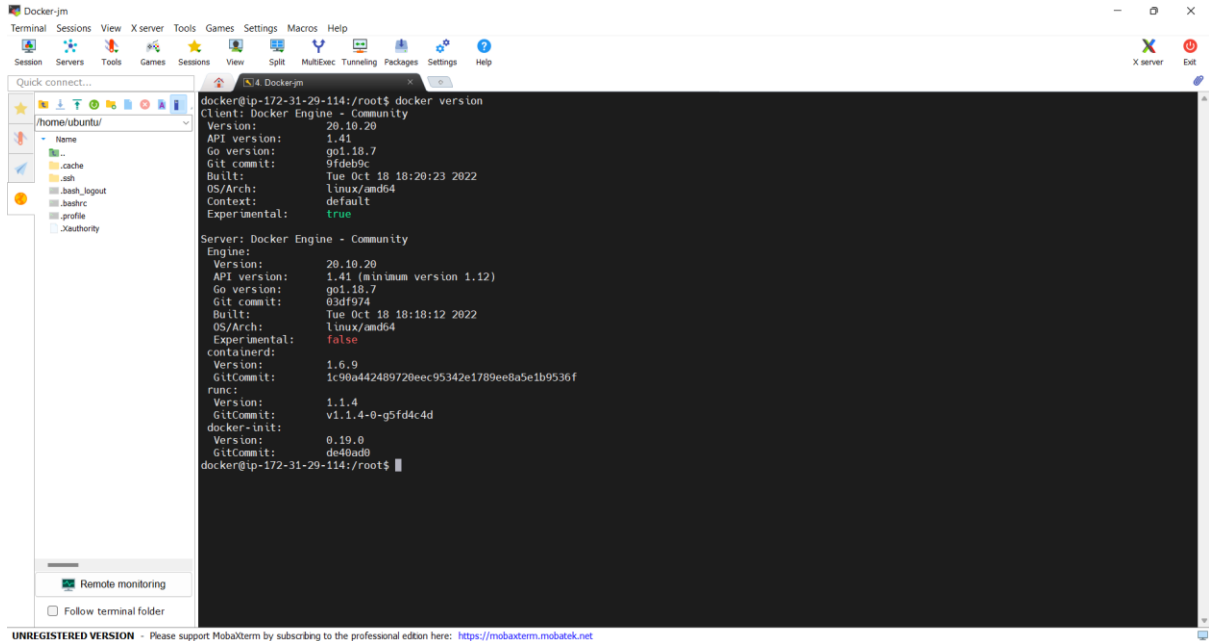


## DAY-3 : DOCKER COMMANDS

### 1. To find out version of docker

\$ docker version

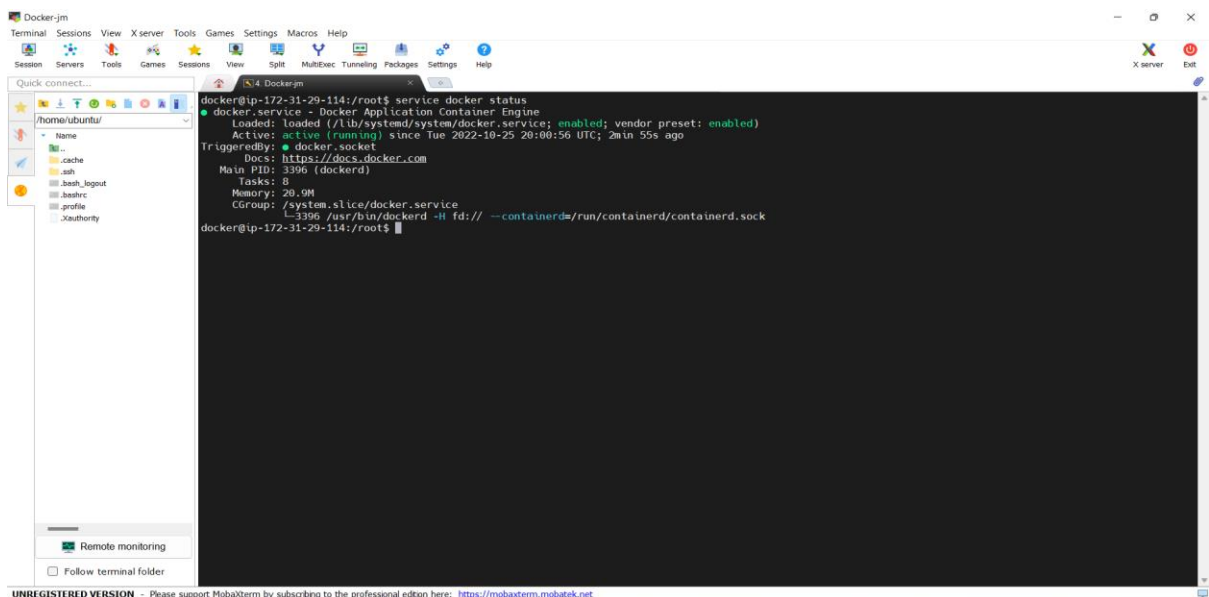


```
docker@ip-172-31-29-114:/root$ docker version
Client: Docker Engine - Community
Version: 20.10.20
API version: 1.41
Go version: go1.18.7
Git commit: 9fdeb9c
Built: Tue Oct 18 18:20:23 2022
OS/Arch: linux/amd64
Context: default
Experimental: true

Server: Docker Engine - Community
Engine:
Version: 20.10.20
API version: 1.41 (minimum version 1.12)
Go version: go1.18.7
Git commit: 03df974
Built: Tue Oct 18 18:18:12 2022
OS/Arch: linux/amd64
Experimental: false
containerd:
Version: 1.6.9
GitCommit: 1c90a442489720e0c95342e1789ee8a5e1b9536f
runc:
Version: 1.1.4
GitCommit: v1.1.4-0-g5fd4c4d
docker-init:
Version: 0.19.0
GitCommit: de40ad9
docker@ip-172-31-29-114:/root$
```

