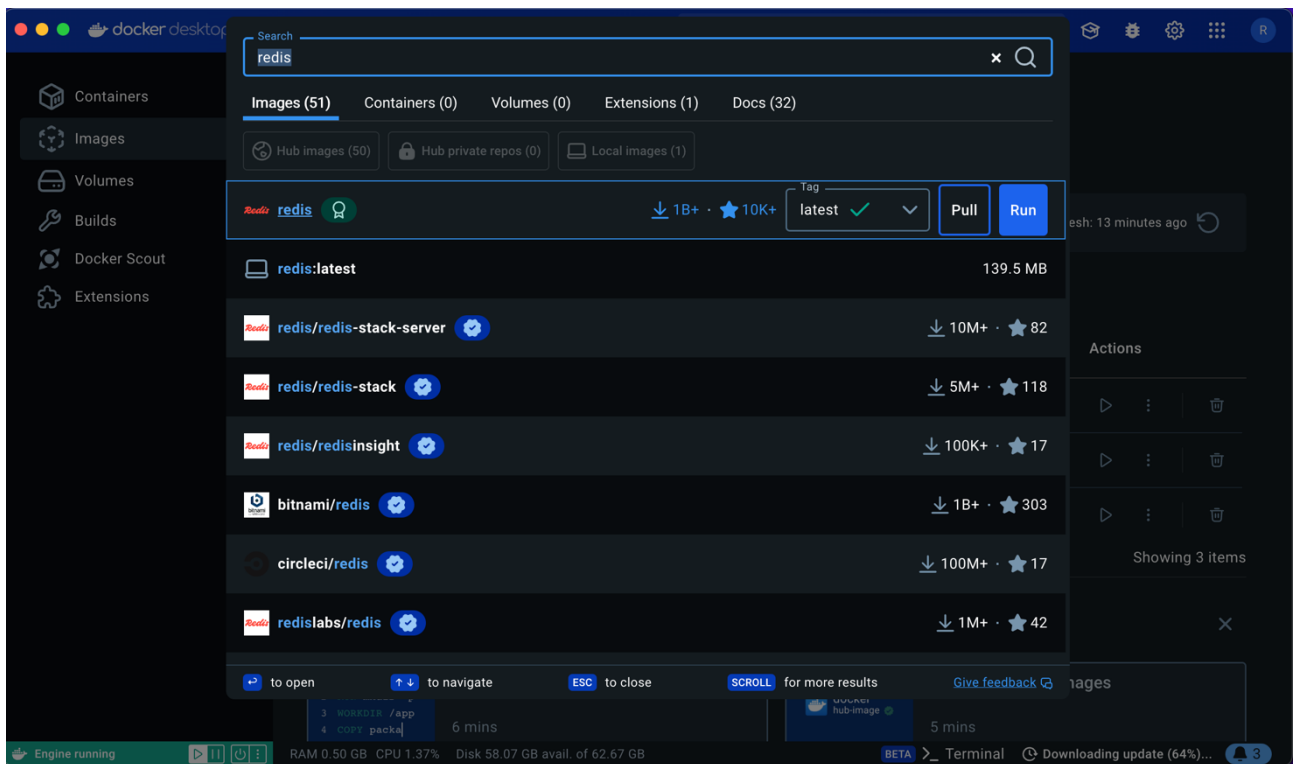# EXPERIMENT 2

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Aim : Working with Docker – Basic Commands

