

## Assignment -4

Assignment Date	19 September 2022
Student Name	Ajantha S
Project Name	Personal Expense Tracker Application
Maximum Marks	2 Marks

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

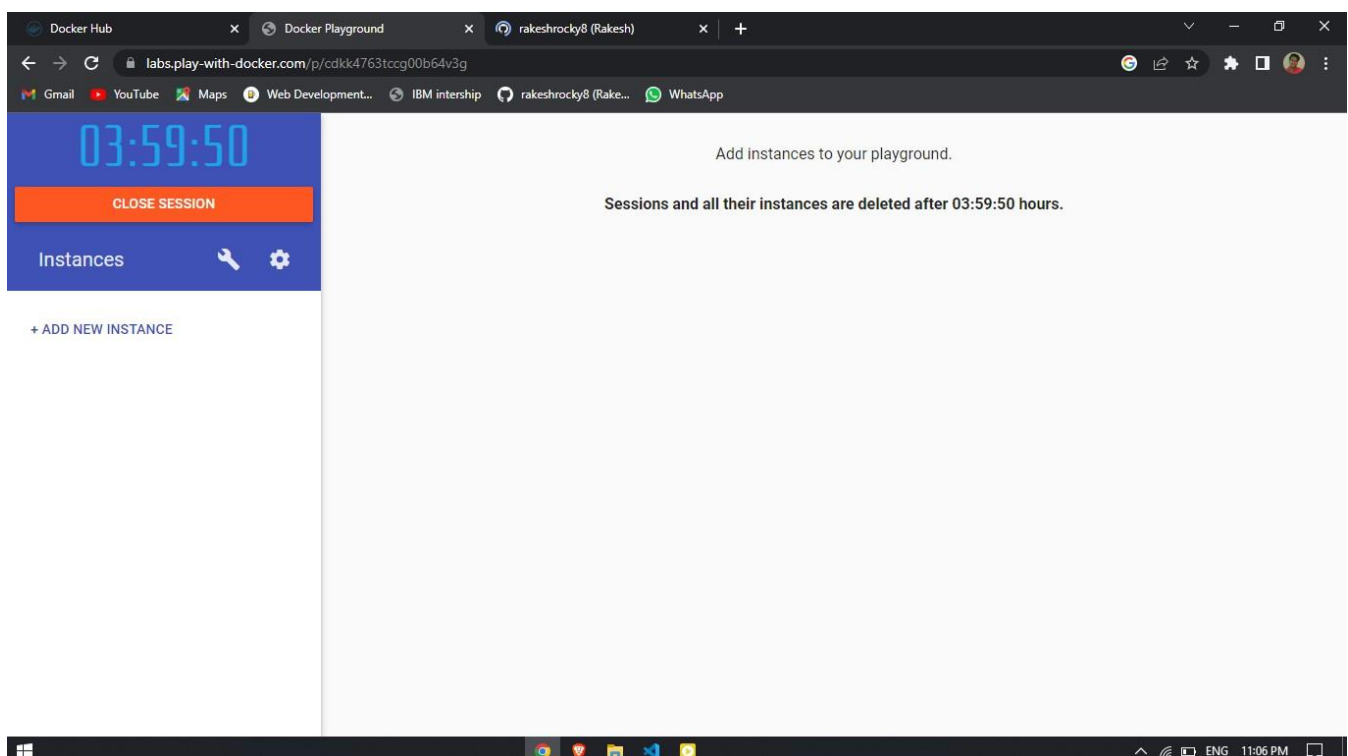
```
Windows PowerShell
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ibm/alpine    latest   9c6f07244728   3 months ago   5.54MB
alpine        latest   9c6f07244728   3 months ago   5.54MB
PS C:\Users\Rakesh> docker push ibm/alpine
Using default tag: latest
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 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 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. On the left, there's a sidebar with a clock showing 03:52:14, a 'CLOSE SESSION' button, and an 'Instances' section. Below 'Instances', there's a list of instances with one instance named 'node1' at IP '192.168.0.28'. The main area displays details for the container 'cdkk9m79\_cdkkd5n91rrg00fsv1ng'. It shows the IP '192.168.0.28', memory usage '0.92% (37MiB / 