

ASSIGNMENT-4

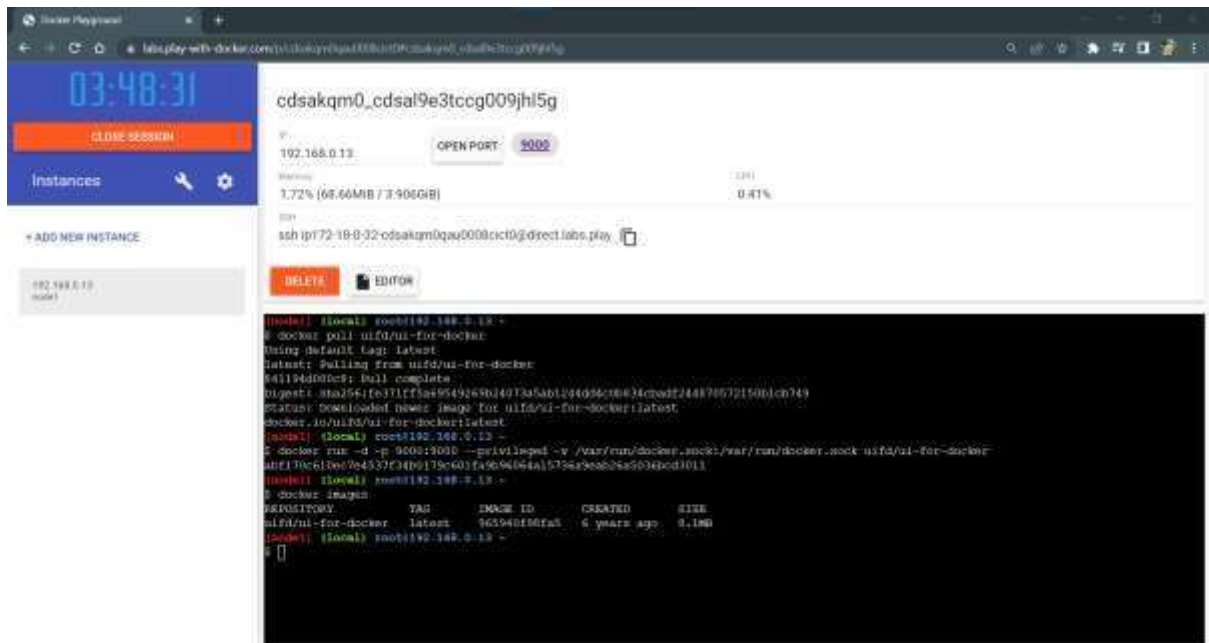
Kubernetes / Docker

Assignment Date	24 November 2022
Student Name	ASHIKA P
Student Roll Number	962219104024
Maximum Marks	2 Marks

Question-1:

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

Solution:

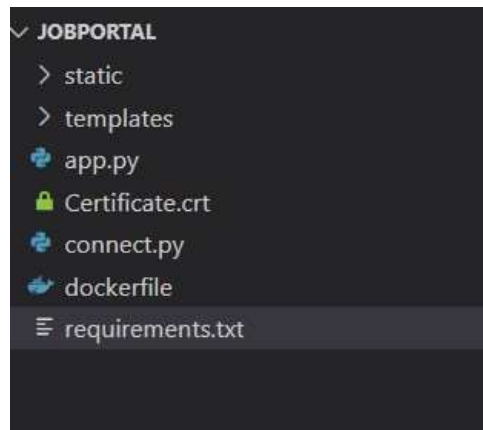


Question-2:

