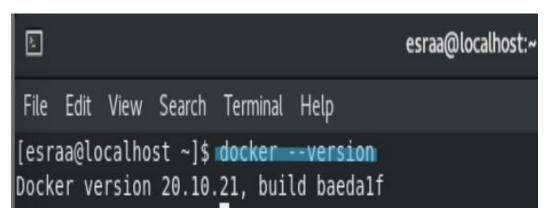
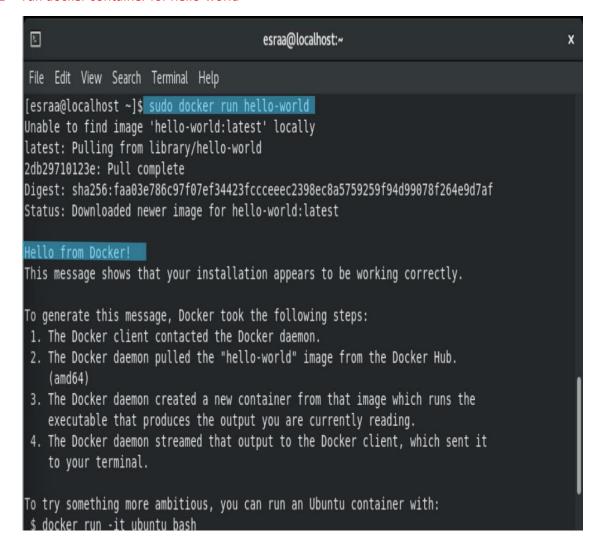
# Lab 1

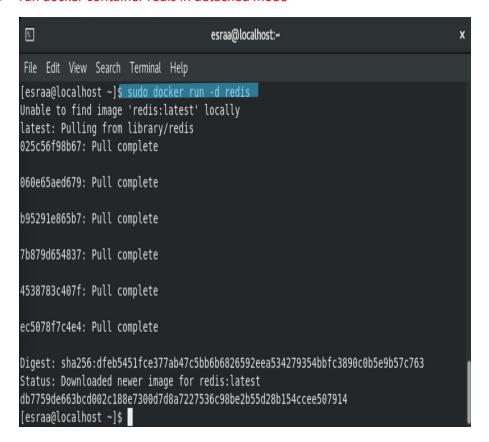
1- check the docker version installed



2- run docker container for hello-world



3- run docker container redis in detached mode



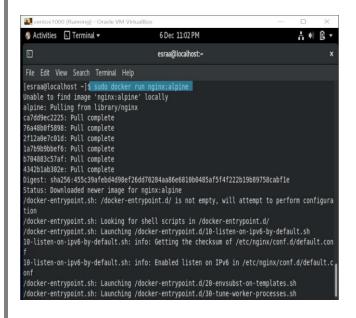
- 4- try to stop the running redis container
- 4- check the present container o the host

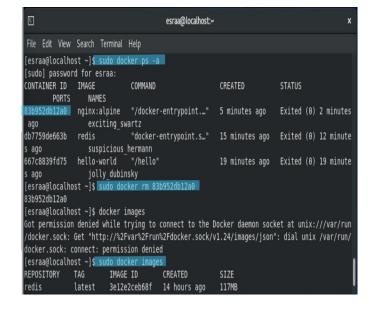
```
2
                                      esraa@localhost:~
File Edit View Search Terminal Help
[esraa@localhost ~]$
[esraa@localhost ~]$ sudo docker ps
CONTAINER ID IMAGE
                        COMMAND
                                                CREATED
                                                                    STATUS
         NAMES
ORTS
db7759de663b redis
                        "docker-entrypoint.s..." About a minute ago Up About a minute
379/tcp suspicious hermann
[esraa@localhost ~]$ sudo docker stop db7759de663b
db7759de663b
[esraa@localhost ~]$ sudo docker ps
CONTAINER ID IMAGE
                        COMMAND CREATED STATUS
                                                     PORTS
                                                               NAMES
[esraa@localhost ~]$
```

