Pulling an image

$ docker images

```
cd@DESKTOP-VCNQ3D1:~$ docker images
REPOSITORY      TAG         IMAGE ID        CREATED         SIZE
ubuntu          latest      ff0fea8310f3    7 days ago      72.8MB
ubuntu          16.04       b6f507652425    6 months ago    135MB
ubuntu          16.10       7d3f705d307c    4 years ago     107MB
```

$ docker search <keyword>

```
cd@DESKTOP-VCNQ3D1:~$ docker search ubuntu
NAME                            DESCRIPTION                                 STARS   OFFICIAL    AUTOMATED
ubuntu                          Ubuntu is a Debian-based Linux operating sys…  13918  [OK]
websphere-liberty               WebSphere Liberty multi-architecture images …  283    [OK]
ubuntu-upstart                  DEPRECATED, as is Upstart (find other proces…  112    [OK]
neurodebian                     NeuroDebian provides neuroscience research s…  88     [OK]
open-liberty                    Open Liberty multi-architecture images based…  51     [OK]
ubuntu-debootstrap              DEPRECATED; use "ubuntu" instead               45     [OK]
ubuntu/nginx                    Nginx, a high-performance reverse proxy & we…  37
ubuntu/mysql                    MySQL open source fast, stable, multi-thread…  28
ubuntu/apache2                  Apache, a secure & extensible open-source HT…  26
ubuntu/prometheus               Prometheus is a systems and service monitori…  22
kasmweb/ubuntu-bionic-desktop   Ubuntu productivity desktop for Kasm Workspa…  21
ubuntu/postgres                 PostgreSQL is an open source object-relation…  15
ubuntu/squid                    Squid is a caching proxy for the Web. Long-t…  15
ubuntu/bind9                    BIND 9 is a very flexible, full-featured DNS…  12
ubuntu/redis                    Redis, an open source key-value store. Long-…  9
ubuntu/grafana                  Grafana, a feature rich metrics dashboard & …  5
ubuntu/prometheus-alertmanager  Alertmanager handles client alerts from Prom…  5
ubuntu/memcached                Memcached, in-memory keyvalue store for smal…  4
ubuntu/telegraf                 Telegraf collects, processes, aggregates & w…  3
circleci/ubuntu-server          This image is for internal use                 3
ubuntu/cortex                   Cortex provides storage for Prometheus. Long…  2
ubuntu/cassandra                Cassandra, an open source NoSQL distributed …  1
bitnami/ubuntu-base-buildpack   Ubuntu base compilation image                  0                  [OK]
snyk/ubuntu                     A base ubuntu image for all broker clients t…  0
rancher/ubuntuconsole                                                          0
cd@DESKTOP-VCNQ3D1:~$ docker pull ubuntu:16.04
```

$ docker pull Ubuntu:16.04

```
cd@DESKTOP-VCNQ3D1:~$ docker pull ubuntu:16.04
16.04: Pulling from library/ubuntu
Digest: sha256:0f71fa8d4d2d4292c3c617fda2b36f6dabe5c8b6e34c3dc5b0d17d4e704bd39c
Status: Image is up to date for ubuntu:16.04
docker.io/library/ubuntu:16.04
cd@DESKTOP-VCNQ3D1:~$ docker pull ubuntu:latest
latest: Pulling from library/ubuntu
Digest: sha256:bea6d19168bbfd6af8d77c2cc3c572114eb5d113e6f422573c93cb605a0e2ffb
Status: Image is up to date for ubuntu:latest
docker.io/library/ubuntu:latest
cd@DESKTOP-VCNQ3D1:~$ docker pull ubuntu:16.10
16.10: Pulling from library/ubuntu
Digest: sha256:8dc9652808dc091400d7d5983949043a9f9c7132b15c14814275d25f94bca18a
Status: Image is up to date for ubuntu:16.10
docker.io/library/ubuntu:16.10
```

$ docker rmi <IMAGE ID>

```
cd@DESKTOP-VCNQ3D1:~$ docker rmi ubuntu:16.10
Untagged: ubuntu:16.10
Untagged: ubuntu@sha256:8dc9652808dc091400d7d5983949043a9f9c7132b15c14814275d25f94bca18a
Deleted: sha256:7d3f705d307c7c225398e04d4c4f8512f64eb8a65959a1fb4514dfde18a047e7
Deleted: sha256:d9db289b9342d9617596cd6ee3bba988629e24d9afa5db4e4b0e4e491c65007d
Deleted: sha256:a87725e8597b97f2399bc3aa50b0e2eec903b8ce19055668d3befb012918205c
Deleted: sha256:38cf10a2801529348366953e9b933d3524360dedc91d3e4d5d7f941da0c973c9
Deleted: sha256:61172966249d43026dbd017eec3a9575e37bddf8a269a9f09ecb559d7bfe7fef
Deleted: sha256:57145c01eb80040fdd0a24cde20af4788605b49593188d4f7efab099af89a08e
cd@DESKTOP-VCNQ3D1:~$ docker rmi ubuntu:16.04
Untagged: ubuntu:16.04
Untagged: ubuntu@sha256:0f71fa8d4d2d4292c3c617fda2b36f6dabe5c8b6e34c3dc5b0d17d4e704bd39c
Deleted: sha256:b6f50765242581c887ff1acc2511fa2d885c52d8fb3ac8c4bba131fd86567f2e
Deleted: sha256:0214f4b057d78b44fd12702828152f67c0ce115f9346acc63acdf997cab7e7c8
Deleted: sha256:1b9d0485372c5562fa614d5b35766f6c442539bcee9825a6e90d1158c3299a61
Deleted: sha256:3c0f34be6eb98057c607b9080237cce0be0b86f52d51ba620dc018a3d421baea
Deleted: sha256:be96a3f634de79f523f07c7e4e0216c28af45eb5776e7a6238a2392f71e01069
cd@DESKTOP-VCNQ3D1:~$ docker rmi ubuntu:latest
```

