BDMH Assignment1

On Docker

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Question1: Create a database name mydb in MySQL and save above table in mydb; show application of 4 mysql commands.

1: Pull mysql image in docker and check via command docker images if image is successfully pulled

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> docker images
REPOSITORY              TAG      IMAGE ID       CREATED       SIZE
sadhanatripathi/mongo   2        23a4d4460980   9 hours ago   449MB
mysql                   latest   2933adc350f3   2 weeks ago   546MB
```

2: Creating docker container

```
PS C:\WINDOWS\system32> docker run -d --name mysqldb -p 3306:3306 -e MYSQL_ROOT_PASSWORD=sadhana mysql
2d6817b2007fff718e057f03fe6ac6cdb785fcbd1d3b5d22e60b761208b5acb9
PS C:\WINDOWS\system32> docker ps
CONTAINER ID   IMAGE   COMMAND                CREATED          STATUS         PORTS                               NAMES
2d6817b2007f   mysql   "docker-entrypoint.s…"  11 seconds ago   Up 6 seconds   0.0.0.0:3306->3306/tcp, 33060/tcp   mysqldb
```

3: Executing bash statement for entering into mysql

```
PS C:\Users\Sadhana> docker ps
CONTAINER ID   IMAGE   COMMAND                CREATED          STATUS          PORTS                               NAMES
2d6817b2007f   mysql   "docker-entrypoint.s…"  38 minutes ago   Up 38 minutes   0.0.0.0:3306->3306/tcp, 33060/tcp   mysqldb
PS C:\Users\Sadhana> docker exec -it mysqldb bash
root@2d6817b2007f:/# mysql -u root -h 127.0.01 -psadhana
```

4:Into mysql

```
PS C:\Users\Sadhana> docker exec -it mysqldb bash
root@2d6817b2007f:/# mysql -u root -h 127.0.01 -psadhana
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.23 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

5: show and create databases

```
mysql> show databases
    -> ;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
4 rows in set (0.01 sec)

mysql> create database mydb;
Query OK, 1 row affected (0.30 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql> create database test;
Query OK, 1 row affected (0.27 sec)

mysql> create database use
    -> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'use' at line 1
mysql> create database usertest;
Query OK, 1 row affected (0.45 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
```

6: drop database

```
Administrator: Windows PowerShell
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
| sys                |
| test               |
| usertest           |
+--------------------+
7 rows in set (0.00 sec)

mysql> drop database usertest;
Query OK, 0 rows affected (0.42 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
| sys                |
| test               |
+--------------------+
6 rows in set (0.01 sec)
```

7: Use mydb, create table fruits and insert entries into table

```
mysql> use mydb;
Database changed
mysql> create table fruits (id int not null, name text, quantity int not null,primary key(id));
Query OK, 0 rows affected (2.88 sec)

mysql> show table;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1
mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| fruits         |
+----------------+
1 row in set (0.03 sec)

mysql> insert into fruits (id,name,quantity) values (1,'apples',50);
Query OK, 1 row affected (0.22 sec)

mysql> insert into fruits (id,name,quantity) values (2,'banana',5);
Query OK, 1 row affected (0.28 sec)

mysql> insert into fruits (id,name,quantity) values (3,'pears',15);
Query OK, 1 row affected (0.19 sec)
```

8: Read command

```
mysql> select * from fruits
    -> ;
+----+--------+----------+
| id | name   | quantity |
+----+--------+----------+
|  1 | apples |       50 |
|  2 | banana |        5 |
|  3 | pears  |       15 |
+----+--------+----------+
3 rows in set (0.00 sec)
```

9: Update command

```
mysql> UPDATE fruits SET quantity = 5 WHERE id=1;
Query OK, 1 row affected (0.26 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from fruits;
+----+--------+----------+
| id | name   | quantity |
+----+--------+----------+
|  1 | apples |        5 |
|  2 | banana |        5 |
|  3 | pears  |       15 |
+----+--------+----------+
3 rows in set (0.00 sec)
```

