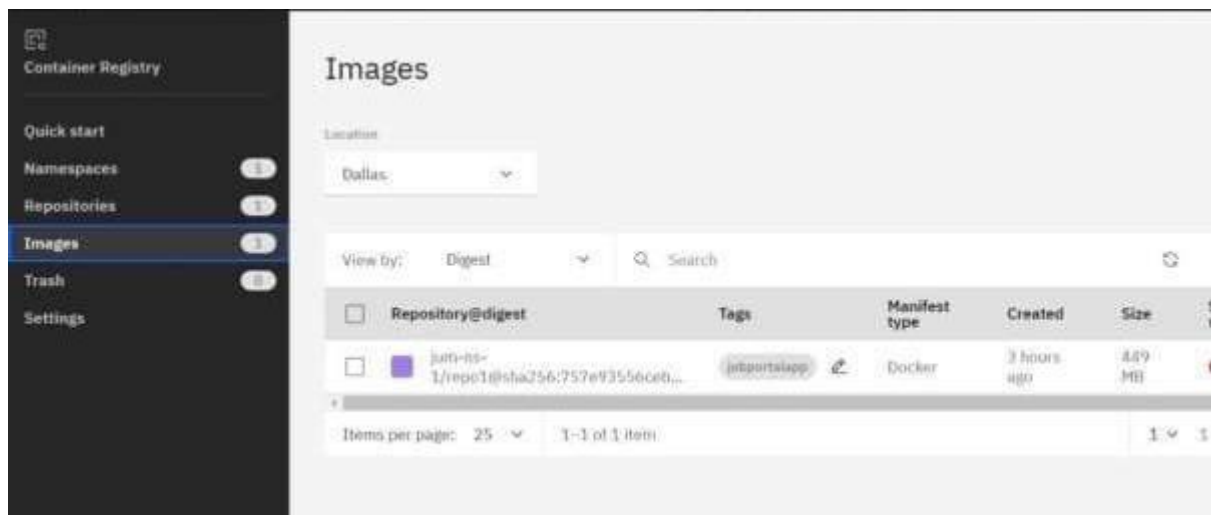
```

```

C:\Users\Frank>
C:\Users\Computer\bin\cloud> resource add assigned
In resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.
Adding resource 'assigned' in resource group 'Default' for account Farlin Dev Binodha's Account in registry ibm.com...
Successfully added resource 'assigned'
C:\Users\Computer\bin\cloud> login
API endpoint: https://cloud.ibm.com
Region: jp-tok
Email: farlin.10100@source.edu.in
Password:
Authenticating...
Targeted account Farlin Dev Binodha's Account (ba4d633bc3470aada11105f8a57128)

API endpoint: https://cloud.ibm.com
Region: jp-tok
Email: farlin.10100@source.edu.in
Password:
Targeted Farlin Dev Binodha's Account (ba4d633bc3470aada11105f8a57128)
Resource group: In resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
API endpoint:
API:
Open:
C:\Users\Computer>

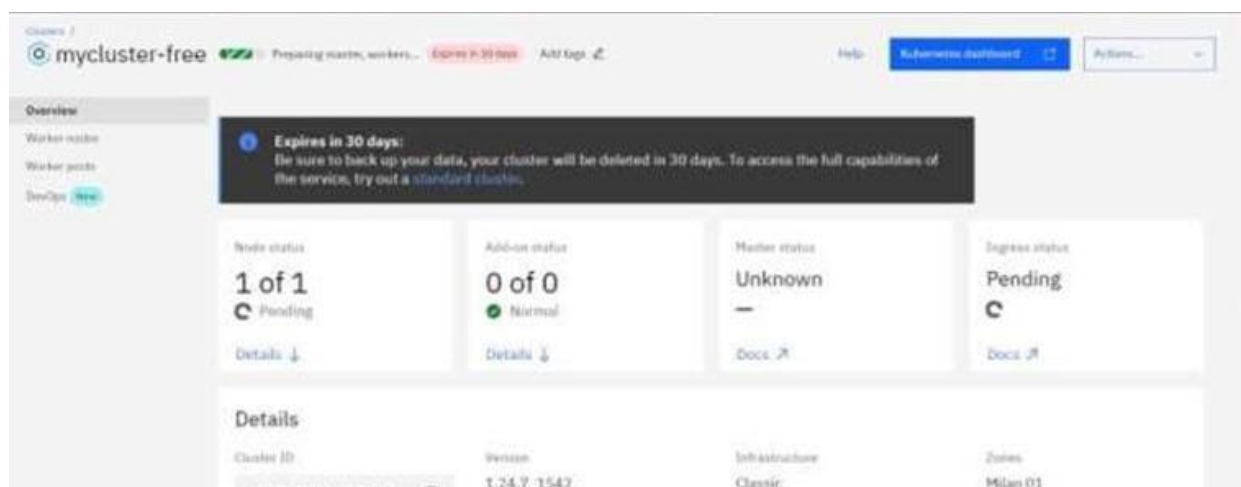
```



Question-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.

Solution:



Clusters / mycluster-free Preparing master, workers... Expires in 10 days [Add tags](#) [Help](#) [Kubernetes dashboard](#) [Actions...](#)

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 1 of 1 page [←](#) [→](#)

kubernetes default Search [+](#) [🔔](#) [🌐](#)

Overview

Workloads 10

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets
- Replication Controllers
- Stateful Sets

Service

- Ingresses 10
- Ingress Classes
- Services 10

Config and Storage

Workloads

Workload Status

Deployments Pods 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-9dd69c877-25mg6

Show all

Show all

10.144.185.58

Running

0

-

-

54 seconds ago

Replica Sets

Name

Images

Labels

Pods

Created

jobportalapp-9dd69c877

Show all

Show all

1 / 1

55 seconds ago

Edit a resource

YAML

JSON

```

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