

Assignment -4

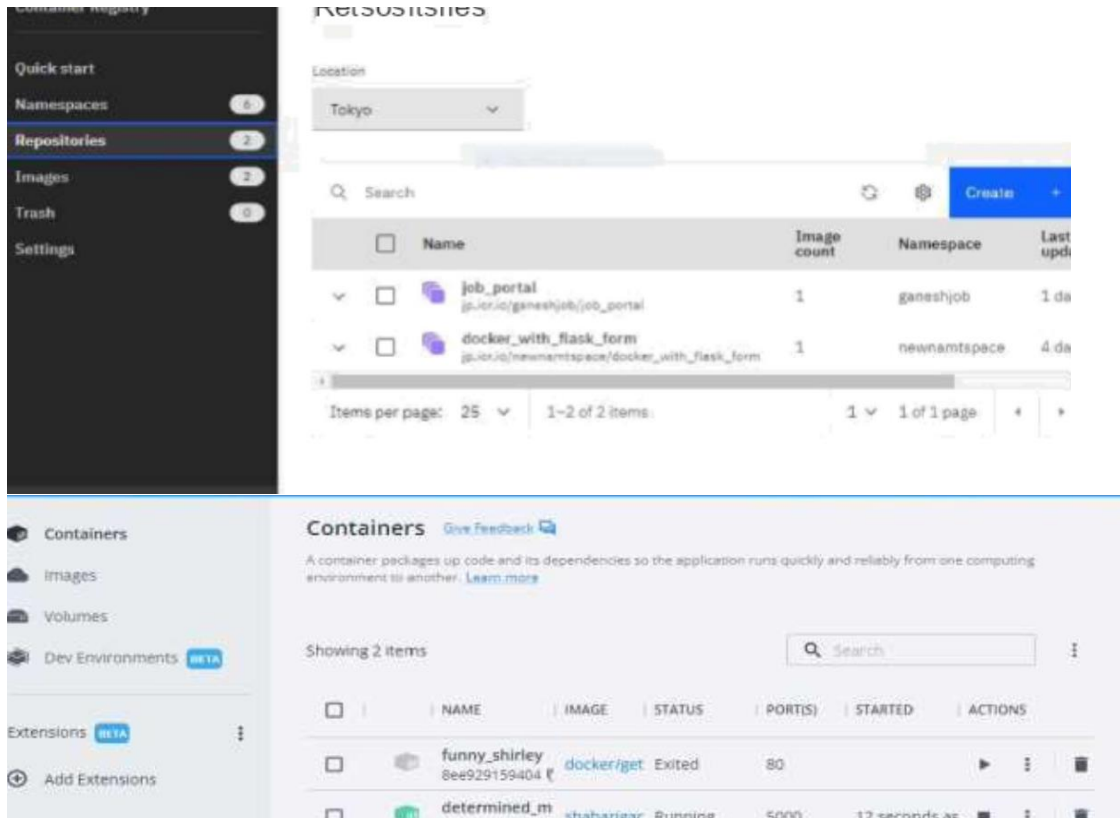
Assignment Date	07 October 2022
Student Name	NITISHARIHARAN K S
Student Roll Number	210419104112
Maximum Marks	2 Marks

Question 1:

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

```
C:\Users\ADMIN>docker pull shabariganesan/docker_with_flask_form
Using default tag: latest
latest: Pulling from shabariganesan/docker_with_flask_form
1671565cc8df: Pull complete
3e94d13e55e7: Pull complete
fa9c7528c685: Pull complete
53ad072f9cd1: Pull complete
d6b983117533: Pull complete
d8092d56ded5: Pull complete
c71afc637d59: Pull complete
864a10b3c704: Pull complete
4334b2fe8293: Pull complete
894457083f4: Pull complete
f885911288d0: Pull complete
086f369ca59f: Pull complete
e113bd27b88e: Pull complete
Digest: sha256:c61f28873bf1c909786ce991b8b68cd976765077f344e34d50e6cce8cf8d95c3
Status: Downloaded newer image for shabariganesan/docker_with_flask_form:latest
docker.io/shabariganesan/docker_with_flask_form:latest

C:\Users\ADMIN>
```



Question 2 :

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

[illegible]

Question 3 :

