**DOCKER Hands on Lab 05.**

***01. Push the Redis images tagged as version 1 and 3 to your Docker Hub repository, named "yourname\_cloudethix\_redis."***

root@DESKTOP-DA2RDP0:harsh# service docker start

\* Starting Docker: docker [ OK ]

root@DESKTOP-DA2RDP0:harsh# docker pull redis

Using default tag: latest

latest: Pulling from library/redis

2f44b7a888fa: Pull complete

c55535369ffc: Pull complete

3622841bf0aa: Pull complete

91a62ca7377a: Pull complete

fdd219d1f4ab: Pull complete

fdf07fe2fb4c: Pull complete

4f4fb700ef54: Pull complete

fba604e70bfe: Pull complete

Digest: sha256:b5ddcd52d425a8e354696c022f392fe45fca928f68d6289e6bb4a709c3a74668

Status: Downloaded newer image for redis:latest

docker.io/library/redis:latest

root@DESKTOP-DA2RDP0:harsh# docker image tag redis:v1 harshitameshram/harsh\_cloudethix\_redis

Error response from daemon: No such image: redis:v1

root@DESKTOP-DA2RDP0:harsh# docker image tag redis harshitameshram/harsh\_cloudethix\_redis

root@DESKTOP-DA2RDP0:harsh# docker image tag redis harshitameshram/harsh\_cloudethix\_redis:v1

root@DESKTOP-DA2RDP0:harsh# docker image tag redis harshitameshram/harsh\_cloudethix\_redis:v3

root@DESKTOP-DA2RDP0:harsh# docker image ls

REPOSITORY TAG IMAGE ID CREATED SIZE

harshitameshram/developer v1 6c44f669082b 24 hours ago 187MB

harshitameshram/harsh\_cloudethix\_redis latest bdff4838c172 9 days ago 138MB

harshitameshram/harsh\_cloudethix\_redis v1 bdff4838c172 9 days ago 138MB

harshitameshram/harsh\_cloudethix\_redis v3 bdff4838c172 9 days ago 138MB

redis latest bdff4838c172 9 days ago 138MB

root@DESKTOP-DA2RDP0:harsh# docker image push harshitameshram/harsh\_cloudethix\_redis

Using default tag: latest

The push refers to repository [docker.io/harshitameshram/harsh\_cloudethix\_redis]

cd02e5942a1e: Mounted from library/redis

5f70bf18a086: Mounted from library/redis

fcae66387b13: Mounted from library/redis

cbc573a5c422: Mounted from library/redis

116584210380: Mounted from library/redis

c95bcf9f626e: Mounted from library/redis

2361aeb2c69c: Mounted from library/redis

571ade696b26: Mounted from library/redis

latest: digest: sha256:5d5d31a84c7fec11a3c8a29b04b1712f650a98338f6a51152de42459ea24060b size: 1986

root@DESKTOP-DA2RDP0:harsh# docker image push harshitameshram/harsh\_cloudethix\_redis:v1

The push refers to repository [docker.io/harshitameshram/harsh\_cloudethix\_redis]

cd02e5942a1e: Layer already exists

5f70bf18a086: Layer already exists

fcae66387b13: Layer already exists

cbc573a5c422: Layer already exists

116584210380: Layer already exists

c95bcf9f626e: Layer already exists

2361aeb2c69c: Layer already exists

571ade696b26: Layer already exists

v1: digest: sha256:5d5d31a84c7fec11a3c8a29b04b1712f650a98338f6a51152de42459ea24060b size: 1986

root@DESKTOP-DA2RDP0:harsh# docker image push harshitameshram/harsh\_cloudethix\_redis:v3

