

Assignment -4

Assignment Date	19 September 2022
Student Name	Saravanan M
Student Roll Number	211219106009
Maximum Marks	2 Marks

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

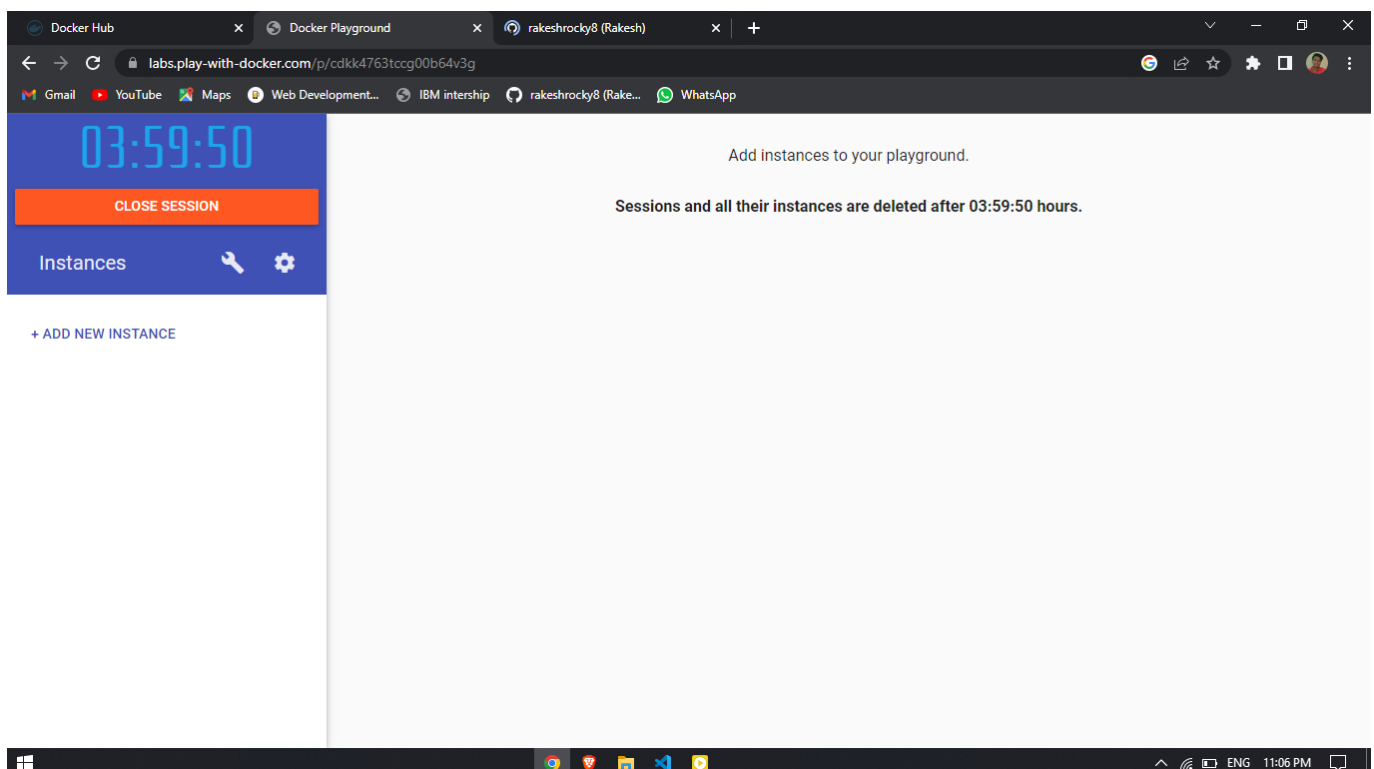
```
Windows PowerShell
PS C:\Users\Rakesh> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ibm/alpine latest 9c6f07244728 3 months ago 5.54MB
alpine latest 9c6f07244728 3 months ago 5.54MB
PS C:\Users\Rakesh> docker push ibm/alpine
Using default tag: latest
The push refers to repository [docker.io/ibm/alpine]
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
```



The screenshot shows the Docker Playground interface in a web browser. The top navigation bar includes links to Docker Hub, Docker Playground, and a user profile for 'rakeshrocky8 (Rakesh)'. The main content area displays the details of a container named 'cdkk9m79_cdkkd5n91rrg00fsv1ng'. The container's IP is 192.168.0.28, and it has a memory usage of 0.92% (37MiB / 3.906GiB) and CPU usage of 0.80%. The SSH command is 'ssh ip172-18-0-5-cdkk9m791rrg00fsv1d0@direct.labs.play-'. Below the container details, there is a terminal window showing a warning message and the prompt '[node1] (local) root@192.168.0.28 ~\$'. The left sidebar shows a list of instances, with '192.168.0.28 node1' selected. The bottom status bar indicates the time as 11:25 PM and the language as ENG.