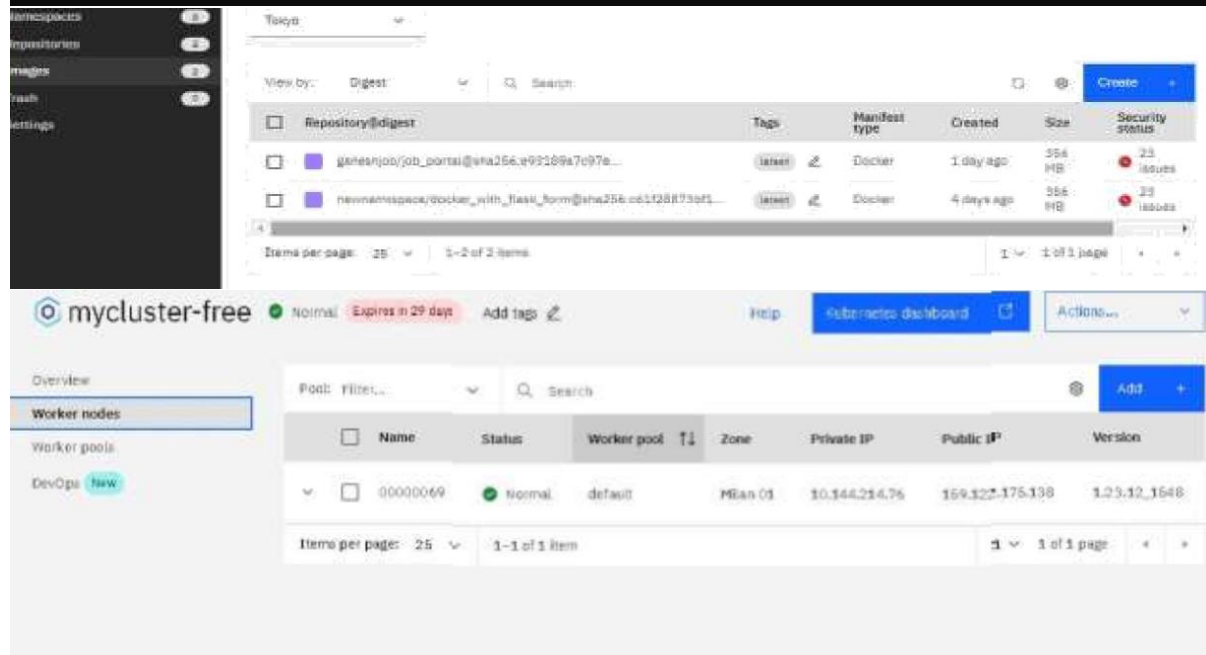
3. Create a IBM container registry and deploy helloworld app or jobportalapp.

```
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
```



The image shows two screenshots. The top screenshot is a terminal window showing the steps to create a deployment in Kubernetes. The bottom screenshot is a composite image showing the IBM Container Registry interface and the mycluster-free dashboard.

IBM Container Registry Interface:

- Left sidebar: namespaces, repositories, images, push, settings.
- Search bar: Tokyo.
- View by: Digest. Search: [empty]
- Table with columns: Repository, Tags, Manifest type, Created, Size, Security status.
- Items listed:
 - Repository: ganesha/job_portal@sha256:e93189a7c97a... Tags: latest Manifest type: Docker Created: 1 day ago Size: 554 MB Security status: 23 issues
 - Repository: newnamespace/docker_with_flask_form@sha256:cd11288730f1... Tags: latest Manifest type: Docker Created: 4 days ago Size: 554 MB Security status: 23 issues
- Footer: Items per page: 25, 1-2 of 2 items, 1 of 1 page.

mycluster-free Dashboard:

- Header: mycluster-free, Normal, Expires in 29 days, Add tags, Help, Kubernetes dashboard, Actions.
- Left sidebar: Overview, Worker nodes (selected), Worker pools, DevOps (New).
- Table with columns: Name, Status, Worker pool, Zone, Private IP, Public IP, Version.
- Items listed:
 - Name: 00000069 Status: Normal Worker pool: default Zone: Mlan 01 Private IP: 10.144.214.76 Public IP: 169.127.175.138 Version: 1.25.12_1648
- Footer: Items per page: 25, 1-1 of 1 item, 1 of 1 page.

Question 4 :

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.

```

The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-' 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 '-' 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
NAME                                READY     UP-TO-DATE   AVAILABLE   AGE
kubernetes-dashboard-v1.10.1        1         1             1           1m
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
NAME                                READY     UP-TO-DATE   AVAILABLE   AGE
kubernetes-dashboard-v1.10.1        1         1             1           1m
resources found in kubernetes-dashboard namespace.
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
NAME                                READY     UP-TO-DATE   AVAILABLE   AGE
kubernetes-dashboard-v1.10.1        1         1             1           1m
resources found in kubernetes-dashboard namespace.
C:\Windows\system32>kubectl proxy
Starting to serve on 127.0.0.1:8001
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
NAME                                READY     UP-TO-DATE   AVAILABLE   AGE
kubernetes-dashboard-v1.10.1        1         1             1           1m
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
NAME                                READY     UP-TO-DATE   AVAILABLE   AGE
kubernetes-dashboard-v1.10.1        1         1             1           1m
resources found in kubernetes-dashboard namespace.
C:\Windows\system32>kubectl -n kubernetes-dashboard get pods
NAME                                READY     STATUS      RESTARTS   AGE
kubernetes-dashboard-v1.10.1-6wz9d  1         Running    0           1m
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
flask-app-ingress   ClusterIP   10.0.0.1          <None>           80              27m
C:\Windows\system32>kubectl apply -f ingress.yaml
ingress.extensions/flask-app-ingress created
C:\Windows\system32>kubectl logs -l flask-app-ingress
I0614 14:00:00.000000 flask-app-ingress: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.[0m
I0614 14:00:00.000000 flask-app-ingress: running on all addresses (0.0.0.0)
I0614 14:00:00.000000 flask-app-ingress: running on HTTP://127.0.0.1:5000
I0614 14:00:00.000000 flask-app-ingress: running on HTTP://172.30.23.11:5000
I0614 14:00:00.000000 flask-app-ingress: Address Ctrl-C to quit[0m
I0614 14:00:00.000000 flask-app-ingress: starting with stat
I0614 14:00:00.000000 flask-app-ingress: debugger is active!
I0614 14:00:00.000000 flask-app-ingress: sugger PIN: 116-437-140

```