1- Check the docker version installed.

```
┌──(root㉿kali)-[~]
└─# docker --version
Docker version 20.10.24+dfsg1, build 297e128
```

2- run docker container for hello-world

```
┌──(root㉿kali)-[~]
└─# docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

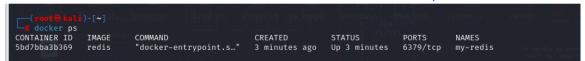3- run docker container redis in detached mode

```
┌──(root㉿kali)-[~]
└─# docker run -d --name my-redis redis
Unable to find image 'redis:latest' locally
latest: Pulling from library/redis
f03b40093957: Already exists
8db26c5e8435: Already exists
37e84c7a626f: Already exists
806c192e0375: Already exists
08769906aa59: Already exists
635073d8ccd5: Already exists
Digest: sha256:f9724694a0b97288d2255ff2b69642dfba7f34c8e41aaf0a59d33d10d8a42687
Status: Downloaded newer image for redis:latest
5bd7bba3b369ed5c7a84b99c03c5583721781a78bdd2d0363f505ba63a07bd64

┌──(root㉿kali)-[~]
└─# docker ps
CONTAINER ID   IMAGE   COMMAND                CREATED              STATUS              PORTS      NAMES
5bd7bba3b369   redis   "docker-entrypoint.s…"  About a minute ago   Up About a minute   6379/tcp   my-redis
```

4- try to stop the running redis container

```
┌──(root㉿kali)-[~]
└─# docker ps
CONTAINER ID   IMAGE     COMMAND                CREATED        STATUS          PORTS       NAMES
5bd7bba3b369   redis     "docker-entrypoint.s…" 3 minutes ago  Up 3 minutes    6379/tcp    my-redis

┌──(root㉿kali)-[~]
└─# docker stop 5bd7bba3b369
5bd7bba3b369
```

5- check the present container o the host

```
┌──(root㉿kali)-[~]
└─# docker ps -a
CONTAINER ID   IMAGE               COMMAND                CREATED         STATUS                     PORTS                                              NAMES
5bd7bba3b369   redis               "docker-entrypoint.s…" 4 minutes ago   Exited (0) About a minute ago                                                 my-redis
c0fdff7e4990   hello-world         "/hello"               7 minutes ago   Exited (0) 7 minutes ago                                                      stupefied_margulis
ca1b5cc795a5   mongo               "docker-entrypoint.s…" 51 minutes ago  Exited (0) 49 minutes ago                                                     zen_hypatia
3e1367f3db69   mongo               "docker-entrypoint.s…" 53 minutes ago  Exited (0) 51 minutes ago                                                     inspiring_napier
703fa733adc4   mongo               "docker-entrypoint.s…" About an hour ago Exited (0) About an hour ago                                                distracted_bassi
b0012e4ac740   mongo               "docker-entrypoint.s…" About an hour ago Exited (0) About an hour ago                                                beautiful_wilson
45a8b9892b03   mongo               "docker-entrypoint.s…" About an hour ago Exited (0) About an hour ago                                                kind_borg
5b43ae2928ad   448a08f1d2f9        "/docker-entrypoint…"  2 hours ago     Exited (0) 2 hours ago                                                        nginx-background
77adf8cf7648   448a08f1d2f9        "/docker-entrypoint…"  2 hours ago     Exited (127) 2 hours ago                                                      wizardly_franklin
11efc0ecdccf   448a08f1d2f9        "/docker-entrypoint…"  2 hours ago     Exited (0) 2 hours ago                                                        inspiring_panini
37c8d97cf277   my-nginx-image      "/docker-entrypoint…"  3 hours ago     Exited (0) 3 hours ago                                                        Docker-test
1a3bc1a7a51e   a7be6198544f        "/docker-entrypoint…"  3 hours ago     Exited (0) 3 hours ago                                                        cool_keller
e28d48272535   448a08f1d2f9        "/docker-entrypoint…"  3 hours ago     Exited (0) 3 hours ago                                                        hamo-alhacker
58362541e1ee   a7be6198544f        "/docker-entrypoint…"  4 hours ago     Exited (0) 4 hours ago                                                        serene_jackson
c4dbef20523b   nginx:1.23.4-alpine "/docker-entrypoint…"  4 hours ago     Exited (0) 4 hours ago                                                        upbeat_gates
e3549fa49f22   nginx:1.23.4-alpine "/docker-entrypoint…"  23 hours ago    Exited (0) 23 hours ago                                                       trusting_noether
1b7f19e85053   redis               "docker-entrypoint.s…" 36 hours ago    Exited (0) 35 hours ago                                                       My-redis
2676877a143a   hello-world         "/hello"               37 hours ago    Exited (0) 37 hours ago                                                       nifty_noether
0554636aad01   my_nginx            "/docker-entrypoint…"  8 days ago      Exited (255) 6 days ago    8080/tcp, 0.0.0.0:8080→80/tcp, :::8080→80/tcp   DockerTasks
e5950d610f36   my-nginx-image      "/docker-entrypoint…"  8 days ago      Created                                                                       elegant_varahamihira
178b4e269458   my-nginx-image      "/docker-entrypoint…"  8 days ago      Created                                                                       happy_kilby
```

6- check the ID of the redis container

