```
# give this command inside the container apt-get update
apt-get install apache2 apt-get
install curl apt-get install sqlite2
service apache2 status service
apache2 start service apache2
stop
```

docker basics

```
# when no docker is installed sudo docker
version
```

Output:

```
$ docker -version
Command 'docker' not found, but can be installed with: sudo apt install
docker.io
==============================================================
```

```
# when docker is installed sudo docker
--version
```

Output:

```
$ docker --version Docker version 19.03.8, build afacb8b7f0
==============================================================
```

```
# when docker is installed with version sudo docker
version
```

Output:

```
$ sudo docker version


Client:
 Version:                        19.03.8
 API version:                  1.40
 Go version:                 go1.13.8
 Git commit:                 afacb8b7f0
 Built:                      Tue Jun 23 22:26:12 2020
 OS/Arch:                    linux/amd64
 Experimental:               false

Server:
 Engine:
  Version:                   19.03.8
  API version:               1.40 (minimum version 1.12) Go
  version:                   go1.13.8
  Git commit:                afacb8b7f0
  Built:                     Thu Jun 18 08:26:54 2020
  OS/Arch:                   linux/amd64
  Experimental:              false
 containerd:
  Version:                   1.3.3-0ubuntu2
  GitCommit:
 runc:
  Version:                   spec: 1.0.1-dev
```

```
      GitCommit:
      docker-init:
    Version:                          0.18.0
    GitCommit:
==================================================================================

# docker pull <image-name> - when pulling images from dockerhub sudo docker pull ubuntu

Output:
$ sudo docker pull ubuntu Using default tag: latest
latest: Pulling from library/ubuntu 3ff22d22a855:
Pull complete e7cb79d19722: Pull complete
323d0d660b6a: Pull complete b7f616834fd0: Pull
complete
Digest:sha256:5d1d5407f353843ecf8b16524bc5565aa332e9e6a1297c73a92d3e754b8a636d Status: Downloaded
newer image for ubuntu:latest docker.io/library/ubuntu:latest
====================================================================================

# docker images - images downloaded on the docker engine(container) sudo docker images

Output:
$ sudo docker images
REPOSITORY                TAG                       IMAGE ID                  CREATED
SIZE
ubuntu                    latest                    1e4467b07108              10 days ago
73.9MB
========================================================================================
====

# docker run - with ubuntu image on container sudo docker run -it
-d ubuntu
(-it: interactive terminal, -d: run in background as daemon)

Output:
$ sudo docker run -it -d ubuntu
723db1dd423425c1a001ea3fbf3118cc8e69ad4fac22d7cdacd0790208281c0b
========================================================================================
====

# docker run -it -p <82:80> -d <image-name> - will run the image on thecontainer with the port forwarding.
sudo docker run -it -p 82:80 -d ubuntu
(-it: interactive terminal, -d: run in background as daemon, -p: portforwarding
<container-port external: container port internal>) Output:

# docker ps - list only container running in the system sudo docker ps

Output:
$ sudo docker ps
CONTAINER ID              IMAGE                     COMMAND                   CREATED
STATUS                    PORTS                     NAMES
```

```
723db1dd4234          ubuntu                    "/bin/bash"          2 minutes ago           Up
2 minutes                                     tender_mestorf
=================================================================================
=====================================================
```

```
# docker ps -a - will list all containers running/exited insystem sudo docker ps -a
```

Output:

```
$ sudo docker ps -a
CONTAINER ID          IMAGE                  COMMAND
                      CREATED    STATUS                 PORTS
                      NAMES
0a783089cf38          ubuntu                 "/bin/bash"          2 minutes ago           Up
2 minutes                                        romantic_rosalind
723db1dd4234          ubuntu                 "/bin/bash"          3 hours ago
Exited (0) 2 minutes ago                     tender_mestorf
=================================================================================
==============================================================
```

```
# docker container stop <container-id> - stopping the specific containerrunning. sudo docker stop 0a783089cf38
```

Output:

```
$ sudo docker stop 0a783089cf38 0a783089cf38
=================================================================================
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```

```
# docker container exec -t <container-id> - by doing this we are logging intothe specific container sessions.
sudo docker exec -it c519b3108c3b bash
```

Output:

```
$ sudo docker exec -it c519b3108c3bbash root@c519b3108c3b:/# ls
bin     dev    home    lib32    libx32    mnt    proc    run    srv    tmp    var
boot    etc    lib     lib64    media     opt    root    sbin   sys    usr
=================================================================================
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```

```
# docker kill <container-id> - will kill the containers which sometimes cannotbe safely exited due to some reasons.
sudo docker kill c519b3108c3b
```

Output:

```
$ sudo docker kill 7c4683ab4625 7c4683ab4625
=================================================================================
=========================================
```

```
# docker rm <container-id> - will delete/remove the containers which usedubuntu image. This is basically used to remove
the containers.
sudo docker rm 7c4683ab4625
```

Output:

```
$ sudo docker rm 7c4683ab4625 7c4683ab4625
=================================================================================
=========================================
# docker rm -f $(docker ps -a -q) - will remove all containers running/exitedin the system
sudo docker rm -f $(sudo docker ps -a -q)

Output:
$ sudo docker rm -f $(sudo docker ps -a-q) 42c4677fd302
4a64be7f1012
==========================================================================================
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```

```
# docker rmi <image-id> - will remove images from the docker system, rmi -remove image
sudo docker rmi a24bb4013296

Output:
$ sudo docker images
REPOSITORY                TAG                        IMAGE ID                  CREATED
SIZE
ubuntu                    latest                     1e4467b07108              10 days ago
73.9MB
alpine                    latest                     a24bb4013296              2 months ago
5.57MB