#### 5- check the ID of the redis container



## 6- try to run a container from nginx:alpine and delete image





```
esraa@localhost:~
File Edit View Search Terminal Help
redis
                       3e12e2ceb68f 14 hours ago
              latest
                                                      117MB
alpine
              latest 49176f190c7e 13 days ago
                                                      7.05MB
              alpine 19dd4d73108a 3 weeks ago
nginx
                                                      23.5MB
hello-world latest feb5d9fea6a5 14 months ago 13.3kB
[esraa@localhost ~]$ docker rmi 19dd4d73108a
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run
/docker.sock: Delete "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/images/19dd4d73108a": dial uni
x /var/run/docker.sock: connect: permission denied
[esraa@localhost ~]$ sudo docker rmi 19dd4d73108a
Untagged: nginx:alpine
Untagged: nginx@sha256:455c39afebd4d98ef26dd70284aa86e6810b0485af5f4f222b19b89758cabf1e
Deleted: sha256:19dd4d73108a1feefc29d299f3727467ac02486c83474fc3979e4a7637291fe6
Deleted: sha256:f4ce01b14251afcef8b6445b0c1c7cfa1ae95a5fa043e70afcdfb301f316b1a1
Deleted: sha256:16ce77ead235d1d248180cffd6ed249f93ecabdca2412415b9b1e9d36efbf8e7
Deleted: sha256:1c2a7b8fa3815d497784080cf5d92231a65c01ebdc4e347b7a66e8cc342885f7
Deleted: sha256:38c72402708547d70a1147ledb18fafeb76c55c8bebb22dc5a8a3636828dbea3
Deleted: sha256:6cd2aff1d9b800fdff5b7cc4bd4f2f175e8e24c2a8e97eca5177601d40d34a57
Deleted: sha256:e5e13b0c77cbb769548077189c3da2f0a764ceca06af49d8d558e759f5c232bd
```

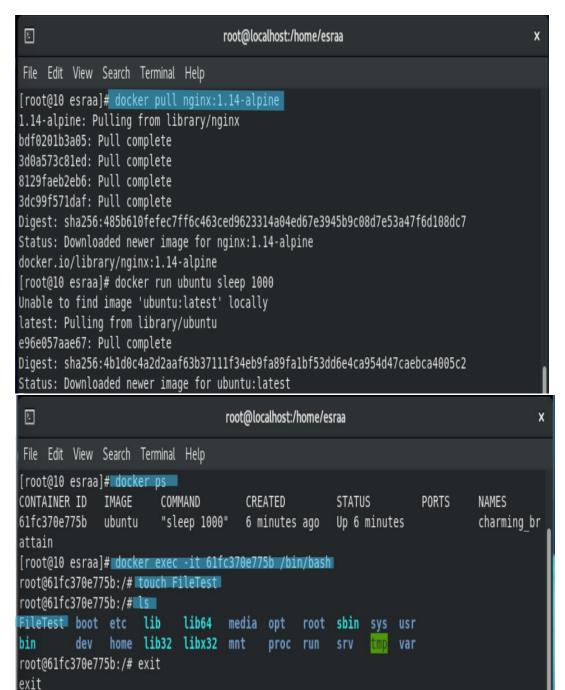
## 7- delete the image redis

```
root@localhost:/home/esraa
 E
File Edit View Search Terminal Help
[root@10 esraa]# docker ps -a
CONTAINER ID IMAGE
                            COMMAND
                                                    CREATED
                                                                    STATUS
      PORTS
                NAMES
db7759de663b redis
                            "docker-entrypoint.s..." 23 minutes ago Exited (0) 20 minutes
                suspicious hermann
667c8839fd75 hello-world "/hello"
                                                    26 minutes ago Exited (0) 26 minutes
                jolly dubinsky
 [root@10 esraa]# docker rm db7759de663b
db7759de663b
[root@10 esraa]# docker images
                       IMAGE ID
REPOSITORY TAG
                                     CREATED
                                                     SIZE
redis
             latest 3e12e2ceb68f 14 hours ago 117MB
             latest 49176f190c7e 13 days ago
                                                     7.05MB
hello-world latest feb5d9fea6a5 14 months ago 13.3kB
[root@10 esraa]# docker rmi 3e12e2ceb68f
Untagged: redis:latest
Untagged: redis@sha256:dfeb5451fce377ab47c5bb6b6826592eea534279354bbfc3890c0b5e9b57c763
Deleted: sha256:3e12e2ceb68fcf0de4ebfe5678b2dcc34642c0f994b1f6d82154ca498aebc2e6
Deleted: sha256:46d6a1cb3c4b483bfca86a3fb1f14de23ba34dbaa74cd029e43276615d285216
Deleted: sha256:c5d0b1902e56065f0d800dad80c3ddb308a87a2af0089a84da80cd7ca8185eaa
Deleted: sha256:1c255e5dbdd559687657a2dc242a733dce581435d3a22efa6a76a0db3d45f1de
```