The push refers to repository [docker.io/harshitameshram/harsh\_cloudethix\_redis]

cd02e5942a1e: Layer already exists

5f70bf18a086: Layer already exists

fcae66387b13: Layer already exists

cbc573a5c422: Layer already exists

116584210380: Layer already exists

c95bcf9f626e: Layer already exists

2361aeb2c69c: Layer already exists

571ade696b26: Layer already exists

v3: digest: sha256:5d5d31a84c7fec11a3c8a29b04b1712f650a98338f6a51152de42459ea24060b size: 1986

root@DESKTOP-DA2RDP0:harsh#

***02. Create a remote Git repository and add the Dockerfile and index.html files. Clone the repository locally and create a release branch.***

root@DESKTOP-DA2RDP0:GIT# git clone git@github.com:HarshitaMeshram/Docker\_Repo.git

Cloning into 'Docker\_Repo'...

remote: Enumerating objects: 8, done.

remote: Counting objects: 100% (8/8), done.

remote: Compressing objects: 100% (5/5), done.

remote: Total 8 (delta 1), reused 0 (delta 0), pack-reused 0

Receiving objects: 100% (8/8), done.

Resolving deltas: 100% (1/1), done.

root@DESKTOP-DA2RDP0:GIT#

root@DESKTOP-DA2RDP0:GIT# ll

total 12

drwxr-xr-x 3 root root 4096 Jan 19 11:33 ./

drwxr-x--- 11 harsh harsh 4096 Jan 19 11:32 ../

drwxr-xr-x 3 root root 4096 Jan 19 11:33 Docker\_Repo/

root@DESKTOP-DA2RDP0:GIT# cd Docker\_Repo/

root@DESKTOP-DA2RDP0:Docker\_Repo#

***Build the Docker image from the release branch with a meaningful tag, then run a container from the image and expose it on host port 8383.***

root@DESKTOP-DA2RDP0:Docker\_Repo# git checkout -b release

Switched to a new branch 'release'

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo# git branch

main

\* release

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo# docker container run -itd -p 8383:80 --name harsh nginix:v2

fdd7873a0c742e46cdc6c50fa5a8efe0e5f8d5a96a02a4471501f1f11ade636a

root@DESKTOP-DA2RDP0:Docker\_Repo# docker container ls -a

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

fdd7873a0c74 nginix:v2 "/docker-entrypoint.…" 7 seconds ago Up 5 seconds 0.0.0.0:8383->80/tcp, :::8383->80/tcp harsh

42379046ae1d httpd "sleep 10" 8 days ago Up 3 seconds 80/tcp httpd\_03

dae094ea403c httpd "httpd-foreground" 8 days ago Up 2 hours 80/tcp httpd\_02

r

root@DESKTOP-DA2RDP0:Docker\_Repo# curl http://172.28.193.173:8383

<html>

<body>

<h1>Innovate, Integrate, Illuminate</h>

<p>Welcome to CLOUDETHIX</p>

</body>

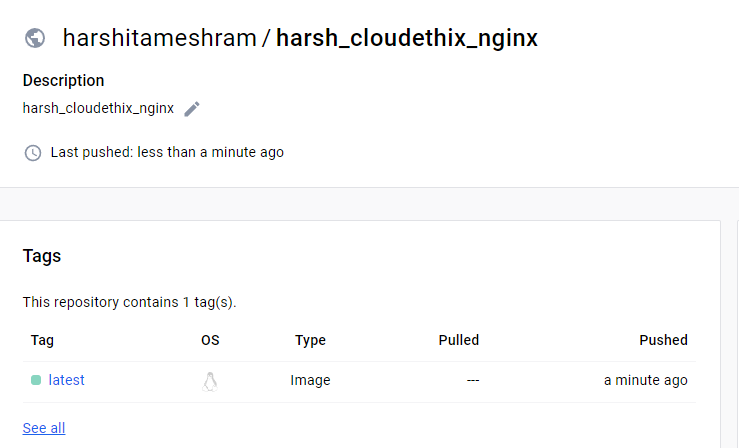
</html>

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo#



***Check the webpage in a browser, and upon success, push the image to your Docker Hub repository named "yourname\_cloudethix\_nginx."***