### 2. To check status

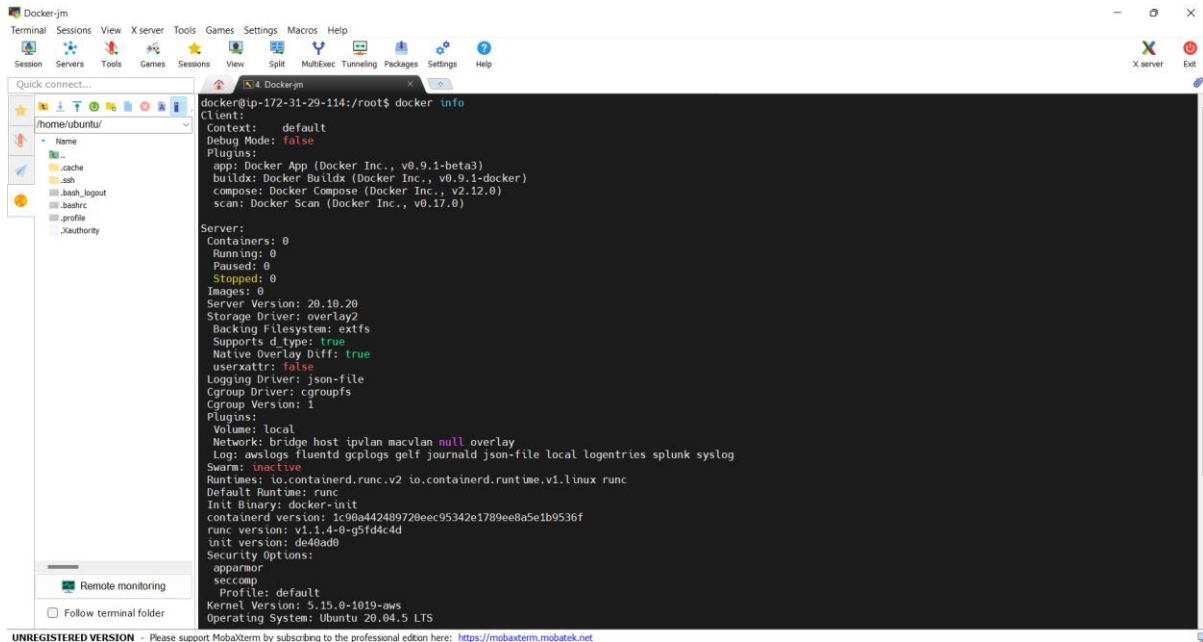
\$ service docker status



```
docker@ip-172-31-29-114:/root$ service docker status
● docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2022-10-25 20:00:56 UTC; 2min 55s ago
     TriggeredBy: ● docker.socket
   Docs: https://docs.docker.com
   Main PID: 3396 (dockerd)
     Tasks: 8
    Memory: 20.9M
   CGroup: /system.slice/docker.service
           └─3396 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock
docker@ip-172-31-29-114:/root$
```