```
┌──(root㉿kali)-[~]
└─# docker ps
CONTAINER ID   IMAGE     COMMAND                CREATED        STATUS          PORTS       NAMES
5bd7bba3b369   redis     "docker-entrypoint.s…" 3 minutes ago  Up 3 minutes    6379/tcp    my-redis
```

CONTAINER ID: 5bd7bba3b369

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

```
┌──(root㉿kali)-[~]
└─# docker run nginx:alpine
Unable to find image 'nginx:alpine' locally
alpine: Pulling from library/nginx
f56be85fc22e: Already exists
97c80f11709c: Pull complete
afb503c1f124: Pull complete
f8c948b732dd: Pull complete
d021bba29710: Pull complete
cadcca1af197: Pull complete
4aacde79cec4: Pull complete
Digest: sha256:2e776a66a3556f001aba13431b26e448fe8acba277bf93d2ab1a785571a46d90
Status: Downloaded newer image for nginx:alpine
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/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.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/05/29 15:49:28 [notice] 1#1: using the "epoll" event method
2023/05/29 15:49:28 [notice] 1#1: nginx/1.25.0
2023/05/29 15:49:28 [notice] 1#1: built by gcc 12.2.1 20220924 (Alpine 12.2.1_git20220924-r4)
2023/05/29 15:49:28 [notice] 1#1: OS: Linux 6.1.0-kali5-amd64
2023/05/29 15:49:28 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/05/29 15:49:28 [notice] 1#1: start worker processes
2023/05/29 15:49:28 [notice] 1#1: start worker process 30
2023/05/29 15:49:28 [notice] 1#1: start worker process 31
2023/05/29 15:49:28 [notice] 1#1: start worker process 32
2023/05/29 15:49:28 [notice] 1#1: start worker process 33
```

7- Delete nginx:alpine image

```
┌──(root㉿kali)-[~]
└─# docker images
REPOSITORY        TAG              IMAGE ID        CREATED         SIZE
nginx             alpine           fe7edaf8a8dc    4 days ago      41.4MB
mongo             latest           61eca46d7769    5 days ago      653MB
my_nginx          latest           4b17a6a08b45    8 days ago      160MB
my-nginx-image    latest           7e7d3b7641b6    8 days ago      142MB
hello-world       latest           9c7a54a9a43c    3 weeks ago     13.3kB
nginx             1.23.4-alpine    8e75cbc5b25c    2 months ago    41MB

┌──(root㉿kali)-[~]
└─# docker rmi -f fe7edaf8a8dc
Untagged: nginx:alpine
Untagged: nginx@sha256:2e776a66a3556f001aba13431b26e448fe8acba277bf93d2ab1a785571a46d90
Deleted: sha256:fe7edaf8a8dcf9af72f49cf0a0219e3ace17667bafc537f0d4a0ab1bd7f10467