1. Finding a Redis Image on Docker Hub:
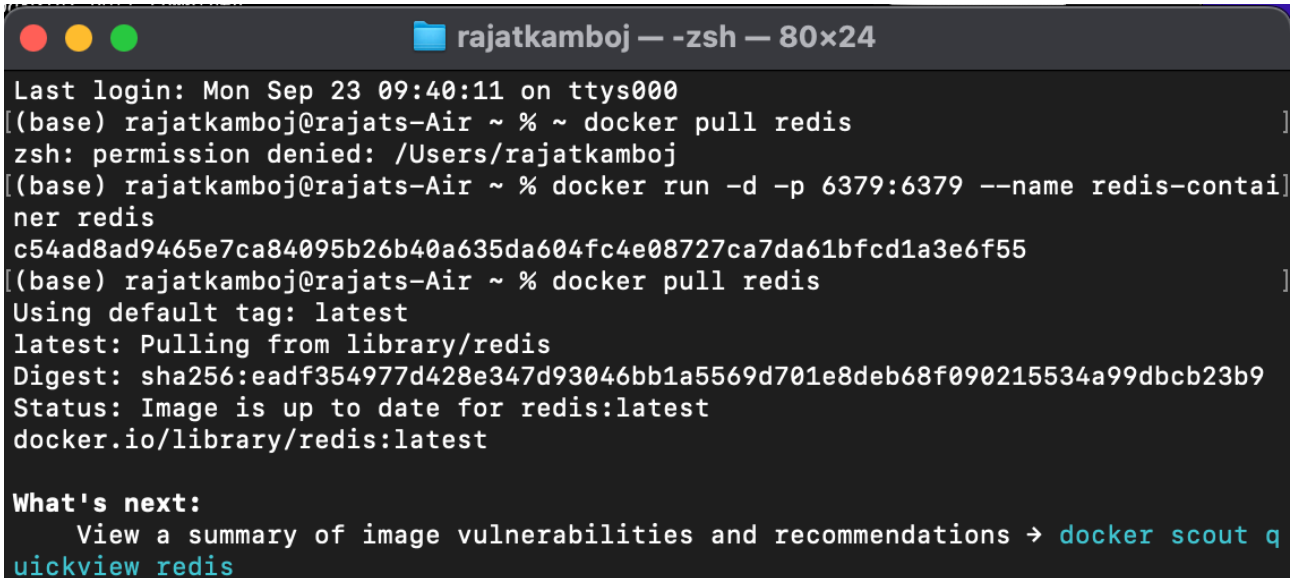

Pulling redis image on local machine to use it offline

~ docker pull redis

this command will pull the redis image from docker hub.

docker run -d -p 6379:6379 --name redis-container redis

```
Last login: Mon Sep 23 09:40:11 on ttys000
[(base) rajatkamboj@rajats-Air ~ % ~ docker pull redis          ]
zsh: permission denied: /Users/rajatkamboj
[(base) rajatkamboj@rajats-Air ~ % docker run -d -p 6379:6379 --name redis-contai]
ner redis
c54ad8ad9465e7ca84095b26b40a635da604fc4e08727ca7da61bfcd1a3e6f55
[(base) rajatkamboj@rajats-Air ~ % docker pull redis            ]
Using default tag: latest
latest: Pulling from library/redis
Digest: sha256:eadf354977d428e347d93046bb1a5569d701e8deb68f090215534a99dbcb23b9
Status: Image is up to date for redis:latest
docker.io/library/redis:latest

What's next:
    View a summary of image vulnerabilities and recommendations → docker scout q
uickview redis
```
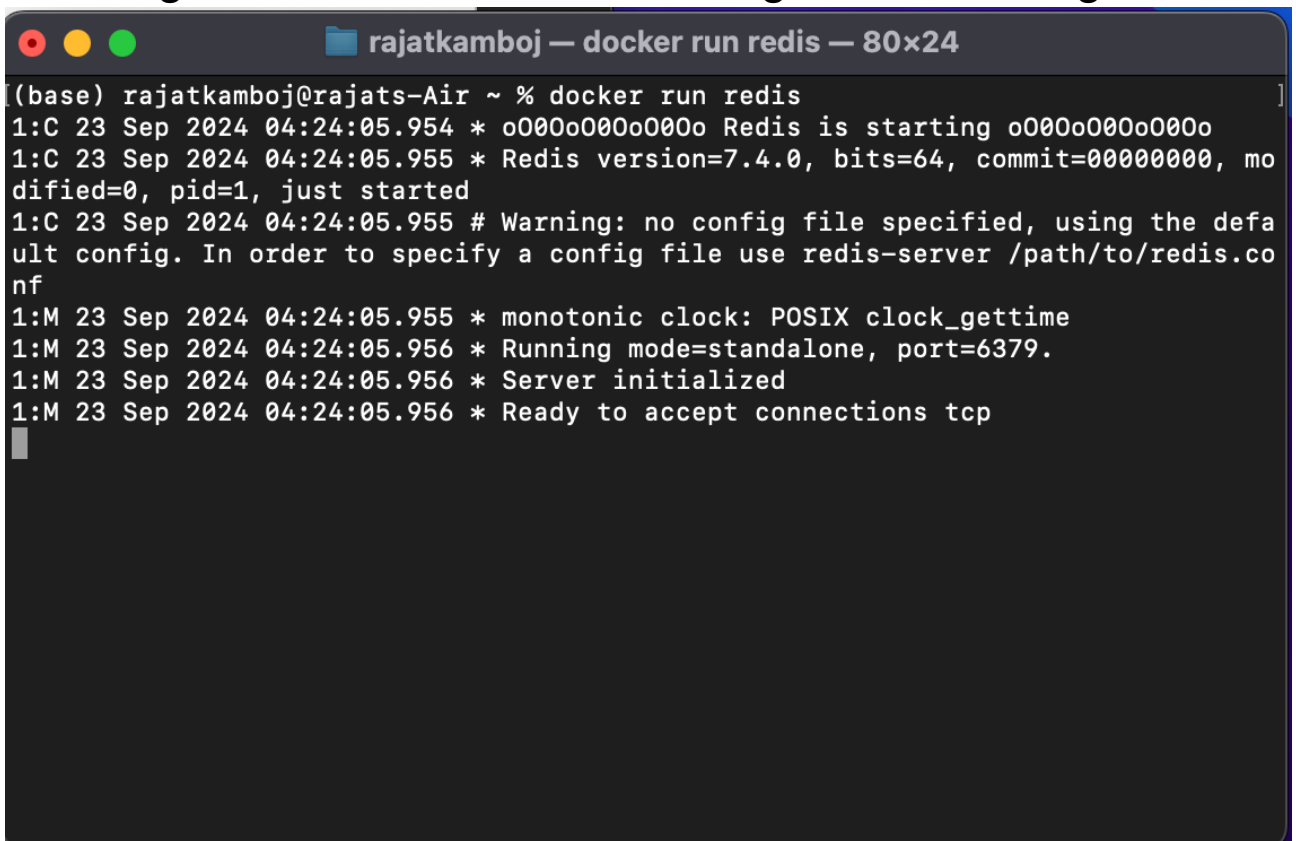
We can check what all images are pull from docker hub ~ docker images
this command helps to see all the images downloaded on to the local machine.

```
[(base) rajatkamboj@rajats-Air ~ % docker images
REPOSITORY      TAG       IMAGE ID       CREATED        SIZE
redis           latest    9fba7e5fadd5   7 weeks ago    140MB
ubuntu          latest    ffb64c9b7e8b   3 months ago   101MB
hello-world     latest    ee301c921b8a   16 months ago  9.14kB
(base) rajatkamboj@rajats-Air ~ %
```

