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Subject : Customize MySQL Database in Docker (DevOps)
Assignment 2

Step1 : Creating a directory
$mkdir my-sql

Step 2 : In that directory create a a sql file named test.sql which contain all the command to create database and insert the value.

$cd my-sql
$vi test.sql

Content of test.sql file :

```
CREATE TABLE student
(
    name            varchar(32)                     ,
    roll_no         varchar(32)         NOT NULL,
    address         varchar(64)                     ,
    mobile_no       varchar(32)                     ,
    pan_no          varchar(32)             ,
    CONSTRAINT      studentpk PRIMARY KEY(roll_no)
);

INSERT INTO student(name, roll_no, address, mobile_no, pan_no)
VALUES('Shoaib Shaikh','n20111045','Shirur','8605232044','MNTPS4885C');

INSERT INTO student(name, roll_no, address, mobile_no, pan_no)
VALUES('Shankar','n20111042','Shrigonda','8605232078','MNTkS4884C');

INSERT INTO student(name, roll_no, address, mobile_no, pan_no)
VALUES('Sahil Mullla','n20111023','Katraj','8605265643','ABTPS4889C');

INSERT INTO student(name, roll_no, address, mobile_no, pan_no)
VALUES('Amir Kazi','n20111040','Nashik','9876532044','HGRTS488C');
```

Step 3 : Create a Dockerfile in same directory.
```
$cd my-sql
$vi Dockerfile
```

Content of Dockerfile is as follows :

```
//Derived from official mysql image (our base image)
FROM mysql

//Root environment variable password
ENV MYSQL_ROOT_PASSWORD pucsd

// Creating database of MYSQL
ENV MYSQL_DATABASE pucsdStudents

ENV MYSQL_USER pucsd
ENV MYSQL_PASSWORD pucsd

//sql script and entry point
COPY test.sql /docker-entrypoint-initdb.d/
```

Explanation of command in detail :

FROM : Build stage or image name for the root of the source. Defaults to the build context.

ENV is mainly meant to provide default values for your future environment variables.

COPY is a dockerfile command that copies files from a local source location to a destination in the Docker container.

Step 4 : Create your docker image outside the my-sql directory run :

$docker build my-sql   //To build a image

Step 5 : And start your MySQL container from the image

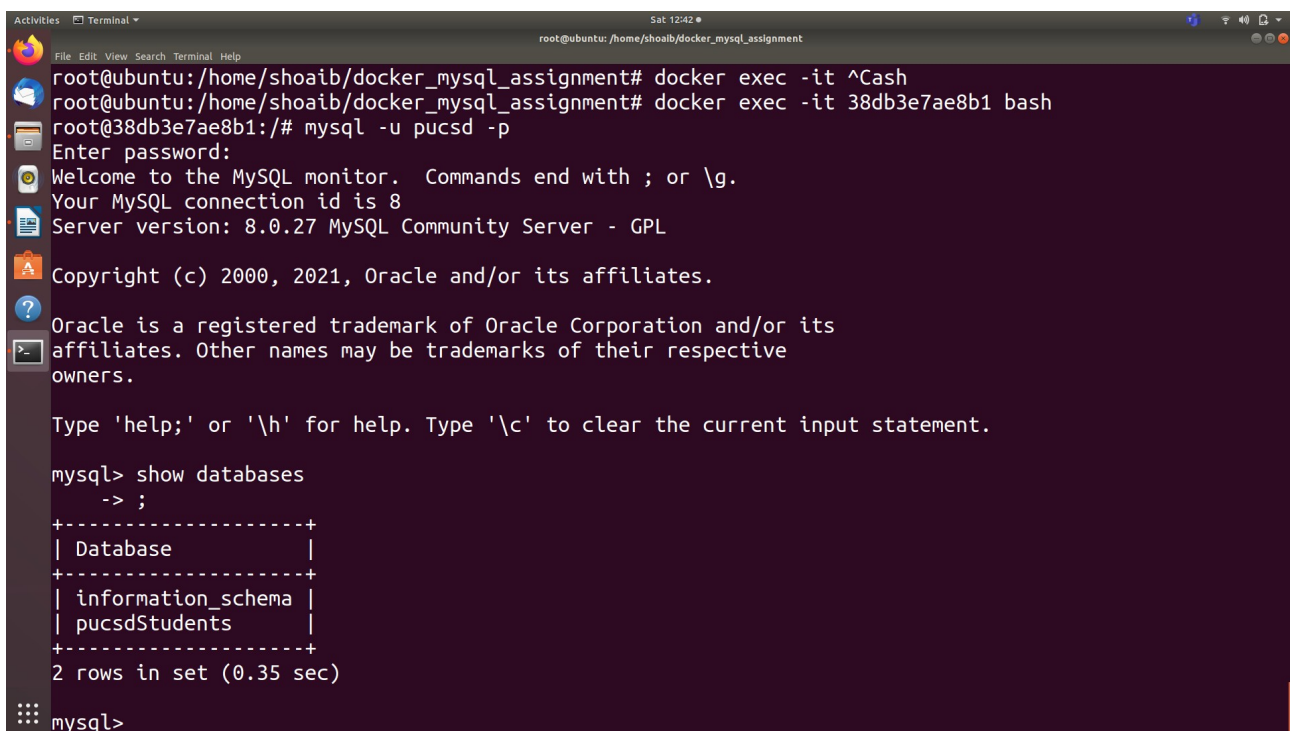$docker run -itd -p 9999:8081 63cb791463e9 //Using image ID

Step 6 : To start the MYSQL container

docker exec -it 38db3e7ae8b1 bash //using container ID

Step 7 : Execute the command for root access of our mysql container.

root@38db3e7ae8b1:/# mysql -u pucsd -p
Enter password : pucsd

Step 8 :show databases;
we can see our database pucSdstudents;

```
root@ubuntu:/home/shoaib/docker_mysql_assignment# docker exec -it ^Cash
root@ubuntu:/home/shoaib/docker_mysql_assignment# docker exec -it 38db3e7ae8b1 bash
root@38db3e7ae8b1:/# mysql -u pucsd -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.27 MySQL Community Server - GPL

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owners.

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

mysql> show databases
    -> ;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| pucsdStudents      |
+--------------------+
2 rows in set (0.35 sec)

mysql>
```