10: Delete command

```
mysql> DELETE from fruits WHERE id =3;
Query OK, 1 row affected (0.20 sec)

mysql> select * from fruits;
+----+--------+----------+
| id | name   | quantity |
+----+--------+----------+
|  1 | apples |        5 |
|  2 | banana |        5 |
+----+--------+----------+
2 rows in set (0.00 sec)

mysql> exit
Bye
root@2d6817b2007f:/# exit
exit
```
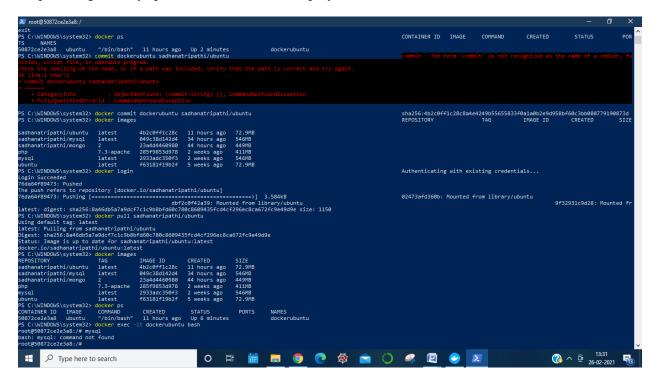
11: Outside shell and container for creating image for container and deploying in docker hub

```
mysql> exit
Bye
root@2d6817b2007f:/# exit
exit
PS C:\Users\Sadhana> docker ps a
"docker ps" accepts no arguments.
See 'docker ps --help'.

Usage:  docker ps [OPTIONS]

List containers
PS C:\Users\Sadhana> docker ps
CONTAINER ID   IMAGE     COMMAND                 CREATED        STATUS          PORTS                                      NAMES
2d6817b2007f   mysql     "docker-entrypoint.s…"  50 minutes ago Up 50 minutes   0.0.0.0:3306->3306/tcp, 33060/tcp   mysqldb
PS C:\Users\Sadhana> docker commit 2d6817b2007f sadhanatripathi/mysql
sha256:049c38d142d4ee75d59aef71b0b45b6be0ba91baa5de8b76b8708f46dcc005d3
PS C:\Users\Sadhana> docker images
REPOSITORY              TAG       IMAGE ID       CREATED         SIZE
sadhanatripathi/mysql   latest    049c38d142d4   18 seconds ago  546MB
sadhanatripathi/mongo   2         23a4d4460980   10 hours ago    449MB
mysql                   latest    2933adc350f3   2 weeks ago     546MB
PS C:\Users\Sadhana> docker login
Authenticating with existing credentials...
Login Succeeded
PS C:\Users\Sadhana> docker push  sadhanatripathi/mysql
Using default tag: latest
The push refers to repository [docker.io/sadhanatripathi/mysql]
049708443e51: Pushed
9fda8797bc31: Mounted from library/mysql
7cdc784cbcfc: Mounted from library/mysql
9ba725af2ff0: Mounted from library/mysql
5ba1eb4d2ba5: Mounted from library/mysql
9ffac285cc4f: Mounted from library/mysql
52d9c23a9a20: Mounted from library/mysql
902a5f810181: Mounted from library/mysql
411bb8845b78: Mounted from library/mysql
7c06655789f2: Mounted from library/mysql
1a4bac3ca47c: Mounted from library/mysql
6427e36e3873: Mounted from library/mysql
9eb82f04c782: Mounted from library/mysql
latest: digest: sha256:5bea2f8e73661d1e5b081e11280e6375492f81fcaff3fb2e6fb034f731dbc45f size: 3035
PS C:\Users\Sadhana> docker images
REPOSITORY              TAG       IMAGE ID       CREATED         SIZE
sadhanatripathi/mysql   latest    049c38d142d4   54 minutes ago  546MB
sadhanatripathi/mongo   2         23a4d4460980   11 hours ago    449MB
mysql                   latest    2933adc350f3   2 weeks ago     546MB
```

12: pull Image for mysql container created and deployed in docker hub

13: Docker hub