$ sudo docker rmi a24bb4013296 Untagged: alpine:latest
Untagged: alpine@sha256:185518070891758909c9f839cf4ca393ee977ac378609f700f60a771a2dfe321 Deleted:
sha256:a24bb4013296f61e89ba57005a7b3e52274d8edd3ae2077d04395f806b63d83e Deleted:
sha256:50644c29ef5a27c9a40c393a73ece2479de78325cae7d762ef3cdc19bf42dd0a
==========================================================================================
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```

```
# docker rmi <username>/<image-name>:<tag-name> - remove the image when thishas dependency on child images.
sudo docker rmi kbhat2376/ubuntu-2020-08-06:latest

Output:
$ sudo docker images
REPOSITORY                                    TAG                        IMAGE ID                  
CREATED                   SIZE
kbhat2376/ubuntu-2020-08-06-latest            latest                     f225620c6fa1              About
an hour ago        215MB
kbhat2376/ubuntu-2020-08-06                   latest                     343be86aab07              2
hours ago                 215MB

$ sudo docker rmikbhat2376/ubuntu-2020-08-06:latest Untagged: kbhat2376/ubuntu-2020-08-06:latest
Untagged: kbhat2376/ubuntu-2020-08-
06@sha256:8ca80f5b8d6ce56bb00d822859a13843e6c05ba6b2f0f9f026451462d6ce0e8e $ sudo docker
images
REPOSITORY                                    TAG                        IMAGE ID                  
CREATED                   SIZE
kbhat2376/ubuntu-2020-08-06-latest            latest                     f225620c6fa1              About
an hour ago        215MB
==========================================================================================
================================================
# docker rmi <image-id> - this will throw an error when we have image to bedeleted and this has dependency with child
image.
sudo docker rmi 343be86aab07

Output:
$ sudo docker rmi 343be86aab07
Error response from daemon: conflict: unable to delete 343be86aab07 (cannotbe forced) - image has dependent child
images
==================================================================================
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```

```
# docker commit b4da9724f9fb debian-2020-08-05 - will save the containerwith latest set of installations, and save
as new image.
sudo docker commit b4da9724f9fb debian-2020-08-05

Output:
$ sudo docker commit b4da9724f9fbdebian-2020-08-05
sha256:d78dc99fd4b0ee19efc2ed8fc0ce823e3546ceb40e3be1d3bce33eb8253264a4 $ sudo docker images
REPOSITORY              TAG                     IMAGE ID                CREATED
SIZE
debian-2020-08-05       latest                  d78dc99fd4b0            11 seconds ago
114MB
debian-05-08-2020       latest                  cf3a1cd779e9            5 minutes ago
114MB
debian                  latest                  ae8514941ea4            2 weeks ago
114MB

$ sudo docker exec -it b4da9724f9fb77f809a735f8b03c57ab87f6f8acebfd3b3fe22282185a47dc9b
bash root@b4da9724f9fb:/# ls
bin      dev     home      lib      media    opt    root    sbin    sys    usr
boot     etc     karthik   lib64    mnt      proc    run     srv     tmp    var
root@b4da9724f9fb:/# cd karthik
root@b4da9724f9fb:/karthik# ls k1.txt
          k2.txt
root@b4da9724f9fb:/karthik# cat >> k1.txt fsdjfsdjsdfjk
dsfsdjfkjds
sdklsdklfsdkf
sdsdjfdskjdf

root@b4da9724f9fb:/karthik# cat k1.txt fsdjfsdjsdfjk
dsfsdjfkjds
sdklsdklfsdkf
sdsdjfdskjdf
root@b4da9724f9fb:/karthik# cat >> k2.txt Welcome to
docker
==================================================================================
==================================================
```

```
# docker login - will login to docker sudo docker login

Output:
Authenticating with existing credentials...
Login did not succeed, error: Error response from daemon: Gethttps://registry- 1.docker.io/v2/: Get
https://auth.docker.io/token?
```

```
account=kbhat2376&client_id=docker&offline_token=true&service=registry.docker.io: net/http: request canceled
(Client.Timeout exceeded while awaiting headers) (Client.Timeout exceeded while awaiting headers)
Login with your Docker ID to push and pull images from Docker Hub. If youdon't have a Docker ID, head over to
https://hub.docker.com to create one.

Username (kbhat2376): kbhat2376
Password:myindia@2376

Error response from daemon: Get https://registry-1.docker.io/v2/: net/http:request canceled while waiting for connection
(Client.Timeout exceeded while awaiting headers)
===================================================================================
===================================================================================
==========================
```

```
# docker push <username>/<image-name> - will push the custom local image tothe docker hub
sudo docker push kbhat2376/ubuntu-2020-08-06-latest
```

Output:

```
The push refers to repository[docker.io/kbhat2376/ubuntu-2020-08-06-latest] 7ae832ac16f7: Pushed
5b747ba07043:  Mounted  from kbhat2376/ubuntu-2020-08-06  78c7a3b3d608:
Mounted  from kbhat2376/ubuntu-2020-08-06  d387dc402e97:  Mounted  from
kbhat2376/ubuntu-2020-08-06         095624243293:         Mounted         from
kbhat2376/ubuntu-2020-08-06         a37e74863e72:         Mounted         from
kbhat2376/ubuntu-2020-08-06         8eeb4a14bcb4:         Mounted         from
kbhat2376/ubuntu-2020-08-06         ce3011290956:         Mounted         from
kbhat2376/ubuntu-2020-08-06 latest: digest:
sha256:1565b372bca309c22f44120683c25ea6ae2dda9c77826aa7035f2edd99a279ea size: 1989
===================================================================================
=============================================================================
```