┌──(root㉿kali)-[~]
└─# docker images
REPOSITORY        TAG              IMAGE ID        CREATED         SIZE
mongo             latest           61eca46d7769    5 days ago      653MB
my_nginx          latest           4b17a6a08b45    8 days ago      160MB
my-nginx-image    latest           7e7d3b7641b6    8 days ago      142MB
hello-world       latest           9c7a54a9a43c    3 weeks ago     13.3kB
nginx             1.23.4-alpine    8e75cbc5b25c    2 months ago    41MB
```

8- delete the image redis

```
┌──(root㉿kali)-[~]
└─# docker rmi -f  0ec8ab59a35f
Untagged: redis:latest
Untagged: redis@sha256:f9724694a0b97288d2255ff2b69642dfba7f34c8e41aaf0a59d33d10d8a42687
Deleted: sha256:0ec8ab59a35faa3aaee416630128e11949d44ac82d15d43053f8af5d61182a5d

┌──(root㉿kali)-[~]
└─# docker images
REPOSITORY        TAG              IMAGE ID        CREATED         SIZE
nginx             alpine           fe7edaf8a8dc    4 days ago      41.4MB
mongo             latest           61eca46d7769    5 days ago      653MB
my_nginx          latest           4b17a6a08b45    8 days ago      160MB
my-nginx-image    latest           7e7d3b7641b6    8 days ago      142MB
hello-world       latest           9c7a54a9a43c    3 weeks ago     13.3kB
nginx             1.23.4-alpine    8e75cbc5b25c    2 months ago    41MB
```

9- pull image from nginx:1.14-alpine

```
┌──(root㉿kali)-[~]
└─# docker pull nginx:1.14-alpine
1.14-alpine: Pulling from library/nginx
bdf0201b3a05: Pull complete
3d0a573c81ed: Pull complete
8129faeb2eb6: Pull complete
3dc99f571daf: Pull complete
Digest: sha256:485b610fefec7ff6c463ced9623314a04ed67e3945b9c08d7e53a47f6d108dc7
Status: Downloaded newer image for nginx:1.14-alpine
docker.io/library/nginx:1.14-alpine

┌──(root㉿kali)-[~]
└─# docker ps
CONTAINER ID    IMAGE       COMMAND    CREATED    STATUS    PORTS    NAMES

┌──(root㉿kali)-[~]
└─# docker images
REPOSITORY        TAG            IMAGE ID        CREATED        SIZE
mongo             latest         61eca46d7769    5 days ago     653MB
my_nginx          latest         4b17a6a08b45    8 days ago     160MB
my-nginx-image    latest         7e7d3b7641b6    8 days ago     142MB
hello-world       latest         9c7a54a9a43c    3 weeks ago    13.3kB
nginx             1.23.4-alpine  8e75cbc5b25c    2 months ago   41MB
nginx             1.14-alpine    8a2fb25a19f5    4 years ago    16MB
```

10-Run an instance of the Ubuntu image to run the sleep 1000 command at startup.

```
┌──(root㉿kali)-[~]
└─# docker run ubuntu sleep 1000
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
dbf6a9befcde: Pull complete
Digest: sha256:dfd64a3b4296d8c9b62aa3309984f8620b98d87e47492599ee20739e8eb54fbf
Status: Downloaded newer image for ubuntu:latest
```

```
File  Actions  Edit  View  Help
  root@kali: ~ ×     root@kali: ~ ×
┌──(root㉿kali)-[~]
└─# docker ps
CONTAINER ID    IMAGE     COMMAND       CREATED          STATUS          PORTS    NAMES
e4c834375cfc    ubuntu    "sleep 1000"  49 seconds ago   Up 48 seconds            sleepy_lamarr
```

11-Exec into the container and touch a file called test-file

```
└─# docker ps
CONTAINER ID   IMAGE    COMMAND       CREATED        STATUS        PORTS      NAMES
e4c834375cfc   ubuntu   "sleep 1000"  3 minutes ago  Up 3 minutes             sleepy_lamarr

┌──(root㉿kali)-[~]
└─# docker exec -it e4c834375cfc /bin/bash
root@e4c834375cfc:/# ls
bin  boot  dev  etc  home  lib  lib32  lib64  libx32  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@e4c834375cfc:/# touch test-file
root@e4c834375cfc:/# ls
bin  boot  dev  etc  home  lib  lib32  lib64  libx32  media  mnt  opt  proc  root  run  sbin  srv  sys  test-file  tmp  usr  var
root@e4c834375cfc:/#
```

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