***Finally, push the release branch to the remote Git repository and merge it by creating a pull request.***

***root@DESKTOP-DA2RDP0:Docker\_Repo# git push origin release***

***Total 0 (delta 0), reused 0 (delta 0), pack-reused 0***

***remote:***

***remote: Create a pull request for 'release' on GitHub by visiting:***

***remote: https://github.com/HarshitaMeshram/Docker\_Repo/pull/new/release***

***remote:***

***To github.com:HarshitaMeshram/Docker\_Repo.git***

***\* [new branch] release -> release***

***root@DESKTOP-DA2RDP0:Docker\_Repo# git checkout main***

***D Docker\_file***

***D index.html***

***Switched to branch 'main'***

***Your branch is up to date with 'origin/main'.***

***root@DESKTOP-DA2RDP0:Docker\_Repo#***

**Delete all Redis images from your local system and push the master branch to the remote repository.**

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image rm harshitameshram/harsh\_cloudethix\_redis:v1

Untagged: harshitameshram/harsh\_cloudethix\_redis:v1

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image rm harshitameshram/harsh\_cloudethix\_redis:v3

Untagged: harshitameshram/harsh\_cloudethix\_redis:v3

Untagged: harshitameshram/harsh\_cloudethix\_redis@sha256:5d5d31a84c7fec11a3c8a29b04b1712f650a98338f6a51152de42459ea24060b

root@DESKTOP-DA2RDP0:Docker\_Repo#

***03. Save all local Redis images as a .tar file in the master branch of your local repository.***

root@DESKTOP-DA2RDP0:Docker\_Repo# git branch

\* main

release

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image pull harshitameshram/harsh\_cloudethix\_redis:v1

v1: Pulling from harshitameshram/harsh\_cloudethix\_redis

Digest: sha256:5d5d31a84c7fec11a3c8a29b04b1712f650a98338f6a51152de42459ea24060b

Status: Downloaded newer image for harshitameshram/harsh\_cloudethix\_redis:v1

docker.io/harshitameshram/harsh\_cloudethix\_redis:v1

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image pull harshitameshram/harsh\_cloudethix\_redis:v3

v3: Pulling from harshitameshram/harsh\_cloudethix\_redis

Digest: sha256:5d5d31a84c7fec11a3c8a29b04b1712f650a98338f6a51152de42459ea24060b

Status: Downloaded newer image for harshitameshram/harsh\_cloudethix\_redis:v3

docker.io/harshitameshram/harsh\_cloudethix\_redis:v3

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image ls

REPOSITORY TAG IMAGE ID CREATED SIZE

harshitameshram/developer <none> 6ce7667bf645 9 days ago 584MB

harshitameshram/harsh\_cloudethix\_redis v1 bdff4838c172 9 days ago 138MB

harshitameshram/harsh\_cloudethix\_redis v3 bdff4838c172 9 days ago 138MB

redis latest bdff4838c172 9 days ago 138MB

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image save harshitameshram/harsh\_cloudethix\_redis:v1 harshitameshram/harsh\_cloudethix\_redis:v3 -o redis.tar

root@DESKTOP-DA2RDP0:Docker\_Repo# ll

total 416580

-rw-r--r-- 1 root root 142182400 Jan 19 13:51 redis

-rw------- 1 root root 142179328 Jan 19 14:41 redis.tar

root@DESKTOP-DA2RDP0:Docker\_Repo# tar -cvjf redis.tar.bz2 redis.tar

redis.tar

root@DESKTOP-DA2RDP0:Docker\_Repo#

***Delete all Redis images from your local system and push the master branch to the remote repository.***

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image rm harshitameshram/harsh\_cloudethix\_redis:v1 harshitameshram/harsh\_cloudethix\_redis:v3