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'.

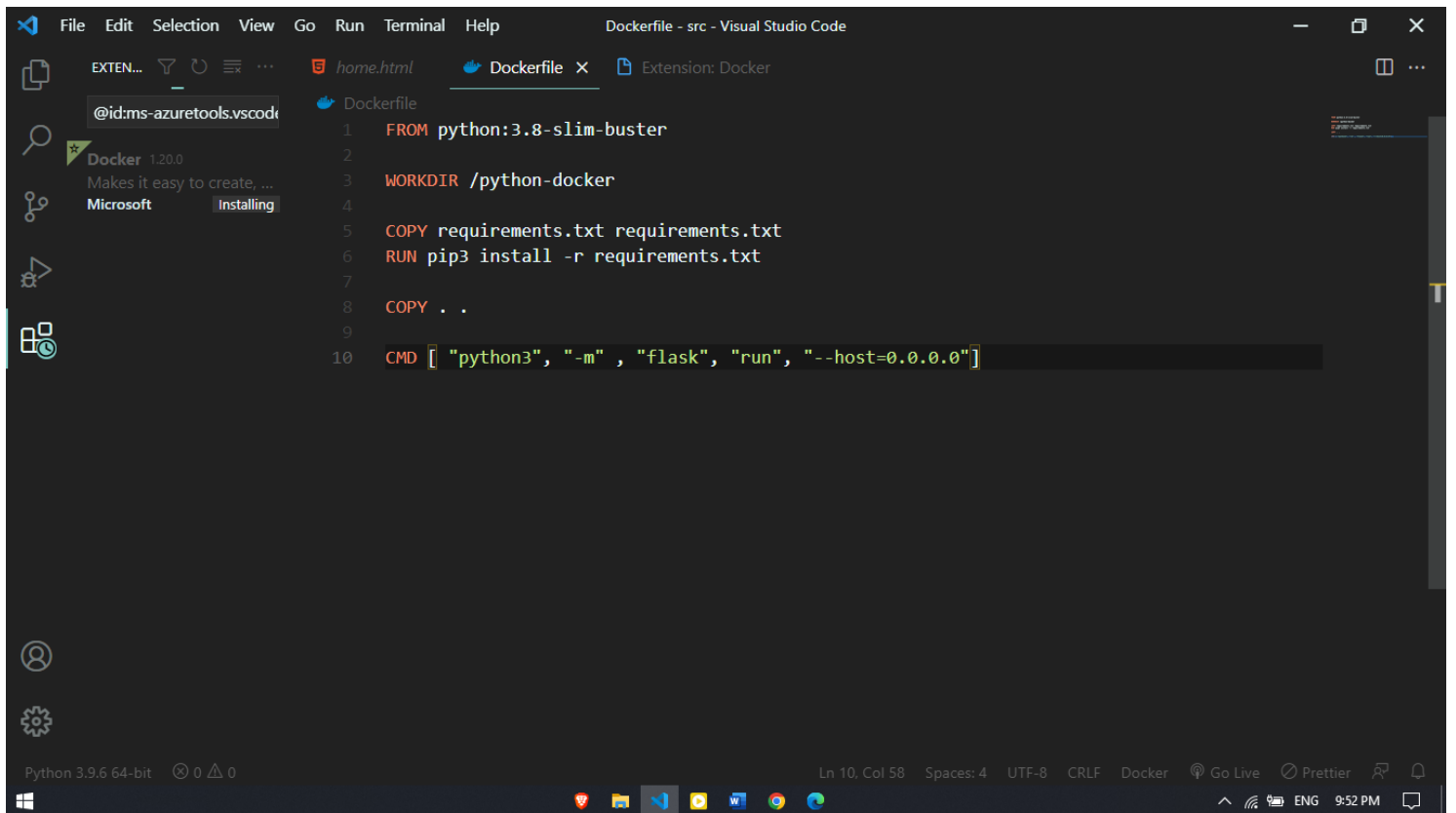
Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan/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 saravanan0310/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



```
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 screenshot shows the Visual Studio Code interface with the Dockerfile open. The left sidebar displays the Docker extension (version 1.20.0) as 'Installing'. The bottom status bar indicates 'Python 3.9.6 64-bit' and 'Ln 10, Col 58'.

Email address

Password

Sign in

Not a member? [Signup](#)

Sign up

Your Name

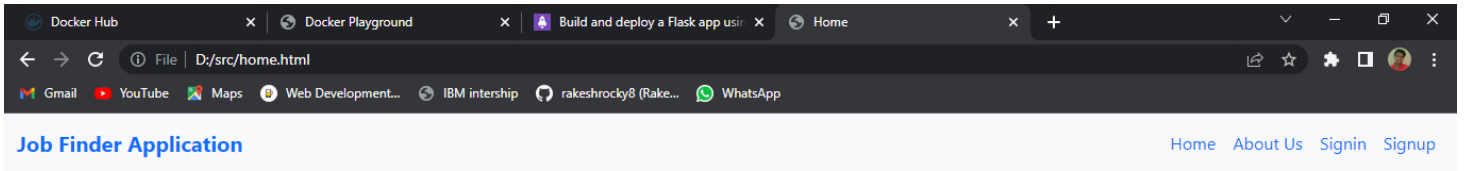
Your Email

Password

Repeat your password

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





JOB FINDER

Latest job searching



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]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker build .
[+] Building 06.3s (7/19)
=> [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@sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f
=> => resolve docker.io/library/python:3.7-alpine@sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f
=> => sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 1.65kB / 1.65kB
=> => sha256:c7f521e75ec40f0260cb22ee68c13d0337a1aafefb724e015c4629347152c01bf 1.37kB / 1.37kB
=> => sha256:caace8ae014d1c9f31120c0a96a2ee9bb257daab97791c80780712ed7e90948 7.71kB / 7.71kB
=> => sha256:47858ae13bf9c7c2b62cfacdc9ce2524efe339df0e0e08935c6587a376d60 673.19kB / 673.19kB
=> => sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 11.16MB / 11.16MB
=> => sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 230B / 230B
=> => extracting sha256:47858ae13bf9c7c2b62cfacdc9ce2524efe339df0e0e08935c6587a376d60 5.85MB
=> => sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08fd08abe21971d18b 2.89MB / 2.89MB
=> => extracting sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 2.65MB