### 3. To find out all information regarding docker

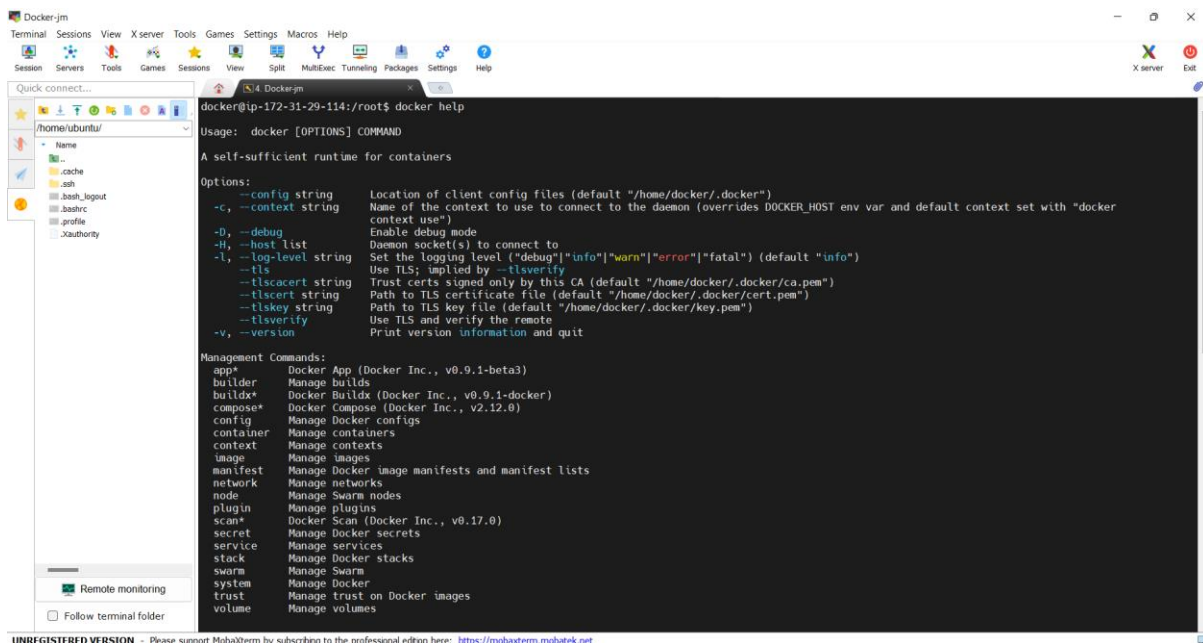
\$ docker info



```
docker@ip-172-31-29-114:/root$ docker info
Client:
Context: default
Debug Mode: false
Plugins:
  app: Docker App (Docker Inc., v0.9.1-beta3)
  buildx: Docker Buildx (Docker Inc., v0.9.1-docker)
  compose: Docker Compose (Docker Inc., v2.12.0)
  scan: Docker Scan (Docker Inc., v0.17.0)
Server:
Containers: 0
Running: 0
Paused: 0
Stopped: 0
Images: 0
Server Version: 20.10.20
Storage Driver: overlay2
Backing Filesystem: extfs
Supports d_type: true
Native Overlay Diff: true
userxattr: false
Logging Driver: json-file
Cgroup Driver: cgroupfs
Cgroup Version: 1
Plugins:
  Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog
Swarm: inactive
Runtimes: io.containerd.runc.v2 io.containerd.runtime.v1.linux runc
Default Runtime: runc
Init Binary: docker-init
containerd version: 1c90a442489720e0c95342e1789ee8a5e1b9536f
runc version: v1.1.4-0-g5fd4c4d
init version: de48ad9
Security Options:
  apparmor
  seccomp
   Profile: default
Kernel Version: 5.15.0-1019-pwv
Operating System: Ubuntu 20.04.5 LTS
```

### 4. For any help regarding commands etc.

\$ docker help



```
docker@ip-172-31-29-114:/root$ docker help
Usage: docker [OPTIONS] COMMAND

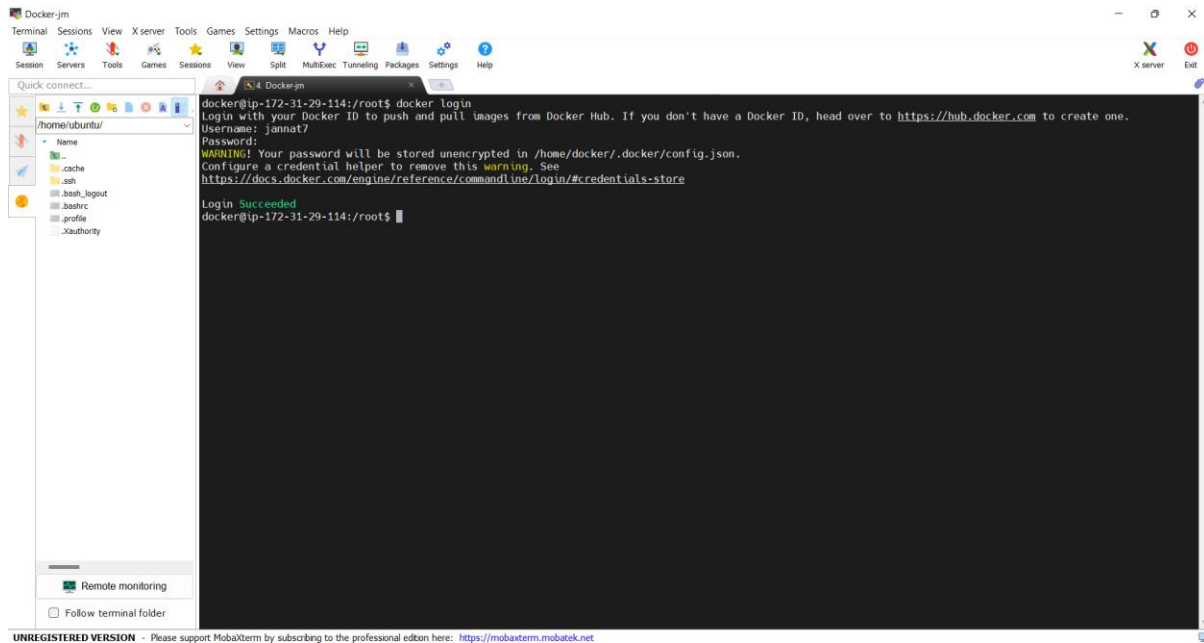
A self-sufficient runtime for containers

Options:
  -c, --config string      Location of client config files (default "/home/docker/.docker")
  -C, --context string      Name of the context to use to connect to the daemon (overrides DOCKER_HOST env var and default context set with "docker context use")
  -D, --debug              Enable debug mode
  -H, --host list          Daemon socket(s) to connect to
  -l, --log-level string    Set the logging level ("debug"|"info"|"warn"|"error"|"fatal") (default "info")
  --tls                   Use TLS; implied by --tlsverify
  --tlscacert string       Trust certs signed only by this CA (default "/home/docker/.docker/ca.pem")
  --tlscert string         Path to TLS certificate file (default "/home/docker/.docker/cert.pem")
  --tlskey string          Path to TLS key file (default "/home/docker/.docker/key.pem")
  --tlsverify              Use TLS and verify the remote
  -v, --version            Print version information and quit

Management Commands:
  app*      Docker App (Docker Inc., v0.9.1-beta3)
  builder   Manage builds
  buildx*   Docker Buildx (Docker Inc., v0.9.1-docker)
  compose*  Docker Compose (Docker Inc., v2.12.0)
  config    Manage Docker configs
  container Manage containers
  context   Manage contexts
  image     Manage images
  manifest  Manage Docker image manifests and manifest lists
  network   Manage networks
  node      Manage Swarm nodes
  plugin    Manage plugins
  scan*     Docker Scan (Docker Inc., v0.17.0)
  secret    Manage Docker secrets
  service   Manage services
  stack     Manage Docker stacks
  swarm     Manage Swarm
  system    Manage Docker
  trust     Manage trust on Docker images
  volume    Manage volumes
```