Untagged: harshitameshram/harsh\_cloudethix\_redis:v1

Untagged: harshitameshram/harsh\_cloudethix\_redis:v3

Untagged: harshitameshram/harsh\_cloudethix\_redis@sha256:5d5d31a84c7fec11a3c8a29b04b1712f650a98338f6a51152de42459ea24060b

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo# git checkout -b master

Switched to a new branch 'master'

root@DESKTOP-DA2RDP0:Docker\_Repo# ll

total 43484

drwxr-xr-x 3 root root 4096 Jan 19 15:11 ./

drwx------ 27 root root 4096 Jan 19 15:13 ../

drwxr-xr-x 8 root root 4096 Jan 19 15:14 .git/

-rw-r--r-- 1 root root 74 Jan 19 12:55 Dockerfile

-rw-r--r-- 1 root root 26 Jan 19 12:00 README.md

-rw-r--r-- 1 root root 103 Jan 19 12:50 custom-index.html

-rw-r--r-- 1 root root 44502882 Jan 19 14:42 redis.tar.bz2

root@DESKTOP-DA2RDP0:Docker\_Repo# git status

On branch master

Untracked files:

(use "git add <file>..." to include in what will be committed)

Dockerfile

README.md

custom-index.html

nothing added to commit but untracked files present (use "git add" to track)

root@DESKTOP-DA2RDP0:Docker\_Repo#

root@DESKTOP-DA2RDP0:Docker\_Repo# git push origin master

Enumerating objects: 3, done.

Counting objects: 100% (3/3), done.

Delta compression using up to 2 threads

Compressing objects: 100% (2/2), done.

Writing objects: 100% (3/3), 42.34 MiB | 1.80 MiB/s, done.

Total 3 (delta 0), reused 0 (delta 0), pack-reused 0

remote:

remote: Create a pull request for 'master' on GitHub by visiting:

remote: https://github.com/HarshitaMeshram/Docker\_Repo/pull/new/master

remote:

To github.com:HarshitaMeshram/Docker\_Repo.git

\* [new branch] master -> master

root@DESKTOP-DA2RDP0:Docker\_Repo#

***Load the Redis images from the tar file to your local system, and verify that all images have been loaded correctly.***

root@DESKTOP-DA2RDP0:Docker\_Repo# tar -xvf redis.tar.bz2

redis.tar

root@DESKTOP-DA2RDP0:Docker\_Repo# docker image load -i redis.tar

Loaded image: harshitameshram/harsh\_cloudethix\_redis:v1

Loaded image: harshitameshram/harsh\_cloudethix\_redis:v3

root@DESKTOP-DA2RDP0:Docker\_Repo#

***04. Pull the Busy-box image to your local system, tag it, and push it to the Docker Hub repository "yourname\_cloudethix\_busybox."***

root@DESKTOP-DA2RDP0:~# docker pull harshitameshram/harsh\_cloudethix\_busybox:v1

v1: Pulling from harshitameshram/harsh\_cloudethix\_busybox

Digest: sha256:7de5fa822a9d1e507c36565ee0cf50c08faa64505461c844a3ce3944d23efa35

Status: Image is up to date for harshitameshram/harsh\_cloudethix\_busybox:v1

docker.io/harshitameshram/harsh\_cloudethix\_busybox:v1

root@DESKTOP-DA2RDP0:~# docker image tag busybox:latest harshitameshram/harsh\_cloudethix\_busybox:v1

root@DESKTOP-DA2RDP0:~#

root@DESKTOP-DA2RDP0:~# docker push harshitameshram/harsh\_cloudethix\_busybox:v1

The push refers to repository [docker.io/harshitameshram/harsh\_cloudethix\_busybox]

82ae998286b2: Layer already exists

v1: digest: sha256:7de5fa822a9d1e507c36565ee0cf50c08faa64505461c844a3ce3944d23efa35 size: 527

root@DESKTOP-DA2RDP0:~#

***Export the Docker image from the NGINX container, create a .tar file, and import the tar file to create a Docker image with a meaningful name.***

root@DESKTOP-DA2RDP0:~# docker container ls

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

fdd7873a0c74 nginix:v2 "/docker-entrypoint.…" 4 hours ago Up 4 hours 0.0.0.0:8383->80/tcp, :::8383->80/tcp harsh