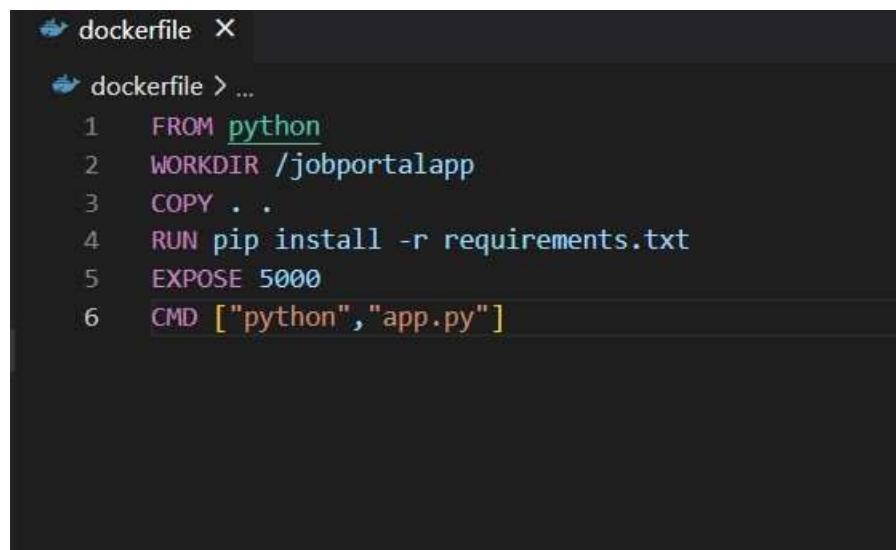
Create a docker file for the jobportal application and deploy it in Docker desktop application

Solution:

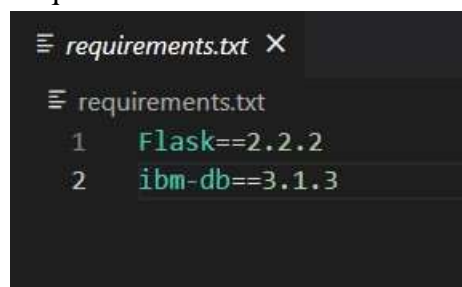
File structure



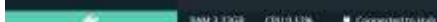
Docker File



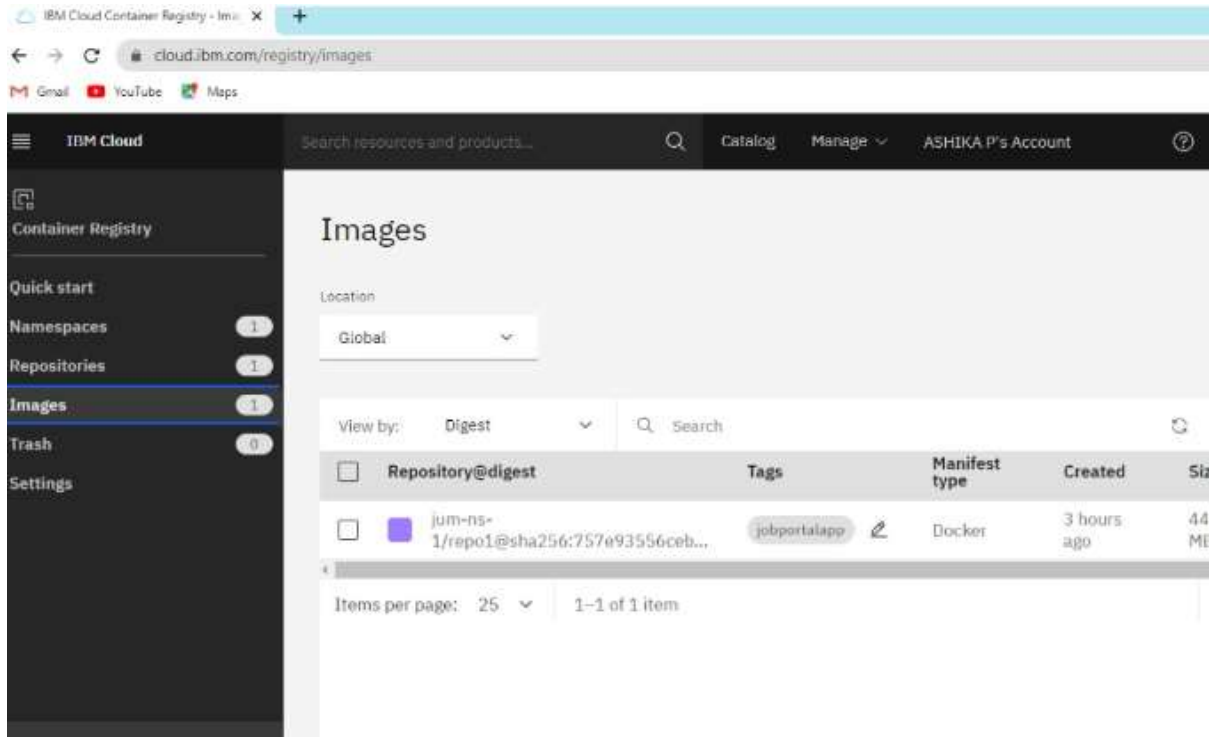
Requirements file



Use 'fuzzbin' to run binary tests against images to find vulnerabilities and learn how to fix them



