

**Assignment - 4**  
Kubernetes/Docker

Assignment Date	9 September 2022
Student Name	Keerthana M
Student Roll Number	111519205021
Maximum Marks	2 Marks

## Question 1:

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

03:55:01

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.18  
node1

cdqjc0m0\_cdqjc360qau0009ecni0

IP  
192.168.0.18

OPEN PORT

Memory

CPU

SSH  
ssh ip172-18-0-56-cdqjc0m0qau0009ecnhg@direct.labs.pla

DELETE

EDITOR

```
#####
[node1] (local) root@192.168.0.18 ~
$ docker run -d -p 80:80 docker/getting-started
Unable to find image 'docker/getting-started:latest' locally
latest: Pulling from docker/getting-started
4f9b9388f04a: Pull complete
5867c8a5fcbd: Pull complete
4b639e65cb3b: Pull complete
061ed9e2b976: Pull complete
bc19f3e8eeb1: Pull complete
4071be97c256: Pull complete
79b586f1a54b: Pull complete
0c9732f525d6: Pull complete
Digest: sha256:b558be874169471bd4e65bd6eac8c303b271a7ee8553ba47481b73b2bf597aee
Status: Downloaded newer image for docker/getting-started:latest
7dfdefc1ac7004d41ac96127b2c8cc10ff2bab808630c71387aa4de85dd59276
[node1] (local) root@192.168.0.18 ~
$
```

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.1219]
(c) Microsoft Corporation. All rights reserved.

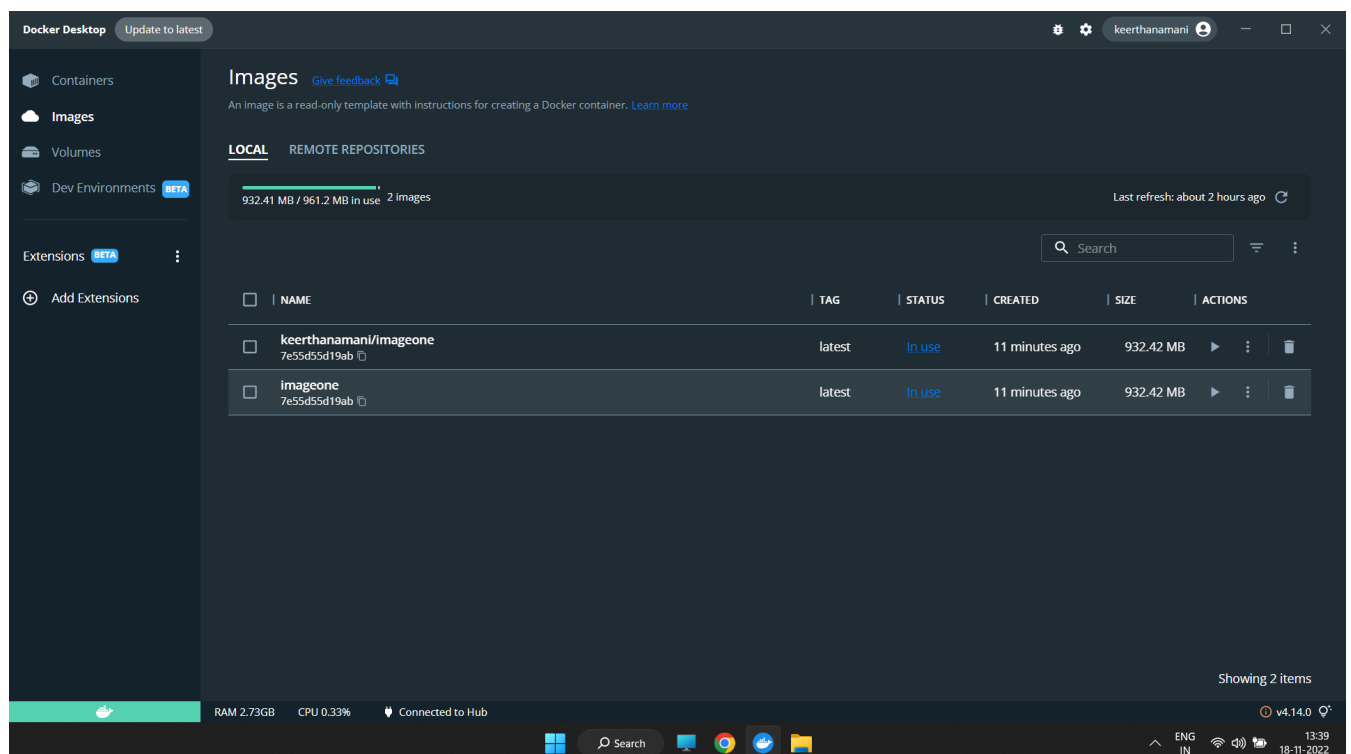
E:\Flask\flask_with_form_and_docker-main>docker build -t imageone .
[+] Building 6.2s (10/10) FINISHED
=> [internal] load build definition from Dockerfile                                0.8s
=> => transferring dockerfile: 32B                                              0.0s
=> [internal] load .dockerignore                                                  1.1s
=> => transferring context: 2B                                                  0.0s
=> [internal] load metadata for docker.io/library/python:3.10.6                 2.3s
=> [1/5] FROM docker.io/library/python:3.10.6@sha256:745efd7b7e4aac9a8422bd8c62d8bc35a693e8979a240d29677cb03e6aa 0.0s
=> [internal] load build context                                                0.5s
=> => transferring context: 689B                                              0.0s
=> CACHED [2/5] WORKDIR /app                                                    0.0s
=> CACHED [3/5] COPY requirements.txt ./                                         0.0s
=> CACHED [4/5] RUN pip install -r requirements.txt                             0.0s
=> CACHED [5/5] COPY . .                                                        0.0s
=> exporting to image                                                          1.7s
=> => exporting layers                                                         0.0s
=> writing image sha256:7e55d55d19ab18c700fa28c2673b59f5ba765c7da358f28baf435f46de0a0e75 0.1s
=> naming to docker.io/library/imageone                                         0.1s

