Module-3: Docker – I Assignment - 3

You have been asked to:

- Use the saved image in the previous assignment
- Upload this image on Dockerhub
- On a separate machine pull this dockerhub image, and launch it on port 80
- Start the apache2 service
- Verify if you are able to see the apache2 service

Solution:

1) **Save the Container Image to Docker Hub**: docker login .

Enter your Docker Hub credentials when prompted.

```
ubuntu@ip-172-31-15-134:~$ docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.co
m/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations
 using SSO. Learn more at https://docs.docker.com/go/access-tokens/

Username: priyanka27.c@gmail.com
Password:
WARNING! Your password will be stored unencrypted in /home/ubuntu/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ubuntu@ip-172-31-15-134:~$
```

2) **Upload this image on Dockerhub :**
   Tag the Image: Tag the saved image with your Docker Hub repository name.
   docker tag my-apache-image poulomibhattacharjee/my-apache-image

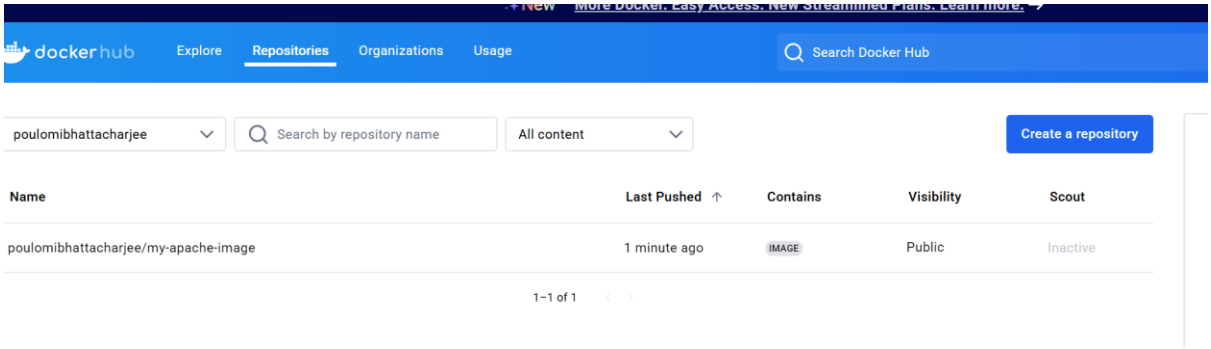
```
Username: priyanka27.c@gmail.com
Password:
WARNING! Your password will be stored unencrypted in /home/ubuntu/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ubuntu@ip-172-31-15-134:~$ docker ps
CONTAINER ID   IMAGE            COMMAND       CREATED          STATUS          PORTS                                   NAMES
7de3728bc482   my-apache-image  "/bin/bash"   32 minutes ago   Up 32 minutes   0.0.0.0:81->80/tcp, :::81->80/tcp       my-apache-container
acc29f734773   ubuntu           "/bin/bash"   59 minutes ago   Up 59 minutes   0.0.0.0:80->80/tcp, :::80->80/tcp       cool_dubinsky
ubuntu@ip-172-31-15-134:~$ docker tag my-apache-image poulomibhattacharjee/my-apache-image
ubuntu@ip-172-31-15-134:~$
```

   Push the Image to Docker Hub: docker push poulomibhattacharjee/my-apache-image

```
ubuntu@ip-172-31-15-134:~$ docker push poulomibhattacharjee/my-apache-image
Using default tag: latest
The push refers to repository [docker.io/poulomibhattacharjee/my-apache-image]
32249f94ec10: Pushed
4b7c01ed0534: Mounted from library/ubuntu
latest: digest: sha256:80cd4bba317cd4257e944c74b0b600baee83fead07d23a6443e46cb5b1af927a size: 741
ubuntu@ip-172-31-15-134:~$
```

Go to the docker hub and we can see the image:



3) On a separate machine pull this dockerhub image, and launch it on port 80:

a) **Create another EC2** and update package and download docker.
b) **Log in to Docker Hub :** docker login , provide your credentials.

```
ubuntu@ip-172-31-8-233:~$ docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.co
m/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations
 using SSO. Learn more at https://docs.docker.com/go/access-tokens/

Username: poulomibhattacharjee
Password:
WARNING! Your password will be stored unencrypted in /home/ubuntu/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ubuntu@ip-172-31-8-233:~$
```

c) **Pull the Image from Docker Hub:** docker pull poulomibhattacharjee/my-apache-image

```
ubuntu@ip-172-31-8-233:~$ docker pull poulomibhattacharjee/my-apache-image
Using default tag: latest
latest: Pulling from poulomibhattacharjee/my-apache-image
5a7813e071bf: Pull complete
1916030e14a0: Pull complete
Digest: sha256:80cd4bba317cd4257e944c74b0b600baee83fead07d23a6443e46cb5b1af927a
Status: Downloaded newer image for poulomibhattacharjee/my-apache-image:latest
docker.io/poulomibhattacharjee/my-apache-image:latest
ubuntu@ip-172-31-8-233:~$
```

d) **Check if the image is downloaded**: docker images

```
ubuntu@ip-172-31-8-233:~$ docker images
REPOSITORY                              TAG       IMAGE ID       CREATED         SIZE
poulomibhattacharjee/my-apache-image    latest    fbd310460a98   47 hours ago    238MB
ubuntu@ip-172-31-8-233:~$
```

e) **Run the Container and Map Port 80**: docker run -dit -p 80:80 --name my-apache-container poulomibhattacharjee/my-apache-image

```
ubuntu@ip-172-31-8-233:~$ docker run -dit -p 80:80 --name my-apache-container poulomibhattacharjee/my-apache-image
fe3fc4680c704b856e30c0a46324380da7048d2b59130213626e6d31c8100bf3
ubuntu@ip-172-31-8-233:~$ docker ps
CONTAINER ID   IMAGE                                   COMMAND       CREATED         STATUS         PORTS                                     NAMES
fe3fc4680c70   poulomibhattacharjee/my-apache-image    "/bin/bash"   8 seconds ago   Up 6 seconds   0.0.0.0:80->80/tcp, :::80->80/tcp         my-apache-conta
iner
ubuntu@ip-172-31-8-233:~$
```

4) **Start the apache2 service:**

a) Access the Running Container: docker exec -it my-apache-container bash

```
ubuntu@ip-172-31-8-233:~$ docker exec -it my-apache-container bash
root@fe3fc4680c70:/#
```

b) **Start Apache2 Service:** service apache2 start

```
ubuntu@ip-172-31-8-233:~$ docker exec -it my-apache-container bash
root@fe3fc4680c70:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2
. Set the 'ServerName' directive globally to suppress this message
 *
root@fe3fc4680c70:/#
```

5) **Verify if you are able to see the apache2 service:**

a) Open Your Web Browser and navigate to `http://<your-server-ip>:80`