## 5. To login to your docker account

**\$ docker login**

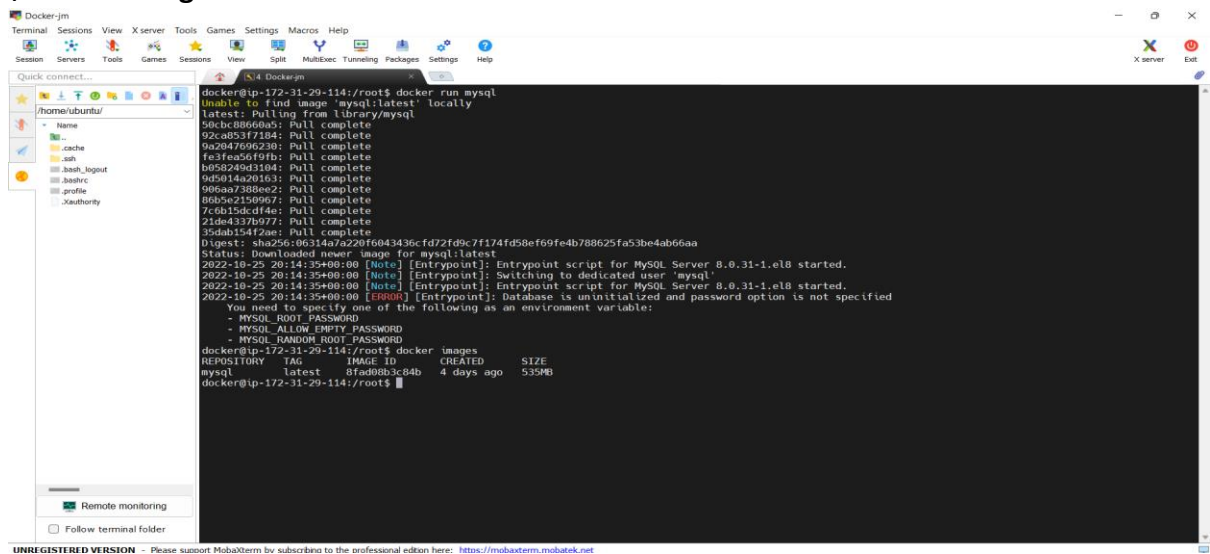


## 6. To run images

**\$ docker run**

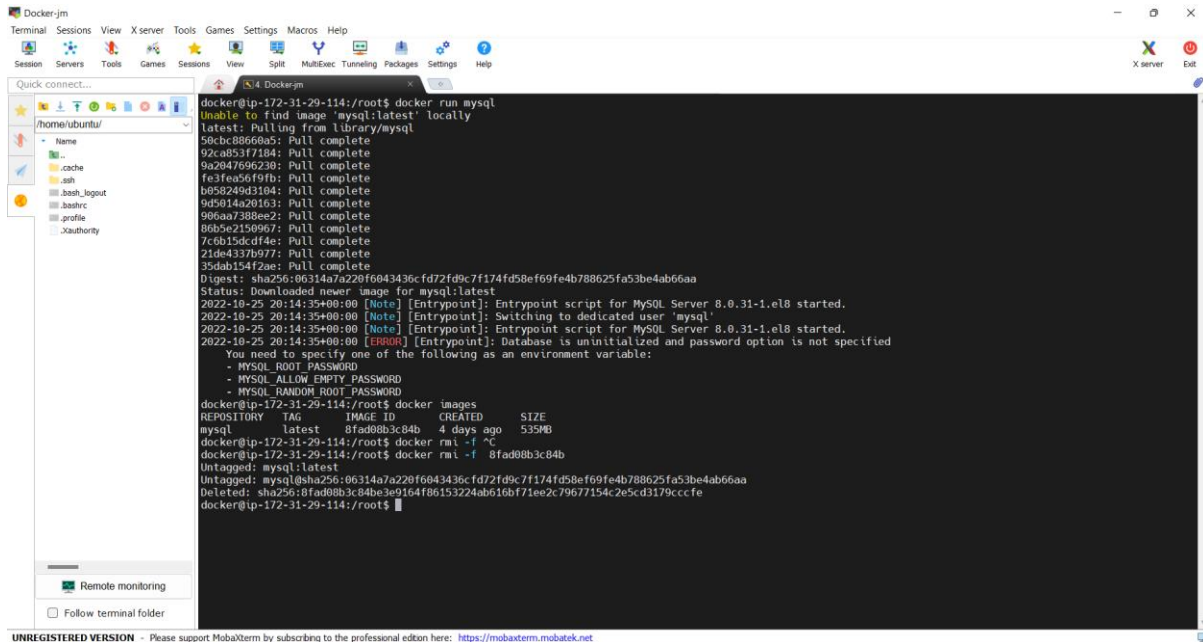
## 7. To display all images

**\$ docker images**



## 8. To remove images

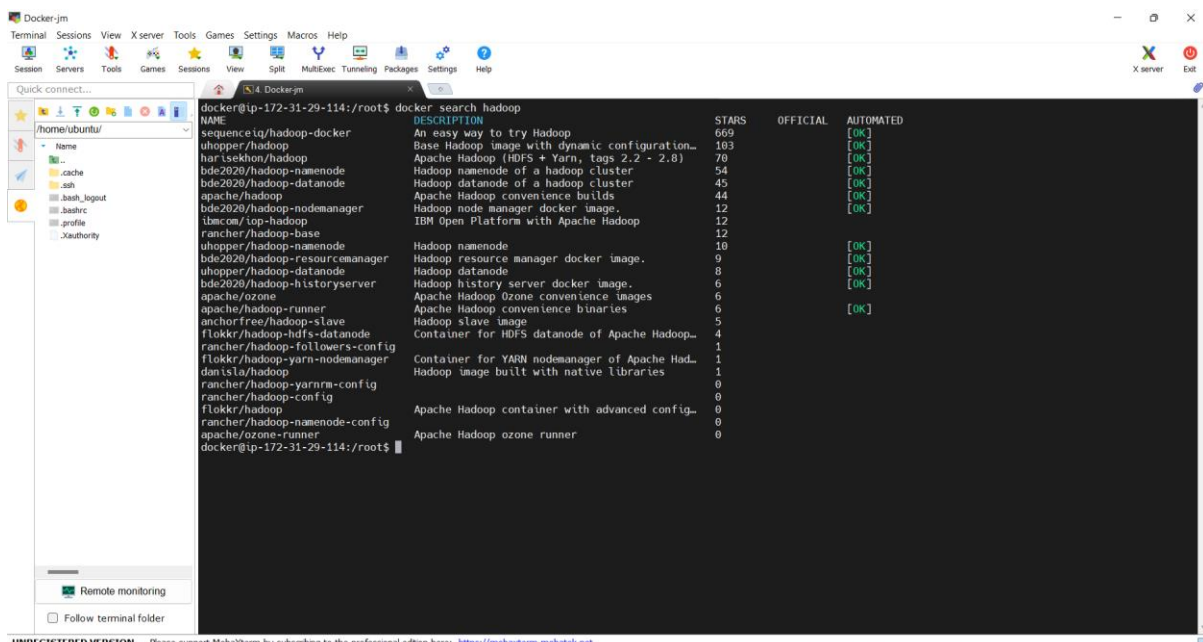
\$ docker rmi



```
docker@ip-172-31-29-114:/root$ docker run mysql
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
58cbc88660a5: Pull complete
92ca853f7184: Pull complete
9a204769623b: Pull complete
fa3fe56f9fb: Pull complete
b658249d3104: Pull complete
9d5014a20163: Pull complete
986aa7388ee2: Pull complete
90b5e2150967: Pull complete
7c6b15dcdf4e: Pull complete
21de4337b977: Pull complete
35dab154f2ae: Pull complete
Digest: sha256:06314a7a220f6843436cf72f9dc7f174fd58ef69fe4b788625fa53be4ab66aa
Status: Downloaded newer image for mysql:latest
2022-10-25 20:14:35+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.31-1.el8 started.
2022-10-25 20:14:35+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2022-10-25 20:14:35+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.31-1.el8 started.
2022-10-25 20:14:35+00:00 [ERROR] [Entrypoint]: Database is uninitialized and password option is not specified
You need to specify one of the following as an environment variable:
- MYSQL_ROOT_PASSWORD
- MYSQL_ALLOW_EMPTY_PASSWORD
- MYSQL_RANDOM_ROOT_PASSWORD
docker@ip-172-31-29-114:/root$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
mysql latest 8fad08b3c84b 4 days ago 535MB
docker@ip-172-31-29-114:/root$ docker rmi -f ^C
Untagged: mysql:latest
Deleted: sha256:06314a7a220f6843436cf72f9dc7f174fd58ef69fe4b788625fa53be4ab66aa
Deleted: sha256:8fad08b3c84be3e9164f86153224ab616bf71ee2c79677154c2e5cd3179cccf
docker@ip-172-31-29-114:/root$
```

