

Assignment -4
PNT2022TMID27090

Assignment Date	2 nd November 2022
Student Name	Ramya N
Student Roll Number	310819106064
Maximum Marks	2 Marks

Question-1:

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

Solution :

GitHub link : <https://github.com/IBM-EPBL/IBM-Project-1022-1658334970/tree/main/Assignments/Ramya%20N/Assignment%204>

The screenshot displays the Docker Desktop application window. The left sidebar shows navigation options: Containers, Images, Volumes, Dev Environments, and Extensions. The main area is titled 'Containers' and shows a list of running containers. Below this, a terminal window is open, showing the execution of Docker commands to pull and run images.

Containers List:

NAME	IMAGE	STATUS	PORTS	STARTED	ACTIONS
elated_chatterjee	ubuntu:latest	Running		4 minutes ago	
boring_mclaren	centos:latest	Running		1 minute ago	

Terminal Output:

```
C:\Users\Ramyadocker> ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
C:\Users\Ramyadocker> pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
80a88026298: Pull complete
Digest: sha256:7cfe75438fc77c9d7235ae502bf229b15ca86647ac01c844b272b56328d56184
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

C:\Users\Ramyadocker> images
REPOSITORY    TAG       IMAGE ID   CREATED   SIZE
ubuntu        latest   cdb68b455a14   2 days ago   77.8MB

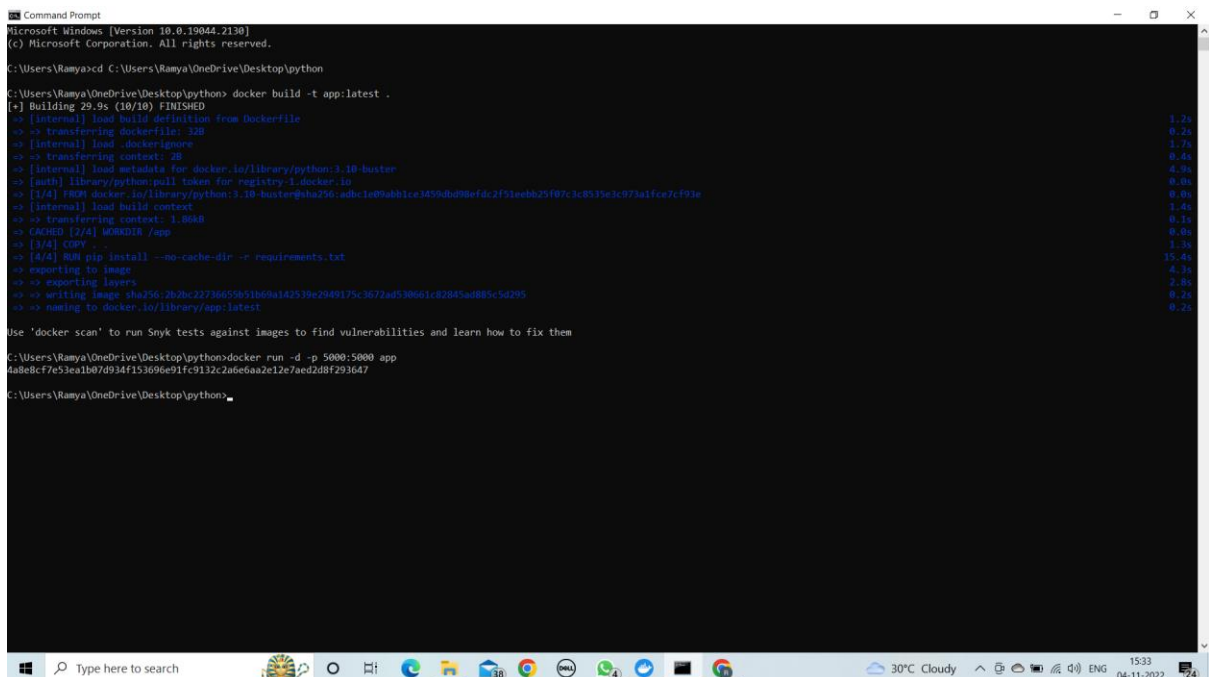
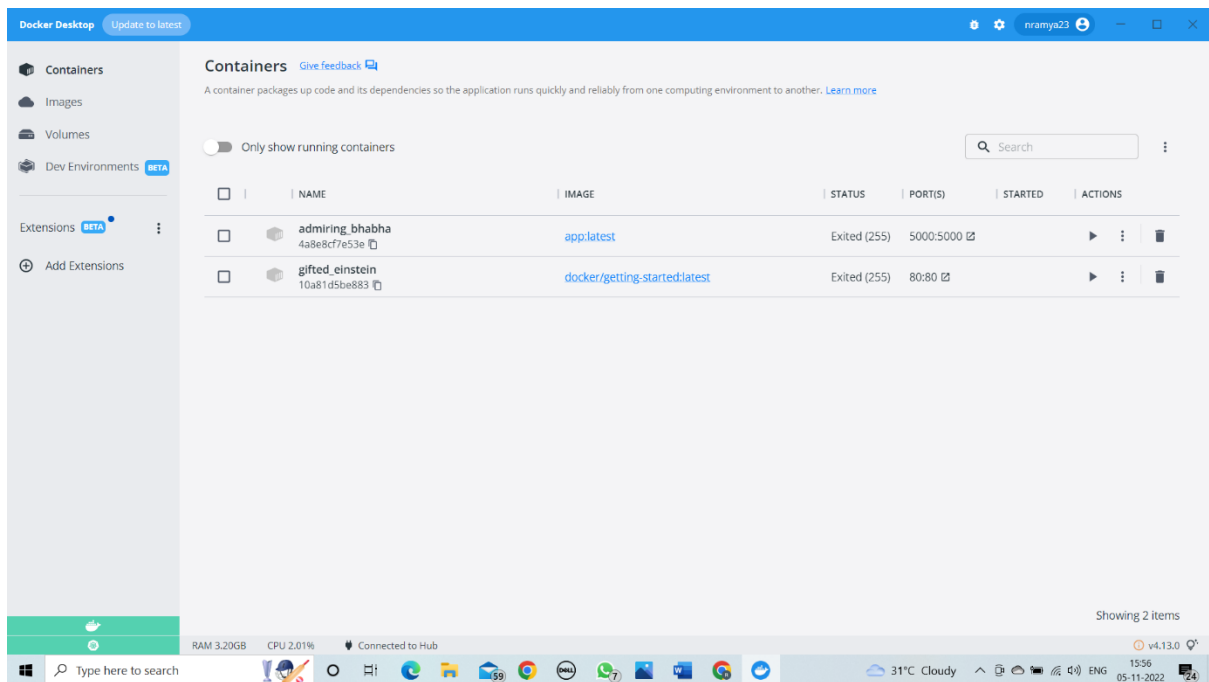
C:\Users\Ramyadocker> pull centos
Using default tag: latest
latest: Pulling from library/centos
e1d8c7532777: Pull complete
Digest: sha256:a27fd8080b517143cbbab9d4b7c8571c40d67d534bbdee55bd6c473f432b177
Status: Downloaded newer image for centos:latest
docker.io/library/centos:latest

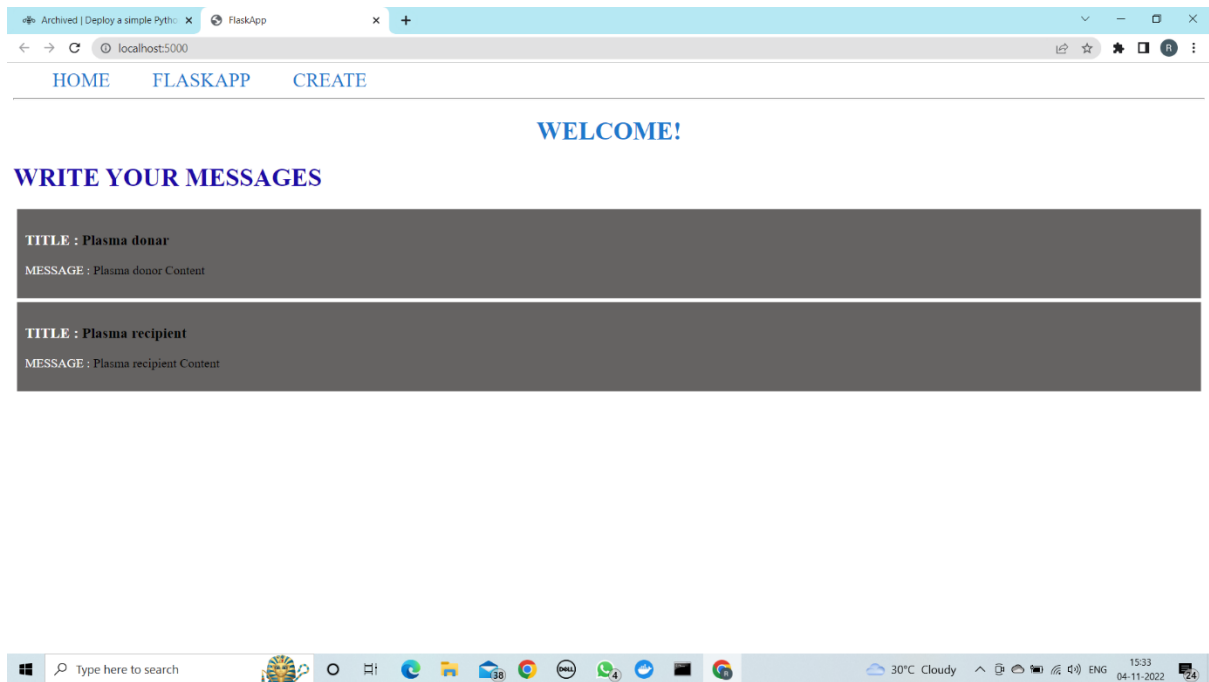
C:\Users\Ramyadocker> ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
805b13f46c22   centos:latest   "/bin/bash"   34 seconds ago   Up 29 seconds   boring_mclaren
10aa88026298   ubuntu:latest   "bash"        3 minutes ago   Up 3 minutes     elated_chatterjee

C:\Users\Ramyadocker>
```

