TASK:Install docker on EC2 and explore the docker commands (docker images, containers, volumes, network)

1)install docker on ECandf docker commands:

```
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-40-86:~$
ubuntu@ip-172-31-40-86:~$
ubuntu@ip-172-31-40-86:~$
ubuntu@ip-172-31-40-86:~$ sudo su -
root@ip-172-31-40-86:~#
root@ip-172-31-40-86:~#
root@ip-172-31-40-86:~#
root@ip-172-31-40-86:~# ls
snap
root@ip-172-31-40-86:~# mkdir docker-task-rangeesh
root@ip-172-31-40-86:~# ls
docker-task-rangeesh  snap
root@ip-172-31-40-86:~# cd docker-task-rangeesh/
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# ls
root@ip-172-31-40-86:~/docker-task-rangeesh# sudo apt-get update
```

```
root@ip-172-31-40-86:~/docker-task-rangeesh# sudo apt-get install -y docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base pigz runc ubuntu-fan
Suggested packages:
```

2)DOCKER CMD:
COMMAND:

```
root@ip-172-31-40-86:~/docker-task-rangeesh# docker images
REPOSITORY    TAG         IMAGE ID    CREATED     SIZE
root@ip-172-31-40-86:~/docker-task-rangeesh# docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
a2318d6c47ec: Pull complete
095d327c79ae: Pull complete
bbfaa25db775: Pull complete
7bb6fb0cfb2b: Pull complete
0723edc10c17: Pull complete
24b3fdc4d1e3: Pull complete
3122471704d5: Pull complete
Digest: sha256:04ba374043ccd2fc5c593885c0eacddebabd5ca375f9323666f28dfd5a9710e3
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker images
REPOSITORY    TAG         IMAGE ID        CREATED       SIZE
nginx         latest      39286ab8a5e1    6 weeks ago   188MB
root@ip-172-31-40-86:~/docker-task-rangeesh# docker rmi 39286ab8a5e1
Untagged: nginx:latest
Untagged: nginx@sha256:04ba374043ccd2fc5c593885c0eacddebabd5ca375f9323666f28dfd5a9710e3
Deleted: sha256:39286ab8a5e14aeaf5fdd6e2fac76e0c8d31a0c07224f0ee5e6be502f12e93f3
Deleted: sha256:d71f9b66dd3f9ef3164d7023cc99ce344d209decd5d6cd56166c0f7a2f812c06
Deleted: sha256:634d30adf8a2232256b2871e268c8f0fdb2c348374cd8510920a76db56868e16
Deleted: sha256:f230be3f4e104c7414b7ce9c8d301f37061b4e06afe010878ea55f858d89f7f3
Deleted: sha256:c5210c8480131b7dbc5ad8adc425d68cd7a8848ee2e07de3c69cb88a4b8fd662
Deleted: sha256:d4f588811a337e0b01da46772d02f7f82ee5f9baff6886365ffb912d455f4f53
Deleted: sha256:d73e21a1e27b0184b36f6578c8d0722a44da253bc74cd72e9788763f4a4de08f
Deleted: sha256:8e2ab394fabf557b00041a8f080b10b4e91c7027b7c174f095332c7ebb6501cb
```

rangeesh_guvi_devops

```
root@ip-172-31-40-86:~/docker-task-rangeesh# docker images
REPOSITORY    TAG        IMAGE ID   CREATED    SIZE
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker run -d --name my_nginx -p 80:80 nginx
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
a2318d6c47ec: Pull complete
095d327c79ae: Pull complete
bbfaa25db775: Pull complete
7bb6fb0cfb2b: Pull complete
0723edc10c17: Pull complete
24b3fdc4d1e3: Pull complete
3122471704d5: Pull complete
Digest: sha256:04ba374043ccd2fc5c593885c0eacddebabd5ca375f9323666f28dfd5a9710e3
Status: Downloaded newer image for nginx:latest
0a493e13a4ada1191b8772ceade41dbf6784a926a289ed4491c6720ec8b76356
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker ps
CONTAINER ID    IMAGE      COMMAND                CREATED        STATUS         PORTS
                           NAMES
0a493e13a4ad    nginx      "/docker-entrypoint.…"  11 seconds ago  Up 10 seconds  0.0.0.0:80
->80/tcp, :::80->80/tcp    my_nginx
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker ps -a
CONTAINER ID    IMAGE      COMMAND                CREATED        STATUS         PORTS
                           NAMES
0a493e13a4ad    nginx      "/docker-entrypoint.…"  28 seconds ago  Up 26 seconds  0.0.0.0:80
->80/tcp, :::80->80/tcp    my_nginx
root@ip-172-31-40-86:~/docker-task-rangeesh# docker stop my_nginx
```

