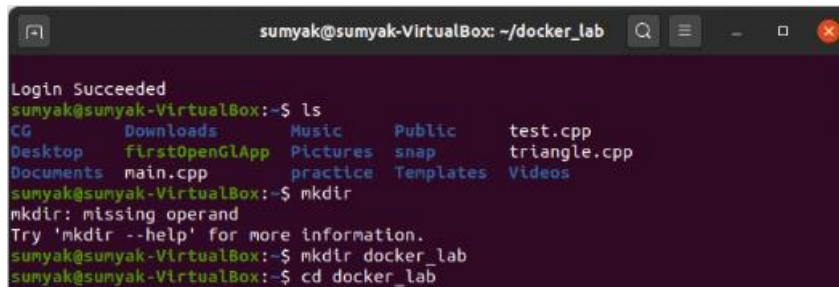


SUMYAK JAIN, 500068360, R171218106

EXPERIMENT-4


DOCKER IMAGES

1) Login to docker hub



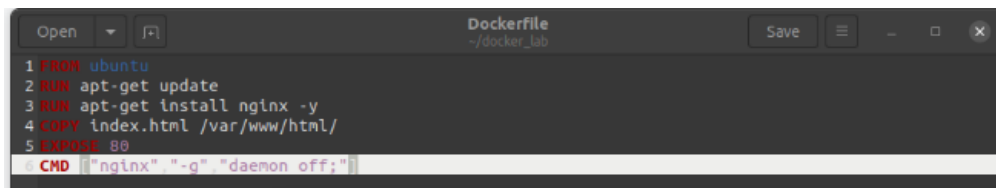
```
sumyak@sumyak-VirtualBox: ~/docker_lab
Login Succeeded
sumyak@sumyak-VirtualBox:~$ ls
CG      Downloads  Music     Public    test.cpp
Desktop firstOpenGlApp Pictures  snap      triangle.cpp
Documents main.cpp   practice Templates Videos
sumyak@sumyak-VirtualBox:~$ mkdir
mkdir: missing operand
Try 'mkdir --help' for more information.
sumyak@sumyak-VirtualBox:~$ mkdir docker_lab
sumyak@sumyak-VirtualBox:~$ cd docker_lab
```

2) Write Dockerfile and index.html file in a particular location



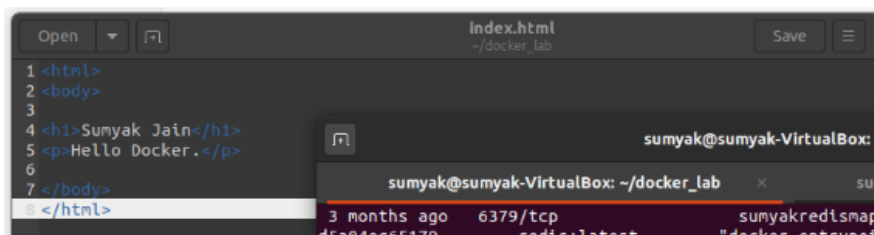
```
sumyak@sumyak-VirtualBox:~/docker_lab$ touch Dockerfile
sumyak@sumyak-VirtualBox:~/docker_lab$ ls
Dockerfile
sumyak@sumyak-VirtualBox:~/docker_lab$ gedit Dockerfile
sumyak@sumyak-VirtualBox:~/docker_lab$ gedit index.html
```

Dockerfile



```
1 FROM ubuntu
2 RUN apt-get update
3 RUN apt-get install nginx -y
4 COPY index.html /var/www/html/
5 EXPOSE 80
6 CMD ["nginx", "-g", "daemon off;"]
```

Index.html



```
1 <html>
2 <body>
3
4 <h1>Sumyak Jain</h1>
5 <p>Hello Docker.</p>
6
7 </body>
8 </html>
```

3) Build an image using Dockerfile

Docker build -t <image name>:<tag name> .

"." (here "." means Dockerfile in same location)

```
sunyak@sunyak-VirtualBox:~/docker_lab$ docker build -t mynginx:1.0 .
Sending build context to Docker daemon 3.072kB
Step 1/6 : FROM ubuntu
--> d70eaf7277ea
Step 2/6 : RUN apt-get update
--> Using cache
--> 086ea42e547d
Step 3/6 : RUN apt-get install nginx -y
--> Using cache
--> 0d5d9e3a6eed
Step 4/6 : COPY index.html /var/www/html/
--> Using cache
--> 94d9a35f30bd
Step 5/6 : EXPOSE 80
--> Using cache
--> 4b5379c2384a
Step 6/6 : CMD ["nginx", "-g", "daemon off;"]
--> Using cache
--> 2ac753d3673c
Successfully built 2ac753d3673c
Successfully tagged mynginx:1.0
sunyak@sunyak-VirtualBox:~/docker_lab$
```

4) Check for images

```
sunyak@sunyak-VirtualBox:~/docker_lab$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED
SIZE
mynginx              1.0                2ac753d3673c       About a minute ago
159MB
alpine               latest             e50c909a8df2       2 weeks ago
5.61MB
redis                latest             62f1d3402b78       3 months ago
104MB
ubuntu               latest             d70eaf7277ea       3 months ago
72.9MB
sunyak@sunyak-VirtualBox:~/docker_lab$
```

