

# Assignment -4

Assignment Date	13 NOVEMBER 2022
Student Name	Majnu P
Student Roll Number	211219106005
Maximum Marks	2 Marks

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

```
Select Command Prompt
Microsoft Windows [Version 10.0.19044.2251]
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C:\Users\LENOVO>docker run -d -p 80:80 docker/getting-started
Unable to find image 'docker/getting-started:latest' locally
latest: Pulling from docker/getting-started
df9b9388f04a: Pull complete
5867cba5fcbd: 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
14a53be070cc39008c137fb144b8be1bf28bb99ceb64ba5c2de31262e9c897b4

C:\Users\LENOVO>docker version
Client:
 Cloud integration: v1.0.29
 Version: 20.10.21
 API version: 1.41
 Go version: go1.18.7
 Git commit: baeda1f
 Built: Tue Oct 25 18:08:16 2022
 OS/Arch: windows/amd64
 Context: default
 Experimental: true

Server: Docker Desktop 4.14.1 (91661)
Engine:
 Version: 20.10.21
 API version: 1.41 (minimum version 1.12)
 Go version: go1.18.7
 Git commit: 3056208
 Built: Tue Oct 25 18:00:19 2022
 OS/Arch: linux/amd64
 Experimental: false
 containerd:
 Version: 1.6.9
```

IBM

IBM-Project-10373-1659

CAD-B1-1M3E (Morning

Explore Docker's Containe

Docker Playground

labs.play-with-docker.com/p/cdrq2e3tccg008dpgsg

03:59:45

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

Add instances to your playground.

Sessions and all their instances are deleted after 03:59:45 hours.

The screenshot shows the IBM Docker Playground interface. On the left, there's a sidebar with a list of instances: manager1 (192.168.0.26), manager2 (192.168.0.24), manager3 (192.168.0.28), manager4 (192.168.0.27), and manager5 (192.168.0.25). The top bar shows a timer at 03:58:22 and a 'CLOSE SESSION' button. The main area displays details for the container 'cdrqq2e3\_cdrqqjm0qau000ahd9d0', including its IP (192.168.0.26), memory usage (1.04% / 41.71MiB / 3.906GiB), CPU usage (0.41%), and an SSH command. Below this, there's a terminal window showing a warning message and a shell prompt.

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

```

Windows PowerShell
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ibm/alpine    latest   9c6f07244728   3 months ago   5.54MB
alpine        latest   9c6f07244728   3 months ago   5.54MB
PS C:\Users\Rakesh> docker push ibm/alpine
Using default tag: latest
The push refers to repository [docker.io/ibm/alpine]
994393dc58e7: Preparing
denied: requested access to the resource is denied
PS C:\Users\Rakesh> docker tag alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

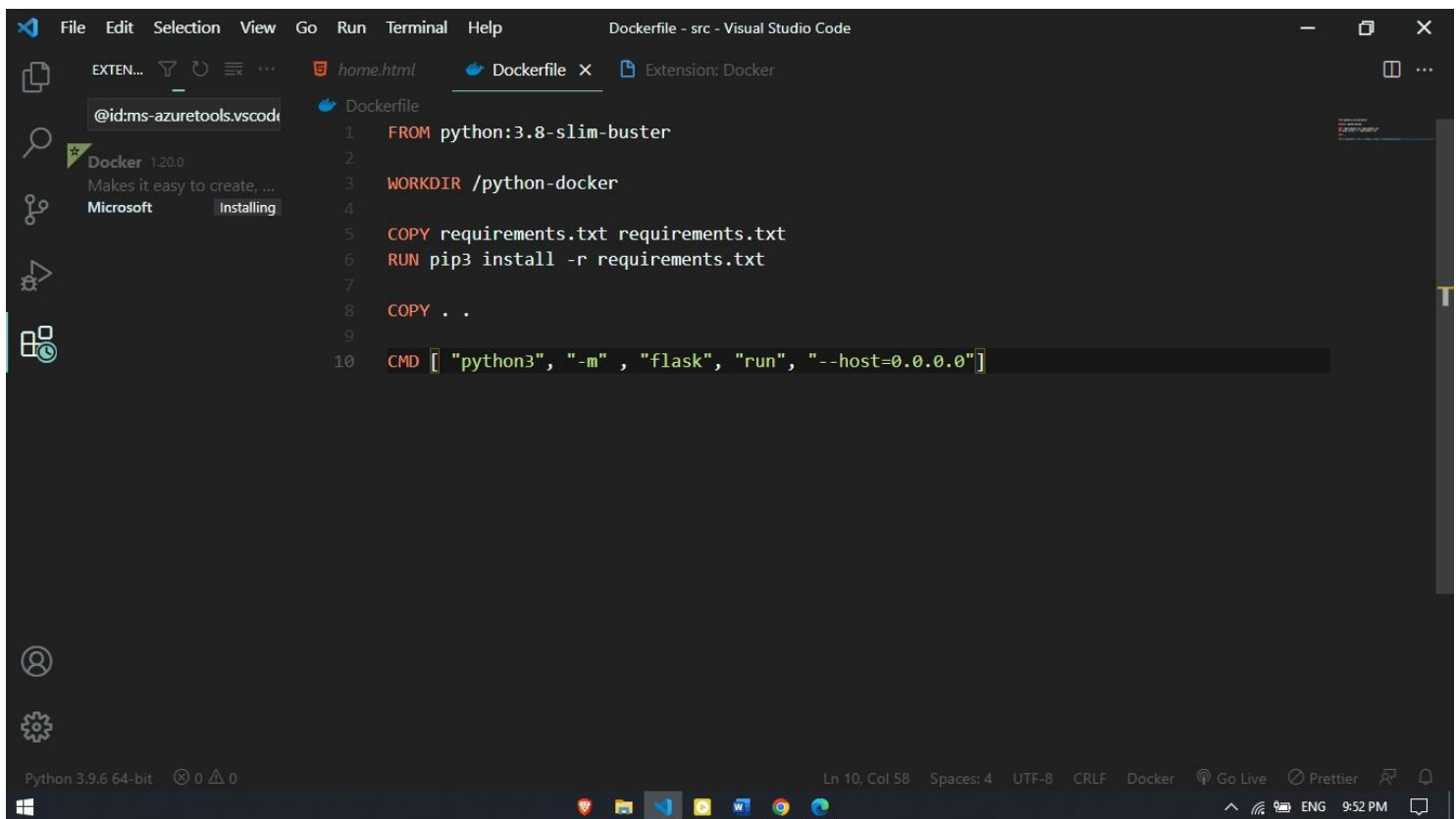
Usage:  docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

Usage:  docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan/alpine
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ibm/alpine    latest   9c6f07244728   3 months ago   5.54MB
alpine        latest   9c6f07244728   3 months ago   5.54MB
saravanan/alpine latest   9c6f07244728   3 months ago   5.54MB
PS C:\Users\Rakesh> docker tag alpine:latest saravanan0310/alpine
PS C:\Users\Rakesh> docker push saravanan0310/alpine
Using default tag: latest
The push refers to repository [docker.io/saravanan0310/alpine]
994393dc58e7: Pushed
  