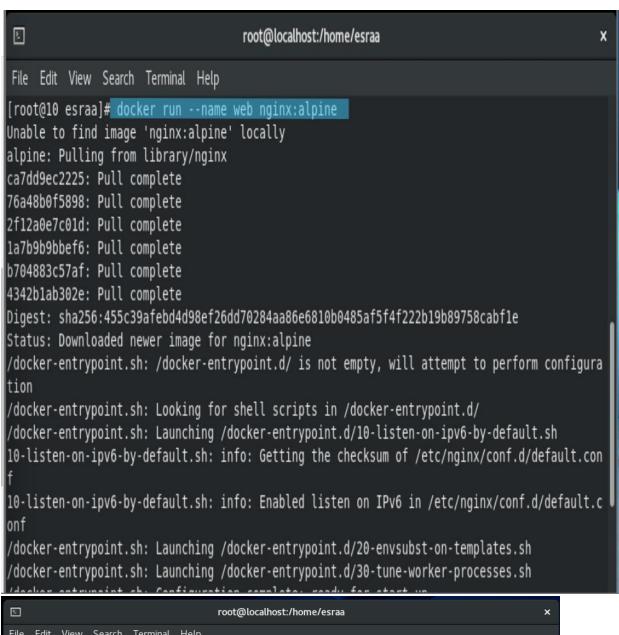
## 8- pull image from nginx:1.14-alpine

[root@10 esraa]#

Run an instance of the ubuntu image to run the sleep 1000 command at startup. Exec into the container and touch a file called test-file.



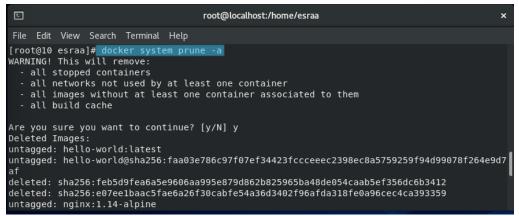
## 9- Run a container with the nginx:alpine image and name it web



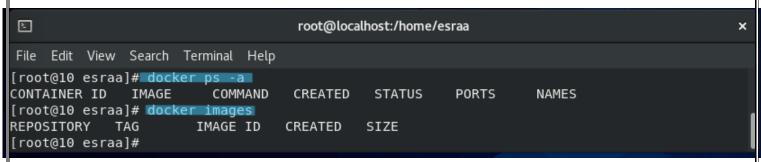
root@localhost:/home/esraa				×
File Edit View	Search Terminal	Help		
[root@10 esraa CONTAINER ID PORTS	a]# docker ps -a IMAGE S NAMES	COMMAND	CREATED	STATUS
16edb735fb7d	nginx:alpine	"/docker-entrypoint"	2 minutes ago	Exited (0) 14 secon
ds ago 61fc370e775b	web ubuntu charming b	"sleep 1000" rattain	13 minutes ago	Up 13 minutes
667c8839fd75 es ago [root@10 esraa	jolly_dubi	"/hello" nsky	46 minutes ago	Exited (0) 46 minut