Question 2 :

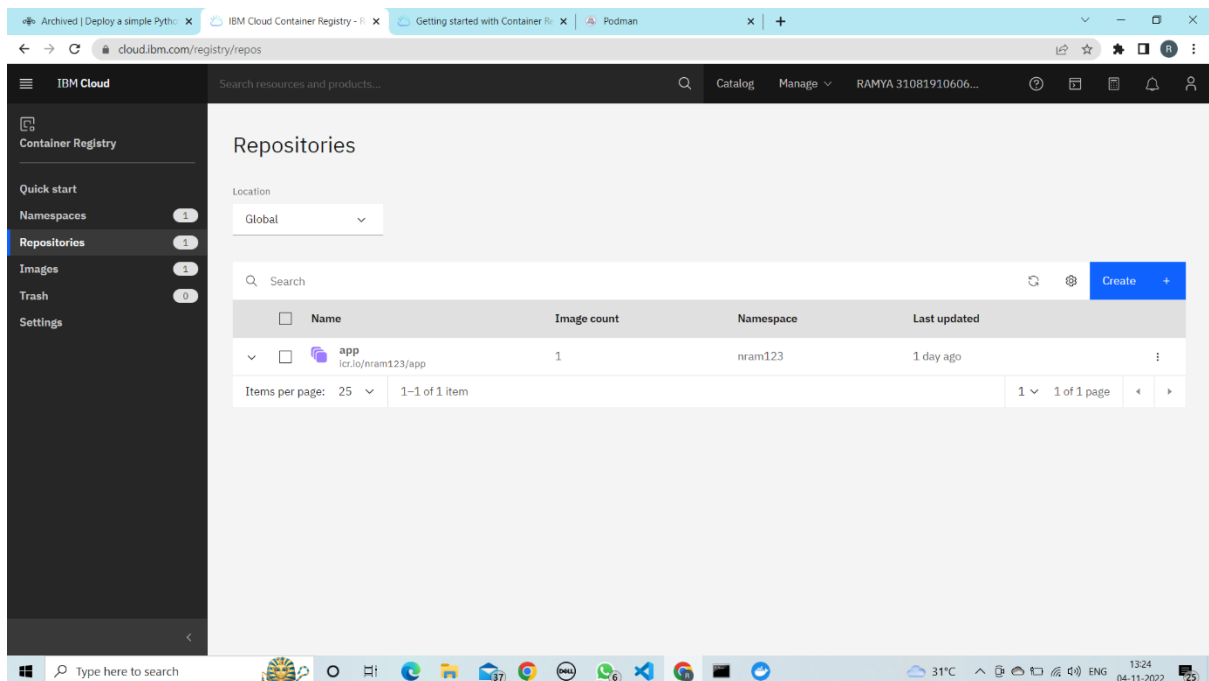
Create a docker file for the jobportal application and deploy it in Docker desktop application.