=> => extracting sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 0.85MB
=> => extracting sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08fd08abe21971d18b 1.08MB
=> [internal] load build context
=> => transferring context: 5.65kB
=> [2/5] WORKDIR /app
=> [3/5] RUN pip install pipenv 13.75s
```

```
C:\Windows\System32\cmd.exe - docker push icr.io/smartfashionapp/ibm
Space:

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>ibmcloud cr region-set global
The region is set to 'global', the registry is 'icr.io'.

OK

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

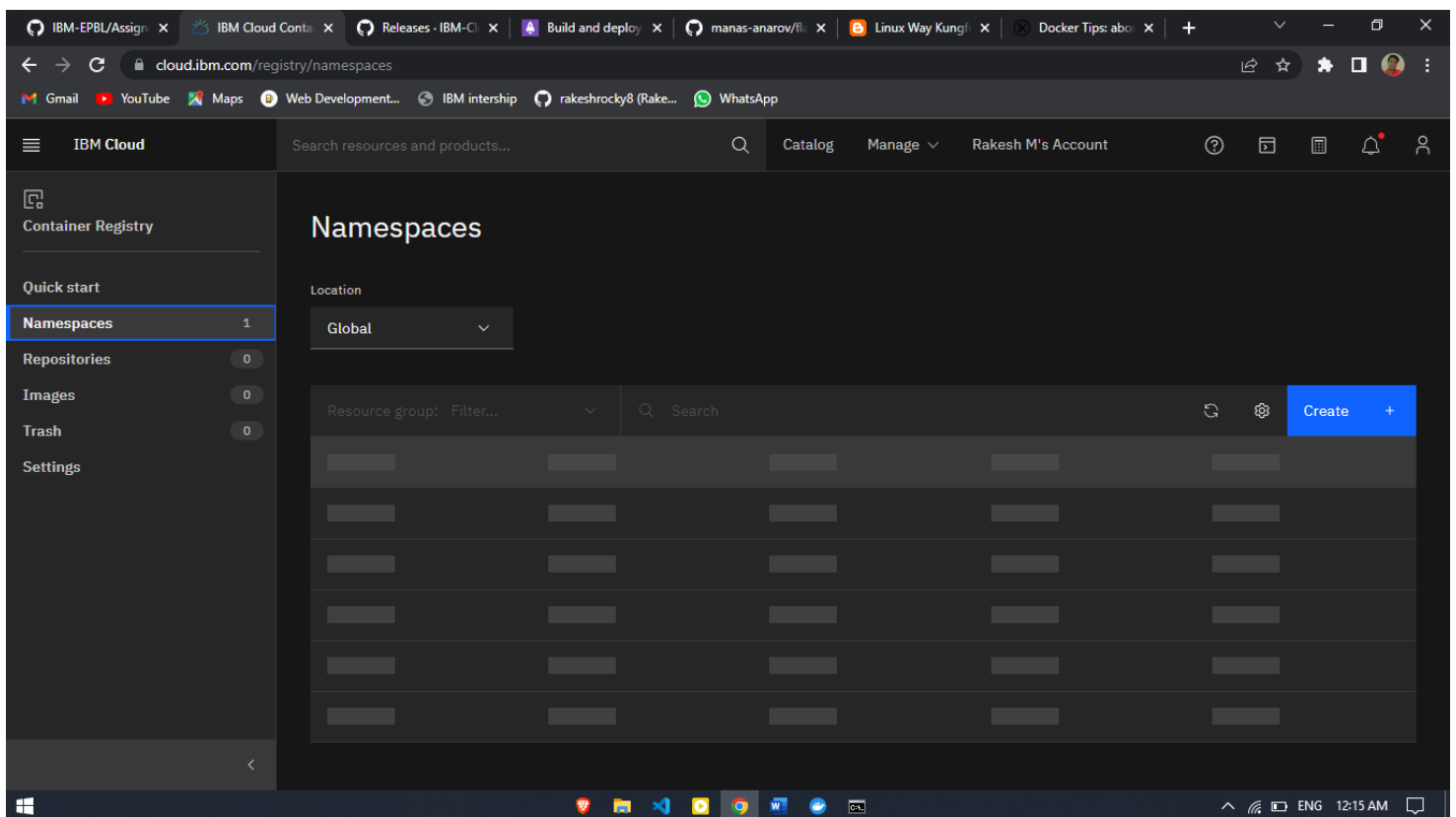
C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
myapp                1.0-recover        95232a1151f8       18 minutes ago     97.9MB
myapp                1.0-recovered      95232a1151f8       18 minutes ago     97.9MB
icr.io/smartfashionapp/app  ibm                95232a1151f8       18 minutes ago     97.9MB
saravanan0310/alpine    latest             9c6f07244728       3 months ago       5.54MB
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

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag myapp icr.io/smartfashionapp/ibm:
Error parsing reference: "icr.io/smartfashionapp/ibm:" is not a valid repository/tag: invalid reference format

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag myapp icr.io/smartfashionapp/ibm
Error response from daemon: No such image: myapp:latest

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag 95232a1151f8 icr.io/smartfashionapp/ibm

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker push icr.io/smartfashionapp/ibm
Using default tag: latest
The push refers to repository [icr.io/smartfashionapp/ibm]
879dc0a7d13a: Preparing
45ca0a7778a1: Preparing
420a6604882f: Preparing
c49c12d42c1e: Preparing
ed37f306c964: Preparing
31e0f81c5bec: Waiting
b3aede2981e3: Waiting
6666686122fd: Waiting
994393dc58e7: Waiting
```