3.906GiB)', and CPU usage '0.80%'. There's an 'OPEN PORT' button and an SSH command: 'ssh ip172-18-0-5-cdkk9m791rrg00fsv1d0@direct.labs.play-'. Below this, there are 'DELETE' and 'EDITOR' buttons. A terminal window at the bottom shows a warning message and a shell prompt: '[node1] (local) root@192.168.0.28 ~\$'.

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'.

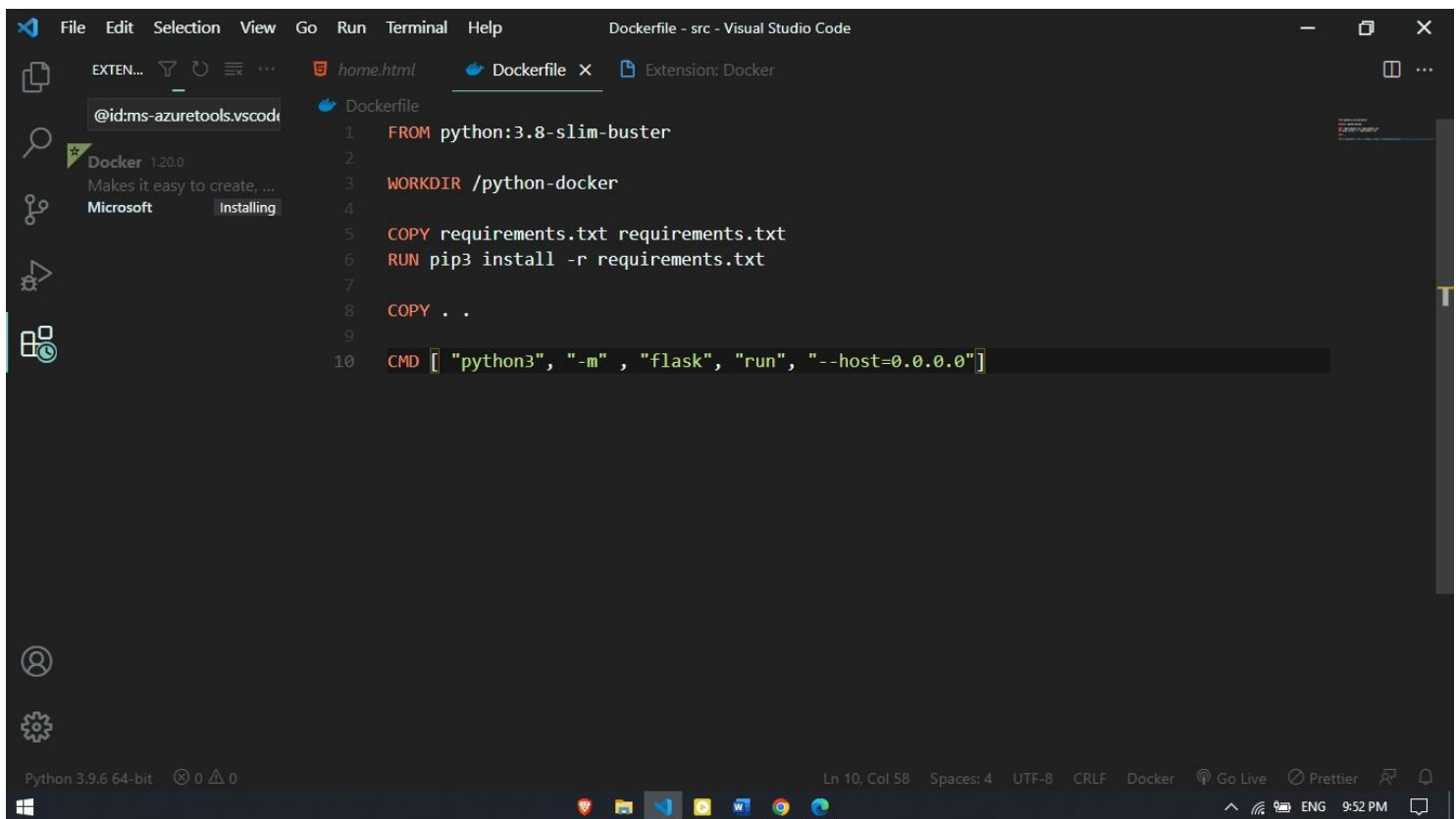
Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

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 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, 0 errors/warnings, and the current file is Dockerfile at line 10, column 58, using UTF-8 encoding and CRLF line endings.

Email address

Password

Sign in

Not a member? [Signup](#)

## Sign up

Your Name

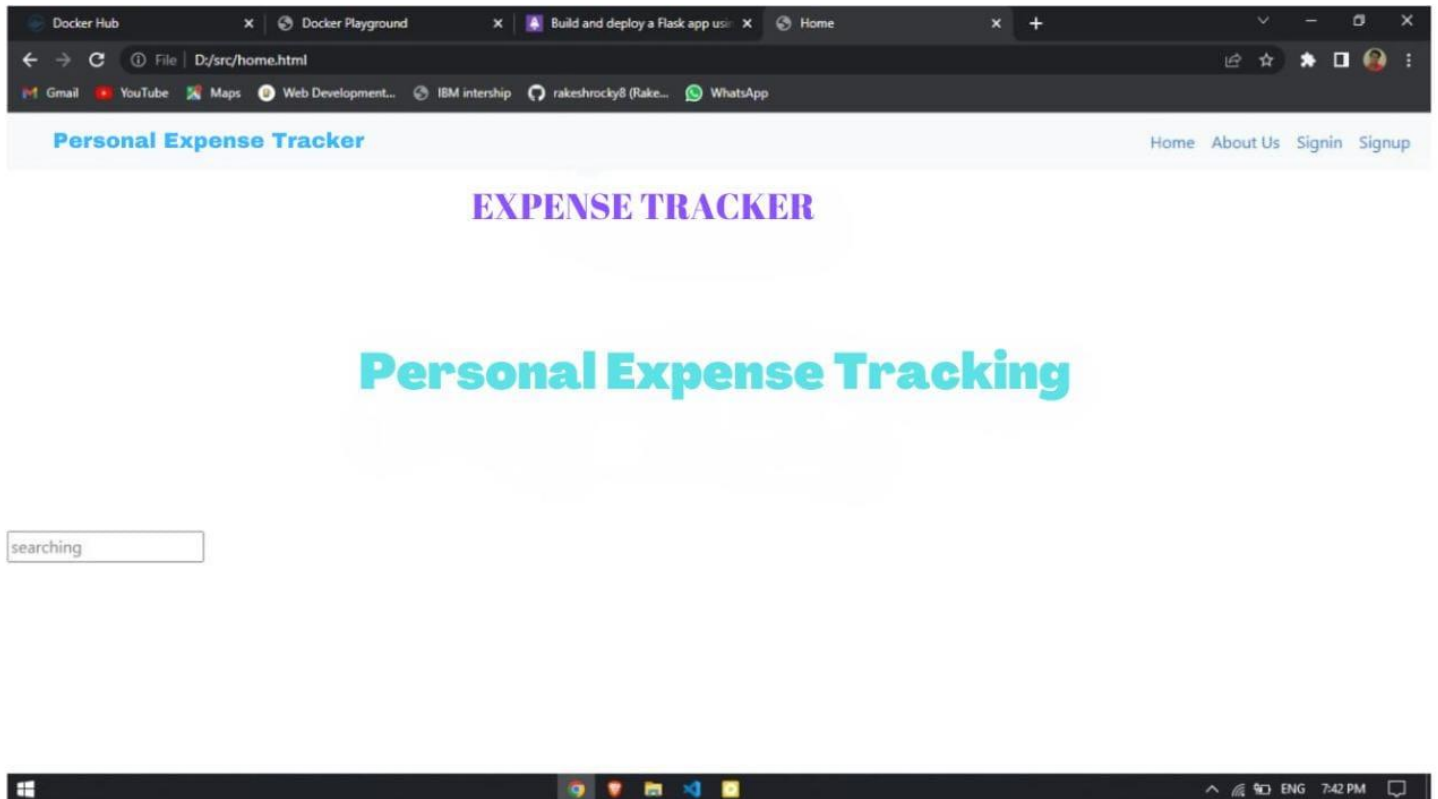
Your Email

Password

Repeat your password

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





### 3. Create an 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>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:c7f521e75ac40f8266cb22ee68c13d0317a1a7eb724d0915c4629347152c61bf 1.27kB / 1.27kB
-> => sha256:caace8ae014d1c9f31128c0a96a2ee9bb6257daab97791c86788712ed7a38048 7.71kB / 7.71kB
-> => sha256:47858aee13bf9c7c2b62cfacdc9ce2524efef339df0c0ed8935c6587a376d60 673.19kB / 673.19kB
-> => sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 11.16MB / 11.16MB
-> => sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 230B / 230B
-> => extracting sha256:47858aee13bf9c7c2b62cfacdc9ce2524efef339df0c0ed8935c6587a376d60
-> => sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08fd08abe21971d18b 2.89MB / 2.89MB
-> => extracting sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50
-> => extracting sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e
-> => extracting sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08fd08abe21971d18b
-> [internal] load build context
-> => transferring context: 5.65kB
-> [2/5] WORKDIR /app
-> [3/5] RUN pip install pipenv 13.7s
```

```
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
```

