EXPERIMENT 2

AIM: Working with Docker (Basic Commands)

Steps to Complete:

1. Search a Redis image on DockerHub

```
om-vats@om-vats-VirtualBox:-$ sudo docker pull redis
[sudo] password for om-vats:
Using default tag: latest
latest: Pulling from library/redis
e4fff0779e6d: Pull complete
d1dde3db2ec5: Pull complete
1d321a003dde: Pull complete
d65aedb2f012: Pull complete
4018f93716a2: Pull complete
b0967b02e8cf: Pull complete
4f4fb700ef54: Pull complete
d288b86f5d06: Pull complete
Digest: sha256:878983f8f5045b28384fc300268cec62bca3b14d5e1a448bec21f28cfcc7bf78
Status: Downloaded newer image for redis:latest
docker.io/library/redis:latest
om-vats@om-vats-VirtualBox:~$ sudo docker search redis
NAME
                                  DESCRIPTION
  STARS
            OFFICIAL
                       AUTOMATED
redis
                                  Redis is the world's fastest data platform f...
  12987
            [OK]
redis/redisinsight
                                  Redis Insight - our best official GUI for Re...
                                  redis-stack-server installs a Redis server w...
redis/redis-stack-server
```

```
redis/rdi-operator
redis/rdi-collector-initializer
                                   Init container for RDI Collector
circleci/redis
                                   CircleCI images for Redis
                       [OK]
  17
bitnami/redis
                                   Bitnami container image for Redis
  300
                       [OK]
                                   Minimalist Wolfi-based Redis image.
chainguard/redis
                                   Redis, verified and packaged by Elestio
elestio/redis
                                   Clustered in-memory database engine compatib...
redislabs/redis
  41
                                   RapidFort optimized, hardened image for Redi...
rapidfort/redis
  21
ubuntu/redis
                                   Redis, an open source key-value store. Long-...
  22
drud/redis
                                   redis
                       [OK]
                                   MetaBrainz redis cluster
metabrainz/redis
                       [OK]
cimg/redis
```

2. Run Docker Container of Redis Image in background

```
redislabs/ng-redis-raft
                                  Redis with redis raft module
google/apigee-redis
                                  apigee-redis
redislabs/ru101-lab
                                  Redis University 101
om-vats@om-vats-VirtualBox:~$ docker run --name my-redis -d redis
docker: permission denied while trying to connect to the Docker daemon socket at
unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/cont
ainers/create?name=my-redis": dial unix /var/run/docker.sock: connect: permissio
n denied.
See 'docker run --help'.
om-vats@om-vats-VirtualBox:~$ sudo docker run --name my-redis -d redis
[sudo] password for om-vats:
Sorry, try again.
[sudo] password for om-vats:
e562a30accd45810ca55be525c90b56527f910602c6db94f9eec245cab256104
om-vats@om-vats-VirtualBox:-$ sudo docker ps
CONTAINER ID
             IMAGE
                         COMMAND
                                                  CREATED
                                                                       STATUS
           PORTS
                      NAMES
e562a30accd4
               redis
                         "docker-entrypoint.s..." About a minute ago
                                                                       Up About
          6379/tcp
                      my-redis
om-vats@om-vats-VirtualBox:~$
```

3. Run Docker PS and Docker PS –a

```
redislabs/ng-redis-raft
                                  Redis with redis raft module
google/apigee-redis
                                  apigee-redis
redislabs/ru101-lab
                                  Redis University 101
om-vats@om-vats-VirtualBox:~$ docker run --name my-redis -d redis
docker: permission denied while trying to connect to the Docker daemon socket at
unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/cont
ainers/create?name=my-redis": dial unix /var/run/docker.sock: connect: permissio
n denied.
See 'docker run --help'.
om-vats@om-vats-VirtualBox:~$ sudo docker run --name my-redis -d redis
[sudo] password for om-vats:
Sorry, try again.
[sudo] password for om-vats:
e562a30accd45810ca55be525c90b56527f910602c6db94f9eec245cab256104
om-vats@om-vats-VirtualBox:~$ sudo docker ps
CONTAINER ID
              IMAGE
                         COMMAND
                                                  CREATED
                                                                       STATUS
           PORTS
                     NAMES
                         "docker-entrypoint.s..."
e562a30accd4
             redis
                                                  About a minute ago
                                                                       Up About
a minute
          6379/tcp
                     my-redis
om-vats@om-vats-VirtualBox:~$
```