```
┌──(root㉿kali)-[~]
└─# docker run --name web nginx:alpine
Unable to find image 'nginx:alpine' locally
alpine: Pulling from library/nginx
f56be85fc22e: Already exists
97c80f11709c: Already exists
afb503c1f124: Already exists
f8c948b732dd: Already exists
d021bba29710: Already exists
cadcca1af197: Already exists
4aacde79cec4: Already exists
Digest: sha256:2e776a66a3556f001aba13431b26e448fe8acba277bf93d2ab1a785571a46d90
Status: Downloaded newer image for nginx:alpine
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/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.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/05/29 16:17:28 [notice] 1#1: using the "epoll" event method
2023/05/29 16:17:28 [notice] 1#1: nginx/1.25.0
2023/05/29 16:17:28 [notice] 1#1: built by gcc 12.2.1 20220924 (Alpine 12.2.1_git20220924-r4)
2023/05/29 16:17:28 [notice] 1#1: OS: Linux 6.1.0-kali5-amd64
2023/05/29 16:17:28 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/05/29 16:17:28 [notice] 1#1: start worker processes
2023/05/29 16:17:28 [notice] 1#1: start worker process 30
2023/05/29 16:17:28 [notice] 1#1: start worker process 31
2023/05/29 16:17:28 [notice] 1#1: start worker process 32
2023/05/29 16:17:28 [notice] 1#1: start worker process 33
```

13- Delete all the images from the host

```
┌──(root㉿kali)-[~]
└─# docker rmi -f $(docker images -q)
Untagged: nginx:alpine
Untagged: nginx@sha256:2e776a66a3556f001aba13431b26e448fe8acba277bf93d2ab1a785571a46d90
Deleted: sha256:fe7edaf8a8dcf9af72f49cf0a0219e3ace17667bafc537f0d4a0ab1bd7f10467
Untagged: mongo:latest
Untagged: mongo@sha256:695cc4d237d158d32d5ddcadefe06444dbbd5feac2d50f560b60b70f2198c16c
Deleted: sha256:61eca46d7769696024576c77399590837fa7efd5265809638981ad7d7977e987
Untagged: my_nginx:latest
Deleted: sha256:4b17a6a08b45c02f5539ee40f72d6710fe417672fb0aab0d1a15acb28da57fac
Deleted: sha256:eeb1d836a4d2136df3f05f268b2762e504bbd8c06181a07d53e25b49c060c92f
Deleted: sha256:ef8661f4b7238a39a4f9a192533c956efab36e2edc735e8fd8dac6f858fa1bc8
Deleted: sha256:a8331cfa03f7169d7e3c5568a2caf093d8e0676e4f062506cc6d70cee416a292
Untagged: my-nginx-image:latest
Deleted: sha256:7e7d3b7641b6988b0f74cf5577a1d743a5faec217eeba9d1920e3a7a9cc49d84
Untagged: hello-world:latest
Untagged: hello-world@sha256:fc6cf906cbfa013e80938cdf0bb199fbdbb86d6e3e013783e5a766f50f5dbce0
Deleted: sha256:9c7a54a9a43cca047013b82af109fe963fde787f63f9e016fdc3384500c2823d
Untagged: ubuntu:latest
Untagged: ubuntu@sha256:dfd64a3b4296d8c9b62aa3309984f8620b98d87e47492599ee20739e8eb54fbf
Deleted: sha256:3b418d7b466ac6275a6bfcb0c86fbe4422ff6ea0af444a294f82d3bf5173ce74
Untagged: nginx:1.23.4-alpine
Untagged: nginx@sha256:02ffd439b71d9ea9408e449b568f65c0bbbb94bebd8750f1d80231ab6496008e
Deleted: sha256:8e75cbc5b25c8438fcfe2e7c12c98409d5f161cbb668d6c444e02796691ada70

┌──(root㉿kali)-[~]
└─# docker images
REPOSITORY    TAG        IMAGE ID       CREATED        SIZE
<none>        <none>     448a08f1d2f9   3 weeks ago    142MB
```