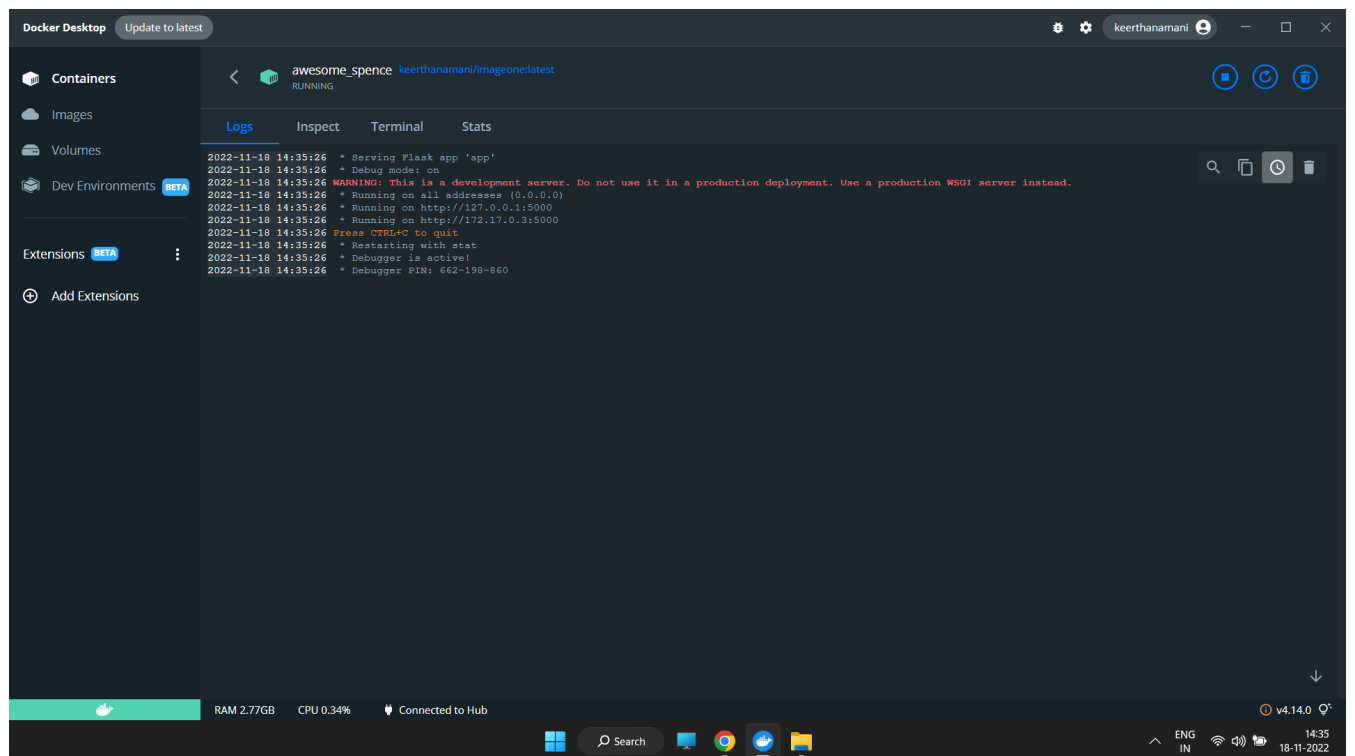
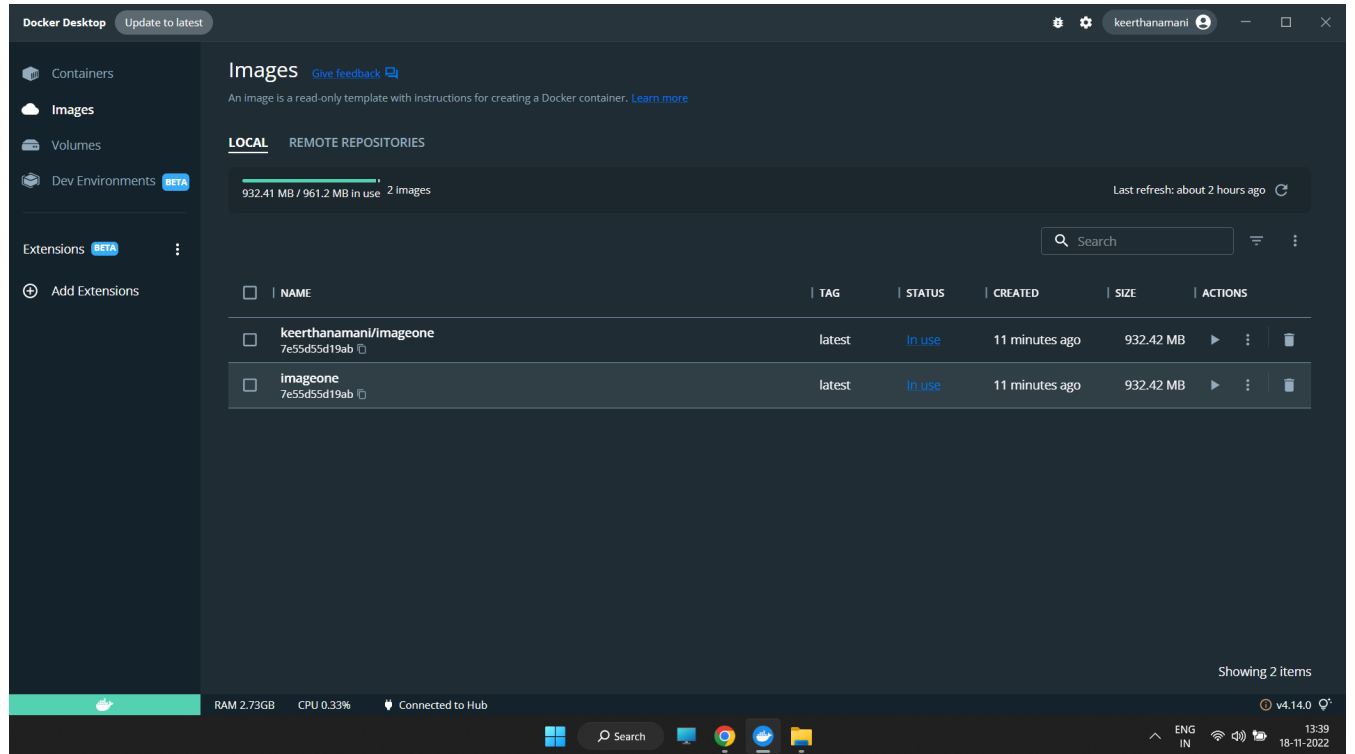
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

