By using docker commands

        pull docker image from docker hub to local machine

        push docker image from local machine to docker hub

        build our own docker image

        display images

        remove docker images

        start container by using docker images

        stop container

        remove container

        display containers

Start docker desktop

Open CMD

1 **docker images**

        displays list of images available on local machine

```
C:\Users\Babji>docker images
REPOSITORY     TAG        IMAGE ID    CREATED    SIZE
```

Note : 'TAG' represents version of image, default is 'latest'

2 **docker pull mongo:3.6**

        checks whether mongo3.6 image available on local machine

        pulls from docker hub if it is not available on local machine

```
C:\Users\Babji>docker pull mongo:3.6
3.6: Pulling from library/mongo
92473f7ef455: Pull complete
fb52bde70123: Pull complete
64788f86be3f: Pull complete
33f6d5f2e001: Pull complete
570e56656608: Pull complete
f518a872ab12: Pull complete
c9bdae151f64: Pull complete
b2c58da5f563: Pull complete
2928038a6053: Pull complete
29a16c1b79ab: Pull complete
efec0f86077c: Pull complete
261a04726d31: Pull complete
7c4062426e72: Pull complete
Digest: sha256:146c1fd999a660e697aac40bc6da842b005c7868232eb0b7d8996c8f3545b05d
Status: Downloaded newer image for mongo:3.6
docker.io/library/mongo:3.6

C:\Users\Babji>
```

```
C:\Users\Babji>docker images
REPOSITORY     TAG        IMAGE ID        CREATED        SIZE
mongo          3.6        2f21415cb85f    20 months ago  453MB
```

3 docker run --name mongo_container1 -p 27017:27017 mongo:3.6

container name
optional

X:Y
X : host port
Y : container port

Docker image to be
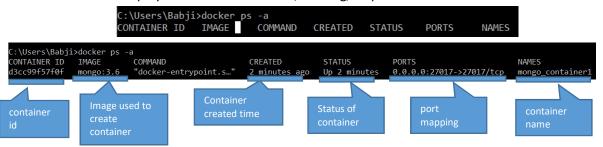used to create
container

creates and starts docker container using docker image

Note: Make sure local mongoDB service stopped before running above command

```
C:\Users\Babji>docker run --name mongo_container1 -p 27017:27017 mongo:3.6
2023-01-04T07:28:17.739+0000 I CONTROL  [initandlisten] MongoDB starting : pid=1 port=
d3cc99f57f0f
2023-01-04T07:28:17.740+0000 I CONTROL  [initandlisten] db version v3.6.23
2023-01-04T07:28:17.740+0000 I CONTROL  [initandlisten] git version: d352e6a4764659e0d
2023-01-04T07:28:17.740+0000 I CONTROL  [initandlisten] OpenSSL version: OpenSSL 1.0.2
2023-01-04T07:28:17.740+0000 I CONTROL  [initandlisten] allocator: tcmalloc
2023-01-04T07:28:17.740+0000 I CONTROL  [initandlisten] modules: none
2023-01-04T07:28:17.740+0000 I CONTROL  [initandlisten] build environment:
2023-01-04T07:28:17.740+0000 I CONTROL  [initandlisten]     distmod: ubuntu1604
```

4 docker ps -a

display all containers created/running/stoped on machine

```
C:\Users\Babji>docker ps -a
CONTAINER ID   IMAGE    COMMAND   CREATED   STATUS   PORTS   NAMES
```

```
C:\Users\Babji>docker ps -a
CONTAINER ID   IMAGE       COMMAND               CREATED         STATUS        PORTS                     NAMES
d3cc99f57f0f   mongo:3.6   "docker-entrypoint.s…"  2 minutes ago   Up 2 minutes  0.0.0.0:27017->27017/tcp  mongo_container1
```

container
id

Image used to
create
container

Container
created time

Status of
container

port
mapping

container
name

how to check mongo container is accessible for users

```
C:\Users\Babji>docker exec -it mongo_container1 bash
root@d3cc99f57f0f:/# mongo
MongoDB shell version v3.6.23
connecting to: mongodb://127.0.0.1:27017/?gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("e56edca1-1f85-46ba-84f6-5738d3332c00") }
MongoDB server version: 3.6.23
Welcome to the MongoDB shell.
For interactive help, type "help".
For more comprehensive documentation, see
2023-01-04T07:28:19.072+0000 I CONTROL  [initandlisten] **
2023-01-04T07:28:19.072+0000 I CONTROL  [initandlisten]
> show dbs;
admin   0.000GB
config  0.000GB
local   0.000GB
```

```
mongo.exe - Shortcut
MongoDB server version: 3.6.23
WARNING: shell and server versions do no
================
Warning: the "mongo" shell has been supe
which delivers improved usability and co
an upcoming release.
For installation instructions, see
https://docs.mongodb.com/mongodb-shell/i
================
---
The server generated these startup warni
2023-01-04T07:28:17.742+0000 I STORAGE
2023-01-04T07:28:17.742+0000 I STORAGE
2023-01-04T07:28:17.742+0000 I STORAGE
2023-01-04T07:28:19.071+0000 I CONTROL
2023-01-04T07:28:19.071+0000 I CONTROL
2023-01-04T07:28:19.071+0000 I CONTROL
2023-01-04T07:28:19.071+0000 I CONTROL
2023-01-04T07:28:19.071+0000 I CONTROL
2023-01-04T07:28:19.072+0000 I CONTROL
2023-01-04T07:28:19.072+0000 I CONTROL
---
> show dbs;
admin   0.000GB
config  0.000GB
local   0.000GB
>
```