#### 10- delete all the images from the host

```
root@localhost:/home/esraa
                                                                                           ×
File Edit View Search Terminal Help
[root@10 esraa]# docker images
                            IMAGE ID
REPOSITORY
              TAG
                                           CREATED
                                                           SIZE
alpine
              latest
                            49176f190c7e
                                           2 weeks ago
                                                           7.05MB
nginx
              alpine
                            19dd4d73108a
                                          3 weeks ago
                                                           23.5MB
ubuntu
                            a8780b506fa4
                                           4 weeks ago
                                                           77.8MB
              latest
hello-world
              latest
                            feb5d9fea6a5
                                           14 months ago
                                                           13.3kB
              1.14-alpine 8a2fb25a19f5 3 years ago
                                                           16MB
nginx
[root@10 esraa]# docker rm -f $(docker ps -a -q)
16edb735fb7d
61fc370e775b
667c8839fd75
[root@10 esraa]# docker system prune -a
WARNING! This will remove:
  - all stopped containers
  - all networks not used by at least one container
```



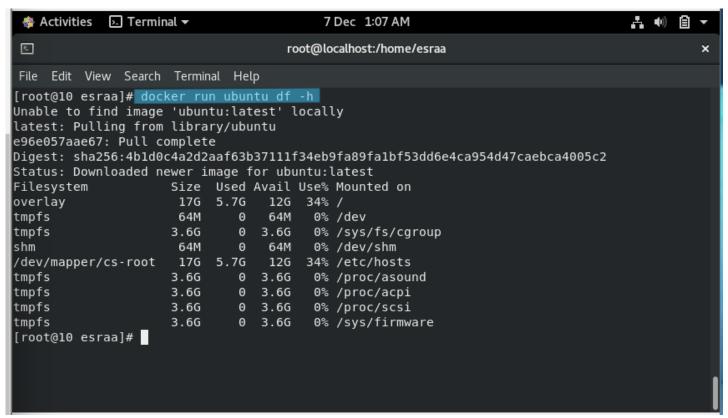
11- Run an instance of nginx:alpine with a name nginx and map port 8080 on the container to 38282



on the host.

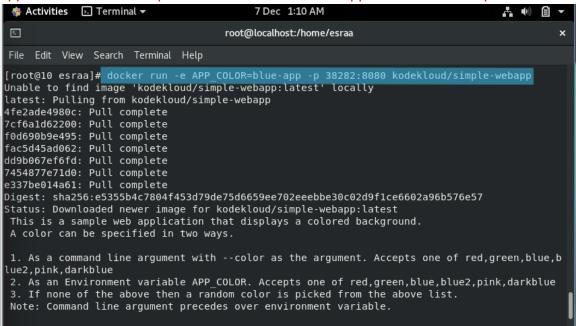
```
E
                                      root@localhost:/home/esraa
 File Edit View Search Terminal Help
[root@10 esraa]# docker run --name nginx -p 38282:8080 nginx:alpine
Unable to find image 'nginx:alpine' locally
alpine: Pulling from library/nginx
ca7dd9ec2225: Pull complete
76a48b0f5898: Pull complete
2f12a0e7c01d: Pull complete
1a7b9b9bbef6: Pull complete
b704883c57af: Pull complete
4342b1ab302e: Pull complete
Digest: sha256:455c39afebd4d98ef26dd70284aa86e6810b0485af5f4f222b19b89758cabf1e
Status: Downloaded newer image for nginx:alpine
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configura
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.con
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.c
onf
docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
```