E:\Flask\flask_with_form_and_docker-main>
```

## Question 2:

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





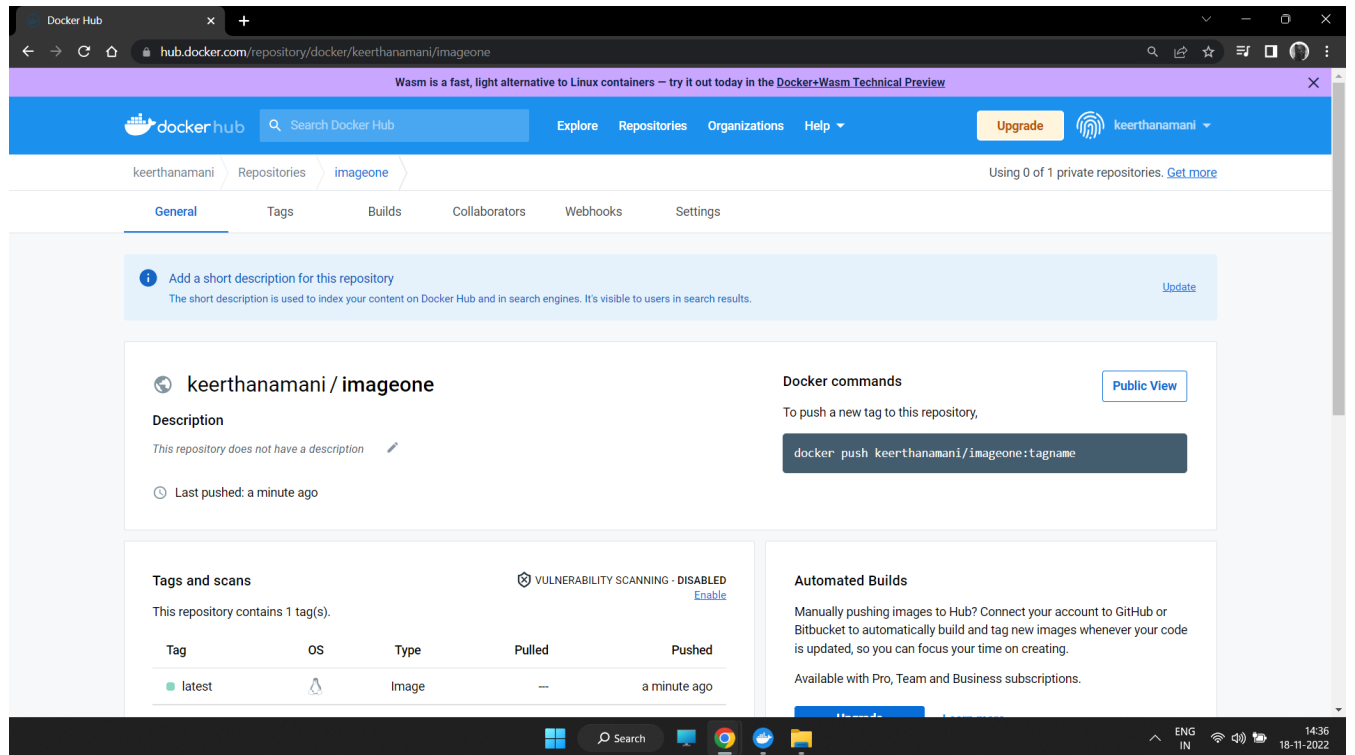
# Blog Page

## Messages

<div>Message One</div> <div>Message One Content</div>
<div>Message Two</div> <div>Message Two Content</div>

## Question 3:

Create a IBM container registry and deploy a hello world app or job portal app.



IBM Cloud Container Registry - 1 x

cloud.ibm.com/registry/namespaces

Search resources and products...

CatalogManageKEERTHANA M's Account

Container Registry

Quick start

Namespaces1

Repositories0

Images0

Trash0

Settings

## Namespaces

LocationTokyo

Resource group: Filter...Search

Create

	Name	Resource group	Repository count	Image count	Retention policy	
	keerthanamani	Default	0	0	Retain all images	

Items per page: 251-1 of 1 item

11 of 1 page

Search

ENG IN

14:4418-11-2022

IBM Cloud Container Registry - 1 x

cloud.ibm.com/registry/repos

Search resources and products...

CatalogManageKEERTHANA M's Account

Container Registry

Quick start

Namespaces1

Repositories1

Images1

Trash0

Settings

## Repositories

LocationTokyo

Search

Create

	Name	Image count	Namespace	Last updated	
	latest	1	keerthanamani	2 hours ago	

Items per page: 251-1 of 1 item

11 of 1 page

Search

ENG IN

15:2518-11-2022

## Question 4:

Create a Kubernetes cluster in IBM cloud and deploy hello world image or job portal image and also expose the same app to run in nodeport.