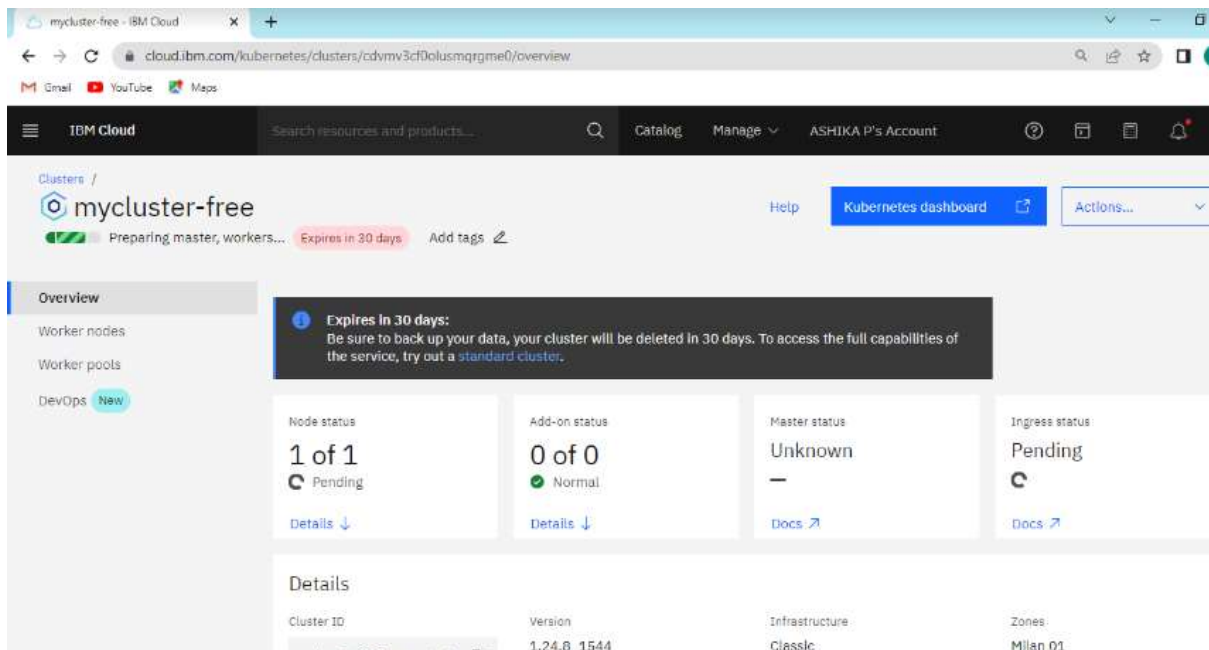
Solution:



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:



mycluster-free IBM Cloud

cloud.ibm.com/kubernetes/clusters/cdvmw3ct0oksmqpgma0/nodes

IBM Cloud Search resources and products...

Clusters / mycluster-free Preparing master, workers... Expires in 30 days [Add tags](#) [Help](#) [Kubernetes dashboard](#) [Actions...](#)

Overview

Worker nodes

Worker pools

DevOps New

Pool: Filter... Search

Name	Status	Worker pool	Zone	Private IP	Public IP	Version
000000dd	Normal	default	Milan 01	10.144.213.210	169.51.206.185	1.24.8_1545

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

kubernetes default Search

Overview

Workloads

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

Service

- Ingresses
- Ingress Classes
- Services

Config and Storage

Workloads

Workload Status

Deployments Pods Replica Sets

Deployments

Overview

Workloads

- Cron Jobs
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Service

- Ingresses
- Ingress Classes
- Services

Deployments

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

Pods

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created
jobprintapp-bcd8f77-25mgf	Show all	Show all	10.144.185.58	Running	0	-	-	54 seconds ago

Replica Sets

Name	Images	Labels	Pods	Created
jobprintapp-bcd8f77	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