## 9. To search about any available images

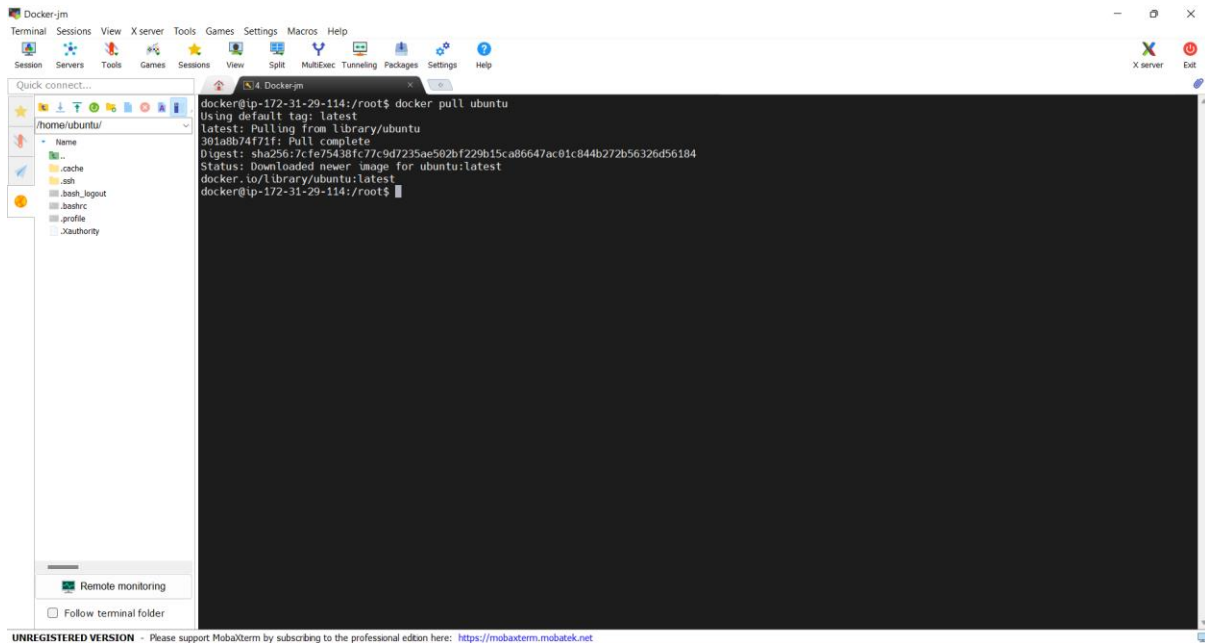
\$ docker search hadoop



```
docker@ip-172-31-29-114:/root$ docker search hadoop
NAME DESCRIPTION STARS OFFICIAL AUTOMATED
sequenceiq/hadoop-docker An easy way to try Hadoop 669 [OK]
uhopper/hadoop Base Hadoop image with dynamic configuration... 183 [OK]
hartsekhon/hadoop Apache Hadoop (HDFS + Yarn, tags 2.2 - 2.8) 70 [OK]
bde2020/hadoop-namenode Hadoop namenode of a hadoop cluster 54 [OK]
bde2020/hadoop-datanode Hadoop datanode of a hadoop cluster 45 [OK]
apache/hadoop Apache Hadoop convenience builds 44 [OK]
bde2020/hadoop-nodemanager Hadoop node manager docker image. 12 [OK]
ibmcom/top-hadoop IBM Open Platform with Apache Hadoop 12
rancher/hadoop-base Hadoop namenode 10 [OK]
uhopper/hadoop-namenode Hadoop namenode 9 [OK]
bde2020/hadoop-resourcemanager Hadoop resource manager docker image. 8 [OK]
uhopper/hadoop-datanode Hadoop datanode 8 [OK]
bde2020/hadoop-historyserver Hadoop history server docker image. 6 [OK]
apache/ozon Apache Hadoop Ozone convenience images 6 [OK]
apache/hadoop-runner Apache Hadoop convenience binaries 6 [OK]
anchorfreet/hadoop-slave Hadoop slave image 5
flokkr/hadoop-hdfs-datanode Container for HDFS datanode of Apache Hadoop... 4
rancher/hadoop-followers-config Container for YARN nodemanager of Apache Had... 1
flokkr/hadoop-yarn-nodemanager Hadoop image built with native libraries 1
rancher/hadoop-yarnrm-config 0
rancher/hadoop-config 0
flokkr/hadoop Apache Hadoop container with advanced config... 0
rancher/hadoop-namenode-config Apache Hadoop ozone runner 0
apache/ozon-runner 0
docker@ip-172-31-29-114:/root$
```

## 10. To pull images from docker

**\$ docker pull**

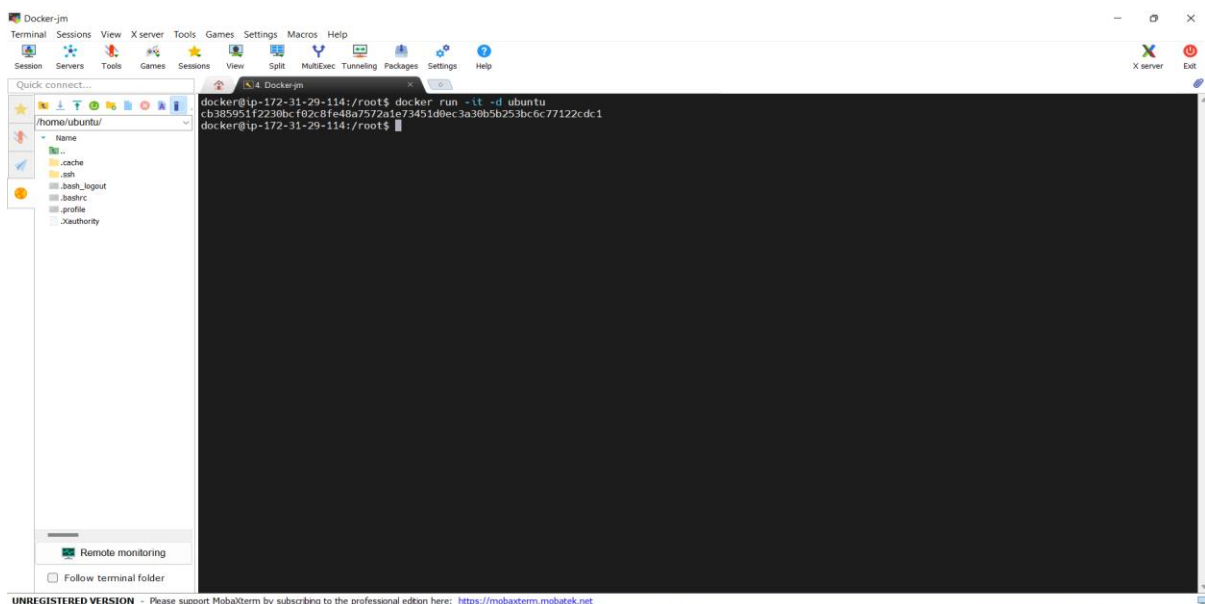


```
docker@ip-172-31-29-114:/root$ docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
381a8b74f71f: Pull complete
Digest: sha256:7cf9754381c77c9d7235a502bf229b15ca86647ac01c844b272b56326d56184
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
docker@ip-172-31-29-114:/root$
```

