Lab Docker Compose MySQL

Creating MySQL Container

```
nano docker-compose.yml
```

```
version: '3.8'
services:
  mysql:
    image: mysql:latest
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: root_password_123456789aA#
      MYSQL_DATABASE: db_demo
      MYSQL_USER: dbuser
      MYSQL_PASSWORD: dbuser_password_123456789aA#
    ports:
      - "3306:3306"
```

- `database` and `web` are used to define two separate services.
- `image` is used to specify the image from dockerhub.
- `ports` to expose required ports.
- `environment` variables are required for mysql.

Run the container

```
docker compose up -d
```

Get the container list

```
docker compose ps
```

Connect to MySQL Container and inspect databases

```
docker exec -it app-mysql-1 bash
```

Note: `app-mysql-1` is the container running in my VM

Connect to the MySQL service

```
mysql -u root -p
```

Show databases

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

Show users

```
mysql> SELECT user FROM mysql. user;
+------------------+
| user             |
+------------------+
| dbuser           |
| root             |
| mysql.infoschema |
| mysql.session    |
| mysql.sys        |
| root             |
+------------------+
6 rows in set (0.00 sec)
```

MySQL with automatic database creation

Create a Db creation file: create-db.sql

```
nano create-db.sql
```

```
CREATE DATABASE cricketDB;
use cricketDB;
CREATE TABLE Persons (
    PersonID int,
    LastName varchar(255),
    FirstName varchar(255),
    Address varchar(255),
    City varchar(255)
);
INSERT INTO Persons (PersonID, LastName, FirstName, Address, City)
VALUES ('100', 'MS', 'Dhoni', 'Farm House, Ranchi Main Road', 'Ranchi');
```

compose.yml file

```
nano compose.yml
```

```
version: '3.8'
services:
  mysql:
    image: mysql:latest
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: root_password_123456789aA#
      MYSQL_DATABASE: db_demo
      MYSQL_USER: dbuser
      MYSQL_PASSWORD: dbuser_password_123456789aA#
    ports:
      - "3306:3306"
    volumes:
      - ./create-db.sql:/docker-entrypoint-initdb.d/create-db.sql
```

Verify database

```
docker exec -it mysql-docker-compose-mysql-1 bash
```

`mysql-docker-compose-mysql-1` is my container name

```
bash-4.4# mysql -u root -p
Enter password:
```

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| db_demo            |
| information_schema |
| mysql              |
| performance_schema |
| sys                |
| cricketDB          |
+--------------------+
6 rows in set (0.00 sec)
```

```
mysql> use cricketDB;
```

```
mysql> SELECT * FROM Persons;
+----------+----------+-----------+-----------------------------+--------+
| PersonID | LastName | FirstName | Address                     | City   |
+----------+----------+-----------+-----------------------------+--------+
|      100 | MS       | Dhoni     | Farm House, Ranchi Main Road | Ranchi |
+----------+----------+-----------+-----------------------------+--------+
1 row in set (0.00 sec)
```