5) Make a container using image id and check for the container is made or not

```
sunyak@sunyak-VirtualBox:~/docker_lab$ docker run -d 2ac75
0ff17654ec410e4f76b8a0d43dc9cf8d182df2fc9d5a2237bf8494334cdb097c
sunyak@sunyak-VirtualBox:~/docker_lab$ docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED
STATUS            PORTS              NAMES
0ff17654ec41       2ac75              "nginx -g 'daemon of..." 20 seconds ago
Up 19 seconds      80/tcp             loving_euclid
76bab64d1356       alpine             "ping cnt1"         4 days ago
Exited (255) 5 hours ago
f9b7e7430333       alpine             "/bin/sh"           4 days ago
Exited (0) 4 days ago
35d4e57a16e0       alpine             "/bin/sh"           4 days ago
Exited (0) 4 days ago
1669e5717de8       alpine             "/bin/sh"           4 days ago
Exited (255) 5 hours ago
10ebc1d77e4c       alpine             "ping cnt1"         4 days ago
Exited (255) 5 hours ago
06dccad7d10e       redis              "docker-entrypoint.s..." 4 days ago
```

6) For pushing an image to dockerhub we need to tag the image with dockerhub repo

docker tag <image id> [<user name>/<repo name>]:<tag name>

```
sunyak@sunyak-VirtualBox:~/docker_lab$ docker tag 2ac75 sunyakjain/nginx:1.0
sunyak@sunyak-VirtualBox:~/docker_lab$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
mynginx              1.0                2ac753d3673c       6 minutes ago      159MB
sunyakjain/nginx     1.0                2ac753d3673c       6 minutes ago      159MB
alpine               latest             e50c909a8df2       2 weeks ago        5.61MB
redis                latest             62f1d3402b78       3 months ago       104MB
ubuntu               latest             d70eaf7277ea       3 months ago       72.9MB
```

7) Push the image to dockerhub

```
sumyak@sumyak-VirtualBox: ~/docker_lab$ docker push sumyakjain/nginx:1.0
The push refers to repository [docker.io/sumyakjain/nginx]
cae3ca3df1b0: Pushed
72ef55d60a58: Pushed
87b8d9079255: Pushed
cc9d18e90faa: Mounted from library/ubuntu
0c2689e3f920: Mounted from library/ubuntu
47dde53750b4: Mounted from library/ubuntu
1.0: digest: sha256:9aea63a3e36d1bd8086183fe5afd4f821c0f590b23203e0e27ad95ce8b45cc08 size: 1574
sumyak@sumyak-VirtualBox: ~/docker_lab$
```

8) Check for the image on dockerhub

The screenshot shows the Docker Hub repository page for 'sumyakjain/nginx'. The page includes a search bar, navigation tabs (General, Tags, Builds, Collaborators, Webhooks, Settings), and a 'Public View' button. The 'General' tab is active, showing the repository name, a description, and the last push time. The 'Tags and Scans' section shows a table with columns for TAG, OS, PULLED, and PUSHED. The 'Recent builds' section is also visible.

TAG	OS	PULLED	PUSHED
1.0	linux/amd64	a minute ago	a minute ago

9) Make a container on some different container instance

```
sumyak@sumyak-VirtualBox: ~/docker_lab$ docker run -d sumyakjain/nginx:1.0
094ed0debb7208d6166feb654d1d0c33a44e193c5d85f9cfe423c9f19873fb60
sumyak@sumyak-VirtualBox: ~/docker_lab$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
094ed0debb7208d6166feb654d1d0c33a44e193c5d85f9cfe423c9f19873fb60	sumyakjain/nginx:1.0	"nginx -g 'daemon of..."	22 seconds ago	Up 21 sec
0ff17654ec41	alpine	"ping cnt1"	4 days ago	Exited (2)
76bab64d1356	alpine	"ping cnt1"	4 days ago	Exited (2)
55) 5 hours ago	alpine	"ping cnt1"	4 days ago	Exited (2)
f9b7e7430333	alpine	"ping cnt1"	4 days ago	Exited (2)
35d4e57a16e0	alpine	"ping cnt1"	4 days ago	Exited (2)
1669e5717de8	alpine	"ping cnt1"	4 days ago	Exited (2)
10ebc1d77e4c	alpine	"ping cnt1"	4 days ago	Exited (2)
55) 5 hours ago	alpine	"ping cnt1"	4 days ago	Exited (2)
06dcca7d10e	redis	"docker-entrypoint.s..."	4 days ago	Exited (2)
55) 5 hours ago	6379/tcp	"docker-entrypoint.s..."	4 days ago	Exited (2)
c74cf9d93599	ubuntu	"/bin/bash"	13 days ago	Exited (0)
3ddaa28e4797	ubuntu	"/bin/bash"	13 days ago	Exited (0)
ba9bf09ccc16	alpine	"/bin/sh"	13 days ago	Exited (0)

10) Attach a port no. and run the container to check the output

```
sumyak@sumyak-VirtualBox: ~/docker_lab$ docker run -d -p 5000:80 sumyakjain/nginx:1.0
db9c054982ab49a0d483ac8b7e1ea74e227ac2b5a489cfdc318fbbaf2ada1bc7
sumyak@sumyak-VirtualBox: ~/docker_lab$
```

11) Check the output on localhost:5000