As redis image has been pulled from the docker hub we
can use it.

2. Running the docker container having the redis image:

```
●  ●  ●              📁 rajatkamboj — docker run redis — 80×24

[(base) rajatkamboj@rajats-Air ~ % docker run redis
1:C 23 Sep 2024 04:24:05.954 * oO0OoO00oO00o Redis is starting oO0OoO00oO00o
1:C 23 Sep 2024 04:24:05.955 * Redis version=7.4.0, bits=64, commit=00000000, mo
dified=0, pid=1, just started
1:C 23 Sep 2024 04:24:05.955 # Warning: no config file specified, using the defa
ult config. In order to specify a config file use redis-server /path/to/redis.co
nf
1:M 23 Sep 2024 04:24:05.955 * monotonic clock: POSIX clock_gettime
1:M 23 Sep 2024 04:24:05.956 * Running mode=standalone, port=6379.
1:M 23 Sep 2024 04:24:05.956 * Server initialized
1:M 23 Sep 2024 04:24:05.956 * Ready to accept connections tcp
```

To run redis we will use the command

~docker run redis   this

will create a container.

```
●  ●  ●  📁 rajatkamboj — docker exec -it redis-container redis-cli — 80×24
Last login: Mon Sep 23 09:55:15 on ttys000
[(base) rajatkamboj@rajats-Air ~ % docker ps                                  ]
CONTAINER ID    IMAGE        COMMAND                    CREATED         STATUS
    PORTS                      NAMES
9338ae732851    redis        "docker-entrypoint.s…"   6 minutes ago   Up 6 minutes
    6379/tcp                   exciting_shannon
c54ad8ad9465    redis        "docker-entrypoint.s…"   10 minutes ago  Up 10 minutes
    0.0.0.0:6379->6379/tcp    redis-container
[(base) rajatkamboj@rajats-Air ~ % docker exec -it redis-container redis-cli   ]
[127.0.0.1:6379>                                                              ]
 127.0.0.1:6379> ▮
```

This shows that the redis container is working fine.