4. Run Docker Container and take its console

```
om-vats@om-vats-VirtualBox:-$ sudo docker run --name my-redis -d redis
 [sudo] password for om-vats:
Sorry, try again.
[sudo] password for om-vats:
e562a30accd45810ca55be525c90b56527f910602c6db94f9eec245cab256104
 om-vats@om-vats-VirtualBox:~$ sudo docker ps
CONTAINER ID IMAGE
e562a30accd4 redis
                                                                                     CREATED
                                                                                                                                                           PORTS
                                                                                                                                                                             NAMES
                                          COMMAND
                                           "docker-entrypoint.s..."
                                                                                    About a minute ago Up About a minute
                                                                                                                                                          6379/tcp
                                                                                                                                                                            my-redis
 om-vats@om-vats-VirtualBox:~$ sudo docker ps -a
CONTAINER ID IMAGE
e562a30accd4 redis
                                        COMMAND
                                                                                     CREATED
                                                                                                                                             PORTS
                                                                                                                                                               NAMES
                                                                                                                  STATUS
                                           "docker-entrypoint.s..."
                                                                                    11 minutes ago Up 11 minutes
                                                                                                                                             6379/tcp my-redis
om-vats@om-vats-VirtualBox:-$ sudo docker run -it --name my-redis-container redis

1: 01 Sep 2024 14:27:33.638 # WARNING Memory overcommit must be enabled! Without it, a background save or replication may under low memory condition. Being disabled, it can also cause failures without low memory condition, see https://github.com/loc/jemalloc/issues/1328. To fix this issue add 'vm.overcommit_memory = 1' to /etc/sysctl.conf and then reboot or run the
       sysctl vm.overcommit_memory=1' for this to take effect.
1:C 01 Sep 2024 14:27:33.642 * o000o000o000o Redis is starting o000o000o00o
1:C 01 Sep 2024 14:27:33.642 * Redis version=7.4.0, bits=64, commit=00000000, modified=0, pid=1, just started
1:C 01 Sep 2024 14:27:33.642 # Warning: no config file specified, using the default config. In order to specify a config fi
e redis-server /path/to/redis.conf
1:M 01 Sep 2024 14:27:33.647 * Increased maximum number of open files to 10032 (it was originally set to 1024).
1:M 01 Sep 2024 14:27:33.658 * monotonic clock: POSIX clock gettime
```

5. Create a Docker Volume and connect it

```
ps aux
7-C1:signal-handler (1725212630) Received SIGINT scheduling shutdown...
1:M 01 Sep 2024 17:43:50.158 * User requested shutdown...
1:M 01 Sep 2024 17:43:50.158 * Saving the final RDB snapshot before exiting.
1:M 01 Sep 2024 17:43:50.172 * DB saved on disk
1:M 01 Sep 2024 17:43:50.173 # Redis is now ready to exit, bye bye...
  om-vats@om-vats-VirtualBox:-$ sudo volume create my-redis-data
[sudo] password for om-vats:
sudo: volume: command not found
om-vats@om-vats-VirtualBox:-$ sudo docker --version
Docker version 24.0.5, build ced0996
 om-vats@om-vats-VirtualBox:-$ sudo systemctl start docker
  om-vats@om-vats-VirtualBox:-$ sudo systemctl enable docker
om-vats@om-vats-VirtualBox:~$ sudo docker volume create mv-redis-data
my-redis-data
om-vats@om-vats-VirtualBox:-$ sudo docker run -d --name my-redis-container -v my-redis-data:/data redis docker: Error response from daemon: Conflict. The container name "/my-redis-container" is already in use by container "c7806b401916a641a09c1fd28a4d9c032fdcd3b3ffd9b8a517eb2f9442323761". You have to remove (or rename) that container to be able to reuse that
 name
 See 'docker run --help'.
  m-vats@om-vats-VirtualBox:~$ sudo docker inspect my-redis-container
             "Id": "c7806b401916a641a09c1fd28a4d9c032fdcd3b3ffd9b8a517eb2f9442323761",
             "Created": "2024-09-01T14:27:31.16303576Z",
"Path": "docker-entrypoint.sh",
"Args": [
```

```
"LogPath": "/var/snap/docker/com
323761/c78865401916a641a09ctfd28a4d9c032
"Name": "/my-redis-container",
"RestartCount": 0,
"Driver": "overlay2",
"Platform": "linux",
"MountLabel": "",
"ProcessLabel": "",
"AppArnorProfile": "docker-default",
"ExecIDs": null,
"ContainerIDftle": "",
"ContainerIDftle": "",
"Config": {
    "Type": "json-file",
    "Config": {
    "NetworkMode": "default",
    "PortBindings": {},
    "RestartPolicy": {
        "Name": "no",
        "MaximumRetryCount": 0
    },
    "AutoRemove": false,
    "VolumesFrom": null,
    "ConsoleSize": [
        24,
        88
    ],
    "CapAdd": null,
    "CapAddd": null,
    "CapAddd": null,
    "CapAddd": null,
    "CapAddd": null,
    "CapAddd": null,
"CapAddd": null,
"CapAddd": null,
```