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 console interface for creating a Kubernetes cluster. The browser address bar displays `cloud.ibm.com/kubernetes/catalog/create`. The page header includes the IBM Cloud logo, a search bar, and navigation links for Catalog, Manage, and the user's account (Rakesh M's Account). The main content area is titled "Kubernetes cluster" and includes tabs for "Create" and "About". A promotional banner for Red Hat OpenShift is visible. The "Plan details" section shows a "Standard" pricing plan. On the right, a "Summary" sidebar lists the cluster configuration, including "Worker nodes" (3). The "Total estimated cost" is shown as "--/mo". A "Create" button is located at the bottom right of the summary section. The Windows taskbar at the bottom shows the system clock as 10:24 AM on 10/24.

IBM Cloud Project-10373-1659175 Fwd: - rakesh0072001@gmail Assignments-CAPD/Assignm mycluster - IBM Cloud

cloud.ibm.com/kubernetes/clusters/cd1ocfmf0p7m891r5cu0/overview

IBM Cloud Search resources and products... Catalog Manage Rakesh M's Account

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

Overview

- Worker nodes
- Worker pools
- DevOps New

Expires in 30 days:
Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a [standard cluster](#).

Node status

1 of 1

Pending

[Details](#)

Add-on status

0 of 0

Normal

[Details](#)

Master status

Deploying

[Docs](#)

Ingress status

Pending

[Docs](#)

Details

Cluster ID	Version	Infrastructure	Zones
cd1ocfmf0p7m891r5cu0	1.24.7_1542	Classic	Milan 01
Created	Resource group	Image security enforcement	
11/9/2022, 4:21 PM		Enable	

IBM-EPBL/Assign IBM Cloud Conta Releases - IBM-Cl Build and deploy manas-anarov/fi Linux Way Kung Docker Tips: abo

cloud.ibm.com/registry/namespaces

IBM Cloud Search resources and products... Catalog Manage Rakesh M's Account

Container Registry

Quick start

Namespaces 1

Repositories 0

Images 0

Trash 0

Settings

Namespaces

Location

Global

Resource group: Filter... Search [Create](#)

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

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