The screenshot shows a terminal window titled 'Docker-jm' with a menu bar (Terminal, Sessions, View, X server, Tools, Games, Settings, Macros, Help) and a toolbar. On the left is a 'Quick connect...' sidebar with a file explorer showing the path '/home/ubuntu/' and various files like '.cache', '.ssh', '.bash\_logout', '.bashrc', '.profile', and '.Xauthority'. The terminal output shows the command 'docker pull ubuntu' being executed, which pulls the latest version of the Ubuntu image from the Docker library. The output includes the image ID '381a8b74f71f', the digest 'sha256:7cf9754381c77c9d7235a502bf229b15ca86647ac01c844b272b56326d56184', and the status 'Downloaded newer image for ubuntu:latest'.

## 11. To create container from image

**\$ docker run**

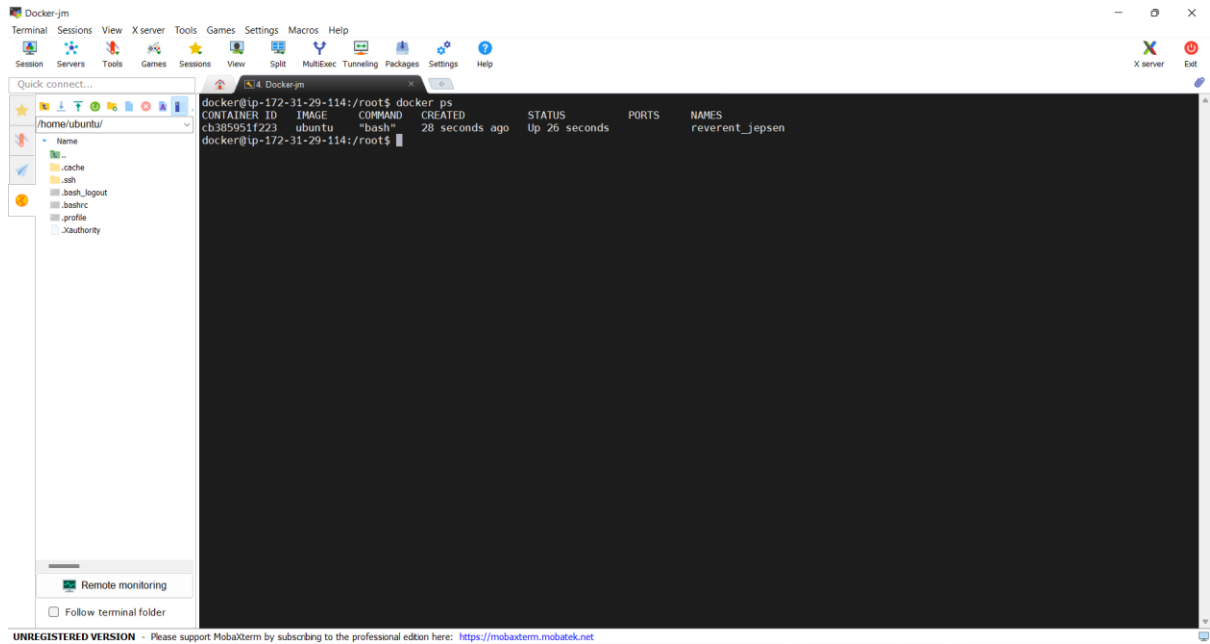


```
docker@ip-172-31-29-114:/root$ docker run -it -d ubuntu
cb385951f2238bcf02c8fe48a7572a1e73451d0ec3a38b5b253bc6c77122cdc1
docker@ip-172-31-29-114:/root$
```

The screenshot shows a terminal window titled 'Docker-jm' with the same menu bar and toolbar as the previous image. The 'Quick connect...' sidebar is also present. The terminal output shows the command 'docker run -it -d ubuntu' being executed, which creates a new Ubuntu container in detached mode. The output is a long alphanumeric string representing the container ID: 'cb385951f2238bcf02c8fe48a7572a1e73451d0ec3a38b5b253bc6c77122cdc1'.