42379046ae1d httpd "sleep 10" 8 days ago Up 4 seconds 80/tcp httpd\_03

root@DESKTOP-DA2RDP0:~# docker export harsh >nginx.tar

root@DESKTOP-DA2RDP0:~# ll

-rw-r--r-- 1 root root 189171712 Jan 19 16:40 nginx.tar

root@DESKTOP-DA2RDP0:~# docker image import nginx.tar nginix\_01

sha256:a91ada6398bb9fd2ab0873dcdc9d840b2db62f5c0c56e0bb3428b3d2d9dfe65c

root@DESKTOP-DA2RDP0:~#

***After importing the image, tag it and push it to the "yourname\_cloudethix\_busybox" Docker Hub repository.***

root@DESKTOP-DA2RDP0:~# docker image tag nginix\_01 harshitameshram/harsh\_cloudethix\_busybox:v1

root@DESKTOP-DA2RDP0:~# docker images

REPOSITORY TAG IMAGE ID CREATED SIZE

harshitameshram/harsh\_cloudethix\_busybox v1 a91ada6398bb 4 minutes ago 185MB

nginix\_01 latest a91ada6398bb 4 minutes ago 185MB

harshitameshram/harsh\_cloudethix\_nginx latest cb3a393068f3 4 hours ago 187MB

nginix v2 cb3a393068f3 4 hours ago 187MB

nginix v1 2c0e8c76c038 5 hours ago 187MB

root@DESKTOP-DA2RDP0:~#

root@DESKTOP-DA2RDP0:~# docker push harshitameshram/harsh\_cloudethix\_busybox:v1

The push refers to repository [docker.io/harshitameshram/harsh\_cloudethix\_busybox]

e1428fcd15bf: Pushed

v1: digest: sha256:c2e5d56020c6b66a3929eafa3ea8b60fcb4401ff2bb55e2a3099f3573213d4aa size: 528

root@DESKTOP-DA2RDP0:~#

***05. Dockerfile creation: Create a simple Dockerfile to build a custom image with the following specifications:*  
*1. Base image: Ubuntu*  
*2. Install packages: curl, vim, and git*  
*3. Set an environment variable: MY\_NAME=Your\_Name*  
*4. Build the custom image using docker build and list all available images using docker images.***

root@DESKTOP-DA2RDP0:~# vim Dockerfile

root@DESKTOP-DA2RDP0:~# cat Dockerfile

FROM ubuntu:latest

RUN apt update

RUN apt install curl -y

RUN apt install vim -y

RUN apt install git -y

ENV MY\_NAME=HARSH

root@DESKTOP-DA2RDP0:~#

root@DESKTOP-DA2RDP0:~# docker build -t ubuntu:latest .

[+] Building 226.4s (9/9) FINISHED docker:default

=> [internal] load .dockerignore 0.3s

=> => transferring context: 2B 0.0s

=> [internal] load build definition from Dockerfile 0.3s

=> => transferring dockerfile: 160B 0.0s

=> [internal] load metadata for docker.io/library/ubuntu:latest 0.0s

=> CACHED [1/5] FROM docker.io/library/ubuntu:latest 0.0s

=> [2/5] RUN apt update 85.5s

=> [3/5] RUN apt install curl -y 28.7s

=> [4/5] RUN apt install vim -y 34.6s

=> [5/5] RUN apt install git -y 74.5s

=> exporting to image 2.0s

=> => exporting layers 1.9s

=> => writing image sha256:fc7bd375e0d2b1d32feb37499153f9fcfc76a9c2f4d2f4eda6b6c37bd2579fa1 0.0s

=> => naming to docker.io/library/ubuntu:latest

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