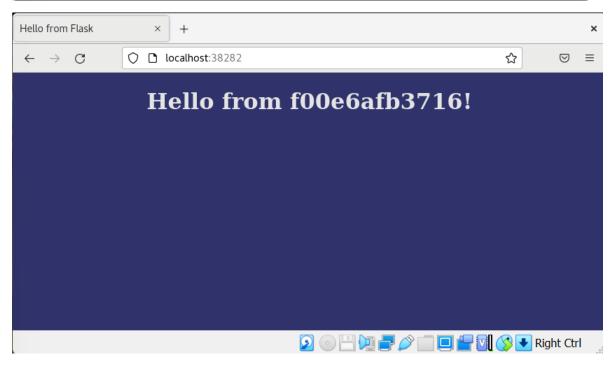
12- create ubuntu image and check the size of it



13- Run a container named blue-app using image kodekloud/simple\_webapp and set the environment variable APP\_COLOR to blue. Make the

application available on port 38282 on the host. The application listens on port 8080





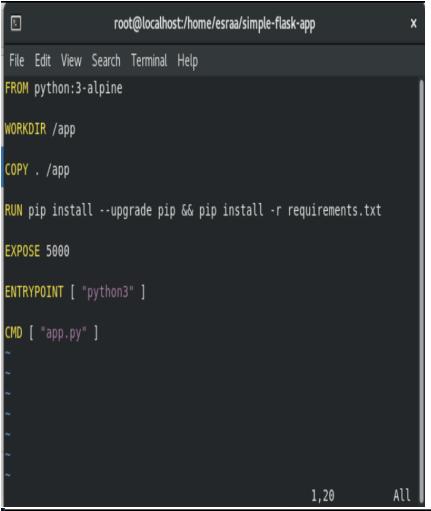
14- Deploy a mysql database using the mysql image and name it mysql\_db Set the database password to use db\_pass123 then inspect it to check the value

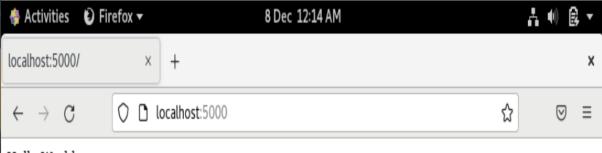
```
2
                                     root@localhost:/home/esraa
                                                                                             ×
File Edit View Search Terminal Help
[root@10 esraa]# docker run -d -e MYSQL ROOT PASSWORD=db pass123 --name mysql-db mysql
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
996f1bba14d6: Pull complete
a4355e2c82df: Pull complete
a9d7aedb7ad7: Pull complete
24ee75d8667d: Pull complete
da8c1ec8ff26: Pull complete
ea8748759282: Pull complete
e0859d5816ee: Pull complete
26e144df551b: Pull complete
9878df6a0cc3: Pull complete
b43b187428e3: Pull complete
202e454031c6: Pull complete
Digest: sha256:66efaaa129f12b1c5871508bc8481a9b28c5b388d74ac5d2a6fc314359bbef91
Status: Downloaded newer image for mysgl:latest
6467858b14464e0e695b0a8c4f54d67d59acd5663ba84266eb3699847404ffd0
```

```
root@localhost:/home/esraa
File Edit View Search Terminal Help
                "33060/tcp": {}
            "Tty": false,
            "OpenStdin": false,
            "StdinOnce": false,
            "Env": [
                "MYSQL ROOT PASSWORD=db pass123",
                "PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin",
                "GOSU VERSION=1.14",
                "MYSQL MAJOR=8.0",
                "MYSQL_VERSION=8.0.31-1.el8",
                "MYSQL SHELL VERSION=8.0.31-1.el8"
            "Cmd": [
                "mysqld"
            "Image": "mysql",
            "Volumes":
                "/var/lib/mysql": {}
            "WorkingDir": "",
```

15- pull the code from https://github.com/sabreensalama/simple\_flask-app/tree/main and create a docker file for this flask app







Hello World

16- Create a volume called mysql\_data, Run a mysql container again,

but this time map a volume to the container so that the data stored

by the container is stored at /opt/data on the host.

Use the same name: mysql-db and same password: db\_pass123 as

before. Mysql stores data at /var/lib/mysql inside the container.