$ docker images

```
cd@DESKTOP-VCNQ3D1:~$ docker images
REPOSITORY      TAG        IMAGE ID       CREATED        SIZE
ubuntu          16.10      7d3f705d307c   4 years ago    107MB
```

Running our container

$ docker run Ubuntu:16.04 /bin/echo 'Hello World!'

```
cd@DESKTOP-VCNQ3D1:~$ docker run ubuntu:16.10 /bin/echo 'Hello world!'
Hello world!
```

$ docker ps

```
cd@DESKTOP-VCNQ3D1:~$ docker ps
CONTAINER ID   IMAGE      COMMAND       CREATED      STATUS      PORTS      NAMES
cd@DESKTOP-VCNQ3D1:~$ docker ps -a
CONTAINER ID   IMAGE         COMMAND              CREATED           STATUS                    PORTS      NAMES
674db01e3227   ubuntu:16.10  "/bin/echo 'Hello wo…"  About a minute ago   Exited (0) About a minute ago            heuristic_meninsky
```

$ docker run –it Ubuntu:16.04 /bin/bash

```
cd@DESKTOP-VCNQ3D1:~$ docker run -it ubuntu:16.04 /bin/bash
Unable to find image 'ubuntu:16.04' locally
^[[A16.04: Pulling from library/ubuntu
58690f9b18fc: Pull complete
b51569e7c507: Pull complete
da8ef40b9eca: Pull complete
fb15d46c38dc: Pull complete
Digest: sha256:0f71fa8d4d2d4292c3c617fda2b36f6dabe5c8b6e34c3dc5b0d17d4e704bd39c
Status: Downloaded newer image for ubuntu:16.04
root@f8e8526b0ef4:/# pwd
/
root@f8e8526b0ef4:/# ls
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@f8e8526b0ef4:/# exit
exit
cd@DESKTOP-VCNQ3D1:~$ docker run -d ubuntu:16.04 /bin/sleep 3600
eece3d3fdaabc30af7c48daa0197cd89924f4d61cd88d3aca3a7da58f32bc160
```

$ docker exec –it be7 /bin/bash

```
cd@DESKTOP-VCNQ3D1:~$ docker exec -it eece3d3fdaab /bin/bash
root@eece3d3fdaab:/# ps aux
USER       PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   4376   668 ?        Ss   10:02   0:00 /bin/sleep 3600
root         8  0.2  0.0  18240  3304 pts/0    Ss   10:05   0:00 /bin/bash
root        19  0.0  0.0  34424  2860 pts/0    R+   10:05   0:00 ps aux
root@eece3d3fdaab:/# exit
exit
```

Removing containers

$ docker stop be73 and docker rm <CONTAINER ID>

```
exit
cd@DESKTOP-VCNQ3D1:~$ docker stop eece3d3fdaab
eece3d3fdaab
cd@DESKTOP-VCNQ3D1:~$ docker ps -a
CONTAINER ID   IMAGE          COMMAND                CREATED         STATUS                      PORTS     NAMES
eece3d3fdaab   ubuntu:16.04   "/bin/sleep 3600"      5 minutes ago   Exited (137) 10 seconds ago           exciting_margulis
f8e8526b0ef4   ubuntu:16.04   "/bin/bash"            7 minutes ago   Exited (0) 6 minutes ago              serene_burnell
674db01e3227   ubuntu:16.10   "/bin/echo 'Hello wo…" 12 minutes ago  Exited (0) 12 minutes ago             heuristic_meninsky
cd@DESKTOP-VCNQ3D1:~$ docker rm eece
eece
```

$ docker run --rm ubuntu:16.04 /bin/echo 'Hello and goodbye!'

```
cd@DESKTOP-VCNQ3D1:~$ docker run --rm ubuntu:16.04 /bin/echo 'Hello and goodbye!'
Hello and goodbye!
cd@DESKTOP-VCNQ3D1:~$
```