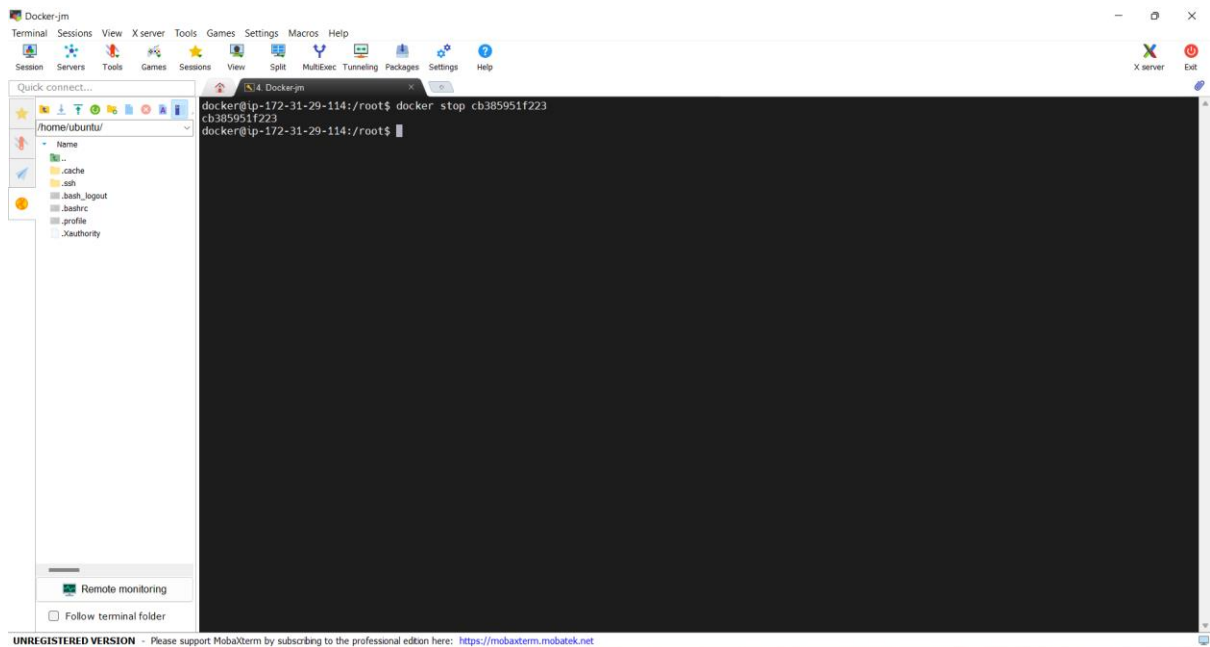
## 12. To list running containers

**\$ docker ps**



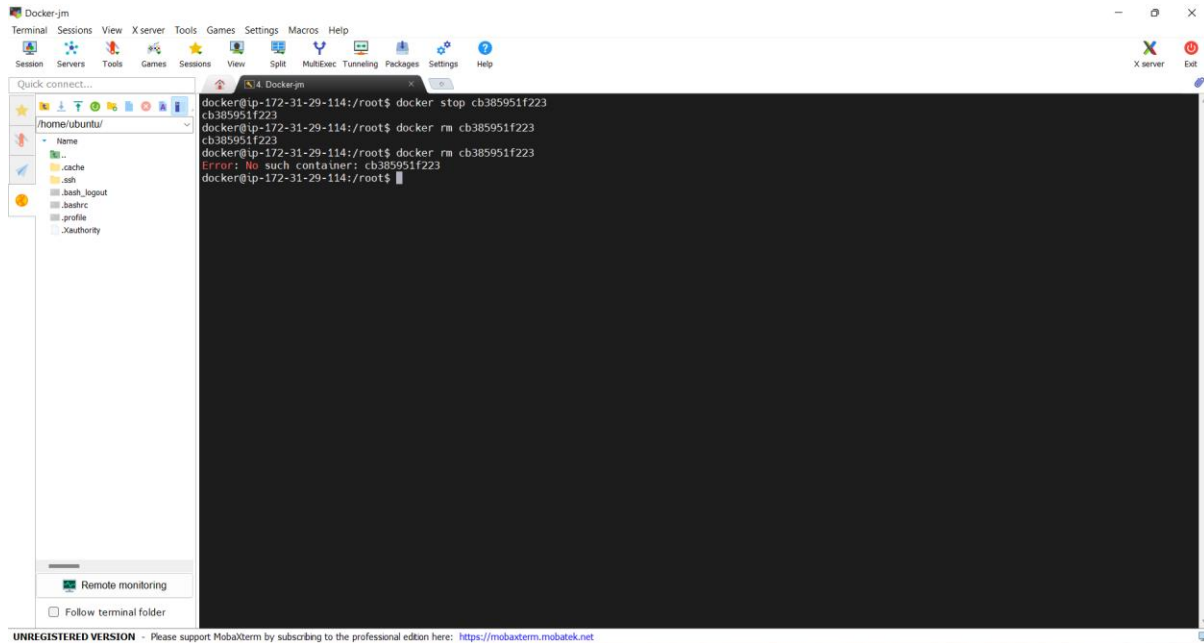
## 13. To stop running container

**\$ docker stop**



## 14. To delete a stopped container

**\$ docker rm**



The screenshot shows a MobaXterm terminal window with the title 'Docker-jm'. The terminal displays the following commands and output:

```
docker@ip-172-31-29-114:/root$ docker stop cb385951f223
cb385951f223
docker@ip-172-31-29-114:/root$ docker rm cb385951f223
cb385951f223
docker@ip-172-31-29-114:/root$ docker rm cb385951f223
Error: No such container: cb385951f223
docker@ip-172-31-29-114:/root$
```

The terminal window includes a sidebar on the left with a 'Quick connect...' section and a 'Remote monitoring' checkbox. The bottom of the window displays the text: 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>'.