3. Docker ps and Docker ps -a
    These commands show the list of docker containers on
    our local machine

    On running ~docker ps and ~docker ps -a the output is :


```
●  ●  ●                  📁 rajatkamboj — -zsh — 80×24
Last login: Mon Sep 23 10:00:27 on ttys000
[(base) rajatkamboj@rajats-Air ~ % docker ps                                  ]
CONTAINER ID    IMAGE        COMMAND                    CREATED         STATUS
    PORTS                      NAMES
9338ae732851    redis        "docker-entrypoint.s…"   10 minutes ago  Up 10 minutes
    6379/tcp                   exciting_shannon
c54ad8ad9465    redis        "docker-entrypoint.s…"   14 minutes ago  Up 14 minutes
    0.0.0.0:6379->6379/tcp    redis-container
[(base) rajatkamboj@rajats-Air ~ % docker ps -a                               ]
CONTAINER ID    IMAGE        COMMAND                    CREATED          STATUS
          PORTS                      NAMES
9338ae732851    redis        "docker-entrypoint.s…"   10 minutes ago   Up 10 min
utes              6379/tcp                   exciting_shannon
c54ad8ad9465    redis        "docker-entrypoint.s…"   14 minutes ago   Up 14 min
utes          0.0.0.0:6379->6379/tcp    redis-container
fcd858362f11    hello-world  "/hello"                   23 minutes ago   Exited (0
) 23 minutes ago                           awesome_nash
80d3e444c98e    ubuntu       "/bin/bash"                5 weeks ago      Exited (2
) 5 weeks ago                              myubuntu
(base) rajatkamboj@rajats-Air ~ % ▮
```
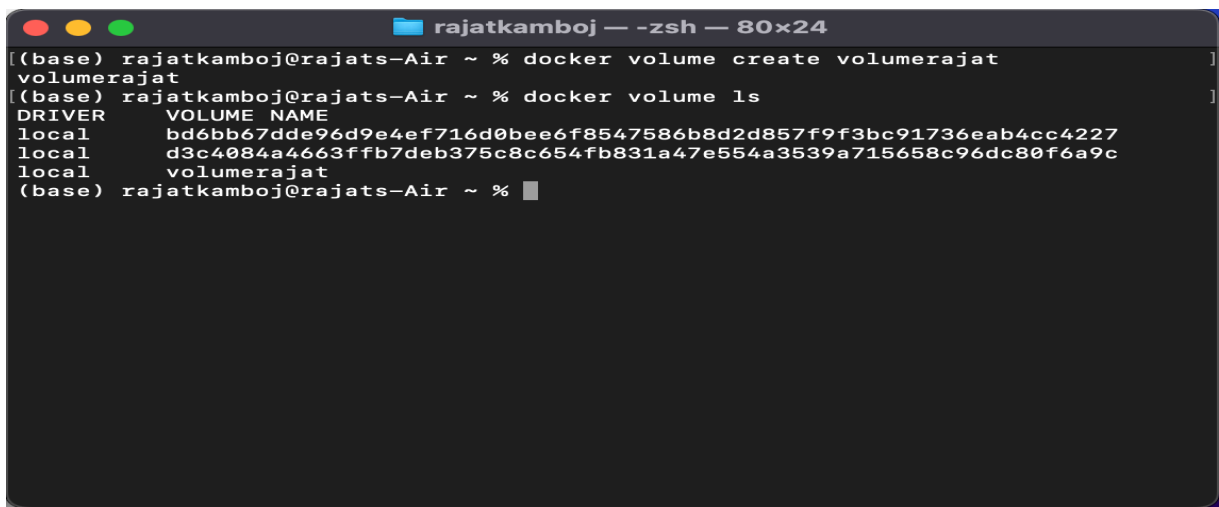
~docker ps just shows the current running containers on the local machine   whereas
~docker ps -a shows the list of all running and stopped containers on the local machine

4. Creating Docker volume
    ~docker volume create
    volumeBhavesh this creates a new
    volume

Running the redis container with the new volume:
~docker run -d —name redisBhavesh -v
volumeBhavesh:/data redis:latest

```
[(base) rajatkamboj@rajats-Air ~ % docker run -d --name redisrajatkamboj -v volum]
erajat:/data redis:latest
41491f9c3817f38206291d640ee1c451ab3831f53fd130ff7e1f866f243d3c94
[(base) rajatkamboj@rajats-Air ~ % docker ps -a                                  ]
CONTAINER ID    IMAGE           COMMAND                 NAMES          STATUS
                PORTS                   NAMES
41491f9c3817    redis:latest    "docker-entrypoint.s…"   11 seconds ago  Up 10 se
conds           6379/tcp                redisrajatkamboj
9338ae732851    redis           "docker-entrypoint.s…"   14 minutes ago  Up 14 mi
nutes           6379/tcp                exciting_shannon
c54ad8ad9465    redis           "docker-entrypoint.s…"   17 minutes ago  Up 17 mi
nutes           0.0.0.0:6379->6379/tcp  redis-container
fcd858362f11    hello-world     "/hello"                 27 minutes ago  Exited (
0) 27 minutes ago                       awesome_nash
80d3e444c98e    ubuntu          "/bin/bash"              5 weeks ago     Exited (
2) 5 weeks ago                          myubuntu
(base) rajatkamboj@rajats-Air ~ % 
```

this creates another container