3)DOCKER IMAGE CMD:

```
root@ip-172-31-40-86:~/docker-task-rangeesh# docker images
REPOSITORY    TAG        IMAGE ID   CREATED    SIZE
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker run -d --name my_nginx -p 80:80 nginx
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
a2318d6c47ec: Pull complete
095d327c79ae: Pull complete
bbfaa25db775: Pull complete
7bb6fb0cfb2b: Pull complete
0723edc10c17: Pull complete
24b3fdc4d1e3: Pull complete
3122471704d5: Pull complete
Digest: sha256:04ba374043ccd2fc5c593885c0eacddebabd5ca375f9323666f28dfd5a9710e3
Status: Downloaded newer image for nginx:latest
0a493e13a4ada1191b8772ceade41dbf6784a926a289ed4491c6720ec8b76356
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker ps
CONTAINER ID    IMAGE      COMMAND                CREATED        STATUS         PORTS
                           NAMES
0a493e13a4ad    nginx      "/docker-entrypoint.…"  11 seconds ago  Up 10 seconds  0.0.0.0:80
->80/tcp, :::80->80/tcp    my_nginx
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker ps -a
CONTAINER ID    IMAGE      COMMAND                CREATED        STATUS         PORTS
                           NAMES
0a493e13a4ad    nginx      "/docker-entrypoint.…"  28 seconds ago  Up 26 seconds  0.0.0.0:80
->80/tcp, :::80->80/tcp    my_nginx
root@ip-172-31-40-86:~/docker-task-rangeesh# docker stop my_nginx
my_nginx
root@ip-172-31-40-86:~/docker-task-rangeesh# docker rm my_nginx
my_nginx
root@ip-172-31-40-86:~/docker-task-rangeesh# docker ps
CONTAINER ID    IMAGE      COMMAND    CREATED    STATUS    PORTS      NAMES
```

4)DOCKER VOLUME:

```
root@ip-172-31-40-86:~/docker-task-rangeesh# docker volume create my_volume
my_volume
root@ip-172-31-40-86:~/docker-task-rangeesh# docker volume ls
DRIVER     VOLUME NAME
local      my_volume
root@ip-172-31-40-86:~/docker-task-rangeesh# docker volume inspect my_volume
[
    {
        "CreatedAt": "2024-09-26T08:46:59Z",
        "Driver": "local",
        "Labels": null,
        "Mountpoint": "/var/lib/docker/volumes/my_volume/_data",
        "Name": "my_volume",
        "Options": null,
        "Scope": "local"
    }
]
```

5)DOCKER NETRWORK:

```
root@ip-172-31-40-86:~/docker-task-rangeesh# docker network ls
NETWORK ID     NAME      DRIVER     SCOPE
175c0b695a6c   bridge    bridge     local
d30afe398528   host      host       local
64b52a87b93b   none      null       local
root@ip-172-31-40-86:~/docker-task-rangeesh# docker network create my_network
c97f03e542ef4ddb75759e0322fb179d269b2fc4956638e2ca951a06b281cd75
root@ip-172-31-40-86:~/docker-task-rangeesh# docker run -d --name my_nginx --network my_netwo
rk -p 80:80 nginx
211e236dfc01b61a6974bf60fdca5047587d739e73517207b436bcce131ac6b8
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker network rm my_network
Error response from daemon: error while removing network: network my_network id c97f03e542ef4
ddb75759e0322fb179d269b2fc4956638e2ca951a06b281cd75 has active endpoints
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh# docker system prune -a
WARNING! This will remove:
  - all stopped containers
  - all networks not used by at least one container
  - all images without at least one container associated to them
  - all build cache

Are you sure you want to continue? [y/N] n
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
root@ip-172-31-40-86:~/docker-task-rangeesh#
Broadcast message from root@ip-172-31-40-86 (Thu 2024-09-26 08:50:21 UTC):

The system will power off now!
```