IBM-EPBL/Assign

IBM Cloud Cont

Releases - IBM-Cl

Build and deploy

manas-anarow/fil

Linux Way Kungl

Docker Tips: abo

cloud.ibm.com/registry/namespaces

Gmail

YouTube

Maps

Web Development...

IBM intership

rakeshrocky8 (Rake...

WhatsApp

IBM Cloud

Search resources and products...

Catalog

Manage

Rakesh M's Account

Container Registry

Quick start

Namespaces1

Repositories0

Images0

Trash0

Settings

Namespaces

Location

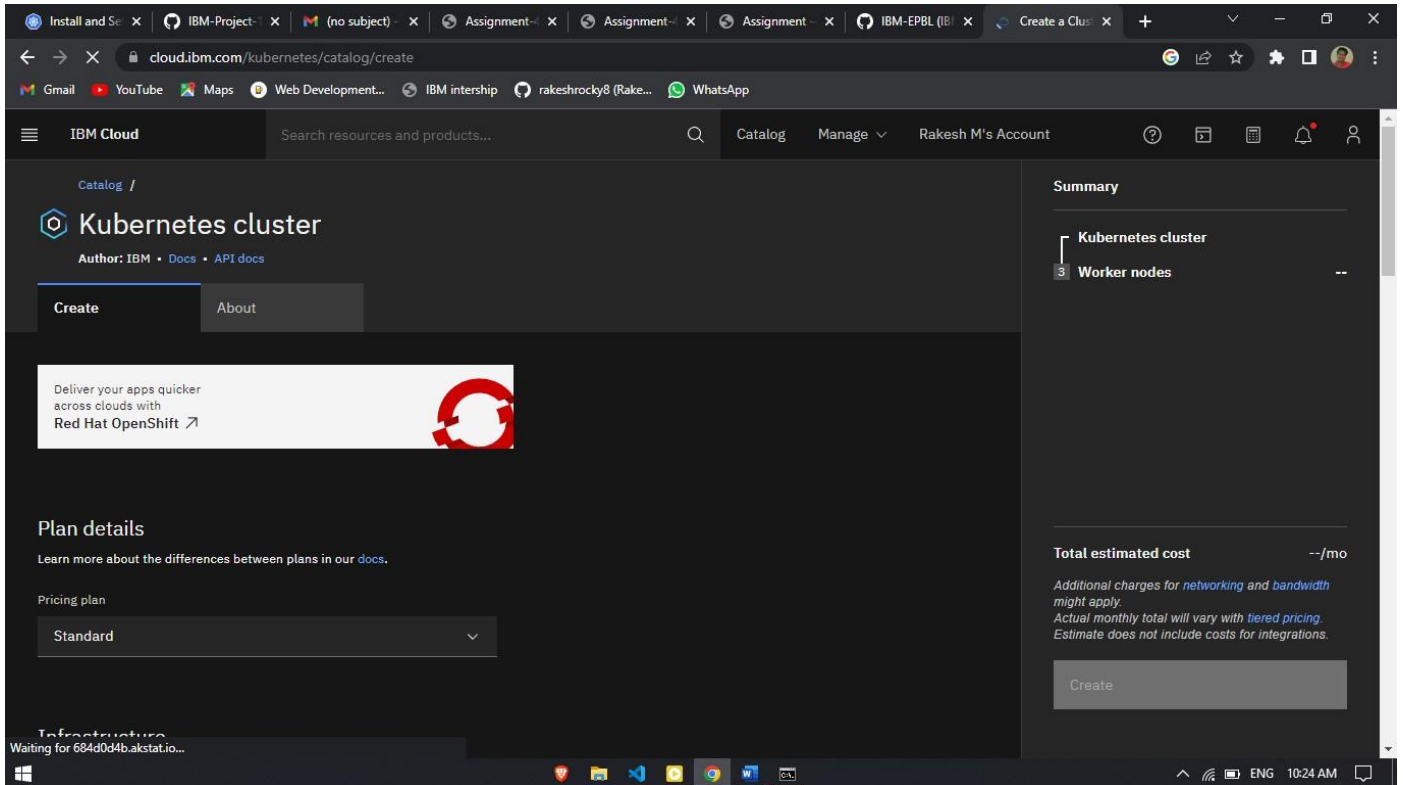
Global

Resource group: Filter...

Search

Create

#### 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.





IBM Cloud

cloud.ibm.com/kubernetes/clusters/cdlocfmf0p7m891r5cu0/overview

mycluster Preparing master, workers... Expires in 30 days Add tags 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
cdlocfmf0p7m891r5cu0	1.24.7_1542	Classic	Milan 01
Created	Resource group	Image security enforcement	
11/9/2022, 4:21 PM		<a href="#">Enable</a>	

IBM Cloud

cloud.ibm.com/registry/namespaces

Namespaces

Location: Global

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

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

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