QUESTION 3 :

Create a IBM container registry and deploy helloworld app or jobportalapp



```
Command Prompt
C:\Users\Ramy>docker tag app icr.io/nram123/app:latest
C:\Users\Ramy>docker push icr.io/nram123/app:latest
The push refers to repository [icr.io/nram123/app]
2a22539fb2c9: Pushed
7cda585ce95f: Pushed
70d4d7b6ed3f: Pushed
80a66a8360c5: Pushed
779f328f6d1d: Pushed
3154fd784942: Pushed
a0520480c038: Pushed
86d4190a4f6: Pushed
8cf4aa8768a: Pushed
ada8cfae898c: Pushed
7a0f5bec8b3: Pushed
f0a87eb98d2a: Pushed
latest: digest: sha256:b10535d6c37a97226bcd68d3fca2dd412da7f2627244730d44a21f3c864fff size: 2844

C:\Users\Ramy>ibmcloud cr image-list
Listing images...

Repository      Tag      Digest      Namespace      Created      Size      Security status
icr.io/nram123/app  latest  b10535d6c37a  nram123        19 hours ago  347 MB      -

C:\Users\Ramy>
```

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.

Overview						
Cluster	Deployments					
Namespaces						
Nodes						
Persistent Volumes						
Roles						
Storage Classes						
Namespace: default						
Overview						
Workloads						
Cron Jobs						
Daemon Sets						
Deployments						
Jobs						
Pods						
Replica Sets						
Replication Controllers						
Stateful Sets						
Discovery and Load Balancing						
Ingresses						
Services						
Config and Storage						

Name	Labels	Pods	Age	Images
flask-node-deployment	app: flasknode	1 / 1	5 minutes	registry.ng.bluemix.net/flask-node/app

Name	Node	Status	Restarts	Age	CPU (cores)	Memory (bytes)
flask-node-deployment-5cd96cf6bc-d6nfx	10.47.79.201	Running	0	5 minutes	0	19.352 Mi

Name	Labels	Pods	Age	Images
flask-node-deployment-5cd96cf6bc	app: flasknode pod-template-hash: 1785279267	1 / 1	5 minutes	registry.ng.bluemix.net/flask-node/app

Discovery and Load Balancing					
Services					
Name	Labels	Cluster IP	Internal endpoints	External endpoints	Age
kubernetes	component: apiserver provider: kubernetes	172.21.0.1	kubernetes:443 TCP kubernetes:0 TCP	-	a minute
flask-node-deployment	-	172.21.104.14	flask-node-deployment:5000 TCP flask-node-deployment:0 TCP	-	a minute