5 **docker stop CONTAINER_NAME/CONTAINER_ID**
   stops running container (stops application)

```
C:\Users\Babji>docker stop mongo_container1
mongo_container1

C:\Users\Babji>docker ps -a
CONTAINER ID   IMAGE       COMMAND             CREATED          STATUS                  PORTS      NAMES
d3cc99f57f0f   mongo:3.6   "docker-entrypoint.s…"   16 minutes ago   Exited (0) 5 seconds ago            mongo_container1
```

6 **docker start CONTAINER_NAME/CONTAINER_ID**
   starts stopped container

```
C:\Users\Babji>docker start mongo_container1
mongo_container1

C:\Users\Babji>docker ps -a
CONTAINER ID   IMAGE       COMMAND             CREATED          STATUS          PORTS                      NAMES
d3cc99f57f0f   mongo:3.6   "docker-entrypoint.s…"   18 minutes ago   Up 18 seconds   0.0.0.0:27017->27017/tcp   mongo_container1
```

7 **docker rm CONTAINER_NAME/CONTAINER_ID**
   removes stopped container

```
C:\Users\Babji>docker stop mongo_container1
mongo_container1

C:\Users\Babji>docker rm mongo_container1
mongo_container1

C:\Users\Babji>docker ps -a
CONTAINER ID   IMAGE       COMMAND     CREATED     STATUS      PORTS       NAMES
```

8 **docker rmi IMAGE_NAME/IMAGE_ID**

        removes docker image

        Note: image must not be used by any container

```
C:\Users\Babji>docker images
REPOSITORY    TAG        IMAGE ID       CREATED        SIZE
mongo         3.6        2f21415cb85f   20 months ago  453MB

C:\Users\Babji>docker rmi mongo:3.6
Untagged: mongo:3.6
Untagged: mongo@sha256:146c1fd999a660e697aac40bc6da842b005c7868232eb0b7d8996c8f3545b05d
Deleted: sha256:2f21415cb85f27d2069174ca001af3c0ebb95a5b3c3520bf59af30395481deb0
Deleted: sha256:b35394aedda9854f591c71e3117466082353de5ae65a9634cde347be91c31f8d
Deleted: sha256:f82dbc55fc042c46a2a00e9644e6bd2dab2d5b927b437c4b441b7b3939fa1f04
Deleted: sha256:da3f47af95e29b61f9cd791fe1c5c14cc7e70d85afa4eb49e2c24a82037169ae
Deleted: sha256:e15d4d1d84d5faee7cf07c0caf88c9a0cdfc437fbf64f3e4be8665db7fd4079a
Deleted: sha256:4c0bb63751e94456e4a6c9f50fed588dc3c8deb7a162a8c38283e1c803e0eda9
Deleted: sha256:97634823781d70e60ba78b7f61877c506bf07cd556bcb4adc4eab6db604ec405
Deleted: sha256:e1670b1fb0a2463bcfa4c7c46fa221b92d0819ba53cd7c440009d6535811db28
Deleted: sha256:7a0c18a2842602518e715e3cca3334d532ea7ebf8a118b0f3a4699030a203b85
Deleted: sha256:f9d4fb8e56e27b20ac5abe20e6857dfe83999e15b8a6ac47c1c5f444f94f2b96
Deleted: sha256:3dd8dccfa6044757eea26f89f080b0e469c375ff0d6ae0a3cde593fdb9c0a846
Deleted: sha256:7f0e6434653736c75e39a50bb3b56bee83ece40e7c703e5afe5ec12af758b382
Deleted: sha256:8f8140988d9c4c701371d1245d04800398d26096bbc05a4f2b9b8db0daa5fa39
Deleted: sha256:16012e0c1d35cf9bd845b5be586fea29507f38a5804307f097caec52046cfef7

C:\Users\Babji>docker images
REPOSITORY    TAG        IMAGE ID   CREATED   SIZE
```