The screenshot shows the Kubernetes dashboard interface. The breadcrumb navigation at the top indicates the path: Workloads > Pods > sample-app-d9bfd84d9-fp74z. The left sidebar contains a menu with categories: Workloads (Cron Jobs, Daemon Sets, Deployments, Jobs, Pods, Replica Sets, Replication Controllers, Stateful Sets), Service (Ingresses, Ingress Classes, Services), and Config and Storage (Config Maps, Persistent Volume Claims, Secrets, Storage Classes). The main content area displays the details for the selected Pod:

- Metadata:** Name: sample-app-d9bfd84d9-fp74z, Namespace: default, Created: Oct 27, 2022, Age: a day ago, UID: 3f3b4ff6-4fa6-4f07-9454-35acb2c91631. Labels: app: sample-app, pod-template-hash: d9bfd84d9.
- Resource information:** Node: docker-desktop, Status: ImagePullBackOff, IP: 10.1.0.48, QoS Class: BestEffort, Restarts: 0, Service Account: default.
- Conditions:** A table showing the pod's status history:

Type	Status	Last probe time	Last transition time	Reason	Message
Initialized	True	-	a day ago	-	-
Ready	False	-	a day ago	ContainersNotReady	containers with unready status: [sample-app-container]

The screenshot shows the Kubernetes dashboard interface. The breadcrumb navigation at the top indicates the path: Workloads > Deployments > sample-app. The left sidebar is identical to the previous screenshot. The main content area displays the details for the selected Deployment:

- Metadata:** Name: sample-app, Namespace: default, Created: Oct 27, 2022, Age: a day ago, UID: 9699564b-f097-4168-be80-31f40116a0fc. Annotations: deployment.kubernetes.io/revision: 1, kubectrl.kubernetes.io/last-applied-configuration.
- Resource information:** Strategy: RollingUpdate, Min ready seconds: 0, Revision history limit: 10. Selector: app: sample-app.
- Rolling update strategy:** Max surge: 25%, Max unavailable: 25%.