```

# Dockerfile



The screenshot shows the Visual Studio Code interface with a Dockerfile open. The file explorer on the left shows the Docker extension being installed. The Dockerfile content is as follows:

```
1 FROM python:3.8-slim-buster
2
3 WORKDIR /python-docker
4
5 COPY requirements.txt requirements.txt
6 RUN pip3 install -r requirements.txt
7
8 COPY . .
9
10 CMD ["python3", "-m", "flask", "run", "--host=0.0.0.0"]
```

The status bar at the bottom indicates the Python 3.9.6 64-bit environment is active, and the file is encoded in UTF-8 with CRLF line endings. The system tray shows the time as 9:52 PM.

Email address

Password

Sign in

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## Sign up

Your Name

Your Email

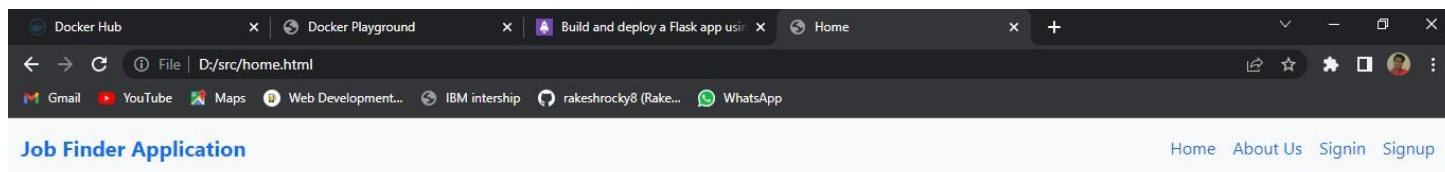
Password

Repeat your password



I agree all statements in [Terms of service](#)





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

```
C:\Windows\System32\cmd.exe - docker build.
Microsoft Windows [Version 10.0.19044.2130]
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C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker build .
[*] Building 66.3s (7/10)
-> [internal] load build definition from Dockerfile
-> => transferring dockerfile: 199B
-> [internal] load .dockerignore
-> => transferring context: 2B
-> [internal] load metadata for docker.io/library/python:3.7-alpine
-> [auth] library/python:pull token for registry-1.docker.io
-> [1/5] FROM docker.io/library/python:3.7-alpine@sha256:6e24a81708ffdb8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f
-> => resolve docker.io/library/python:3.7-alpine@sha256:6e24a81708ffdb8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f
-> => sha256:6e24a81708ffdb8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 1.65kB / 1.65kB
-> => sha256:c7f521e75ac40f8266cb22ee968c13d0317a1afeb724d0915c4629347152c61bf 1.37kB / 1.37kB
-> => sha256:caace8ae014d1c9f31128c0a96a2ee9b0b257daab97791c86788712ed7a38948 7.71kB / 7.71kB
-> => sha256:47858aee13bf9c7c2b62cfacdc9ce2524efef339df0c0ed8935c6587a376d60 673.19kB / 673.19kB
-> => sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 11.16MB / 11.16MB
-> => sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 230B / 230B
-> => extracting sha256:47858aee13bf9c7c2b62cfacdc9ce2524efef339df0c0ed8935c6587a376d60
-> => sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fdb0d08f08abe21971d18b 2.89MB / 2.89MB
-> => extracting sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50
-> => extracting sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e
-> => extracting sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fdb0d08f08abe21971d18b
-> [internal] load build context
-> => transferring context: 5.65kB
-> [2/5] WORKDIR /app
-> [3/5] RUN pip install pipenv
13.7s
```

#### 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 screenshot shows the IBM Cloud Kubernetes cluster overview page for a cluster named 'majnu'. The cluster is in a 'Normal' state and expires in 29 days. The overview includes a sidebar with navigation links for Overview, Worker nodes, Worker pools, and DevOps (marked as 'New'). The main content area displays a warning about the 29-day expiration and four status cards: Node status (1 of 1, Normal), Add-on status (0 of 0, Normal), Master status (Normal), and Ingress status (Healthy). Below these cards is a 'Details' section with a table of cluster information.

Cluster ID	Version	Infrastructure	Zones
cdqv3v9f05cs516njeb0	1.24.8_1544	Classic	Milan 01

Created	Resource group	Image security enforcement
11/17/2022, 2:04 PM	Default	<a href="#">Enable</a>



