

## ✎ Module 9 - Assignment

### Problem Statement:

You work for xyz organization. Your job work is to manage Linux-based servers.

You have been asked to:

1. Install MySQL on CentOS
2. Create a database with two tables - table1 & table2
3. Create a shell script which can be used to insert 4 rows of data into table1 & table2

Update packages:

```
sudo yum update -y
```

Install mysql:

```
sudo yum install mysql-server -y
```

Start the service and confirm it is up

```
sudo systemctl start mysqld  
sudo systemctl status mysqld
```

```
Active: inactive (dead)  
[ec2-user@ip-172-31-38-50 ~]$ sudo systemctl start mysqld  
[ec2-user@ip-172-31-38-50 ~]$ sudo systemctl status mysqld  
● mysqld.service - MySQL 8.0 database server  
   Loaded: loaded (/usr/lib/systemd/system/mysqld.service; disabled; preset: disabled)  
   Active: active (running) since Sun 2023-08-20 16:16:34 UTC; 8s ago  
     Process: 51307 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCCESS)  
     Process: 51329 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mysqld.service (code=exited, status=0/SUCCESS)  
    Main PID: 51402 (mysqld)  
      Status: "Server is operational"  
        Tasks: 39 (limit: 4421)  
       Memory: 414.4M  
          CPU: 4.690s  
      CGroup: /system.slice/mysqld.service  
              └─51402 /usr/libexec/mysqld --basedir=/usr
```

Run `mysql_secure_installation` for security-related operations like configuring a password

```
sudo mysql_secure_installation
```

Log in to the MySQL shell as the root user: `mysql -u root -p` using previously configured password

```

[ec2-user@ip-172-31-38-50 ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.32 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql>

```

## Step 1: Create a Database

```
CREATE DATABASE mydatabase;
```

## Step 2: Create Tables

```
USE mydatabase;

CREATE TABLE table1 (
  id INT PRIMARY KEY AUTO_INCREMENT,
  name VARCHAR(255),
  age INT
);

CREATE TABLE table2 (
  id INT PRIMARY KEY AUTO_INCREMENT,
  product VARCHAR(255),
  price FLOAT
);
```

```

mysql> CREATE DATABASE mydatabase;
Query OK, 1 row affected (0.01 sec)

mysql> USE mydatabase;
Database changed
mysql>
mysql> CREATE TABLE table1 (
  ->   id INT PRIMARY KEY AUTO_INCREMENT,
  ->   name VARCHAR(255),
  ->   age INT
  -> );

CREATE TABLE table2 (
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> CREATE TABLE table2 (
  ->   id INT PRIMARY KEY AUTO_INCREMENT,
  ->   product VARCHAR(255),
  ->   price FLOAT
  -> );
Query OK, 0 rows affected (0.03 sec)

mysql>

```

## 3. Create a Shell Script for Inserting Data:

Created script named `mysql_script.sh` with the following content using `vi`:

```
#!/bin/bash
```

```
# Log in to the MySQL server and insert data into table1 and table2
mysql -u root -p -D 'mydatabase' <<EOF
```

```
INSERT INTO table1 (name, age) VALUES ('Alice', 30);
INSERT INTO table1 (name, age) VALUES ('Bob', 40);
INSERT INTO table1 (name, age) VALUES ('Charlie', 50);
INSERT INTO table1 (name, age) VALUES ('Dave', 60);

INSERT INTO table2 (product, price) VALUES ('Laptop', 1000);
INSERT INTO table2 (product, price) VALUES ('Phone', 500);
INSERT INTO table2 (product, price) VALUES ('TV', 1500);
INSERT INTO table2 (product, price) VALUES ('Camera', 800);

EOF
```

Giving script execution permissions:

```
chmod +x insert_data.sh
```

```
[ec2-user@ip-172-31-38-50 ~]$ chmod +x mysql_script.sh
[ec2-user@ip-172-31-38-50 ~]$ ls -l
total 4
-rwxr-xr-x. 1 ec2-user ec2-user 585 Aug 20 16:44 mysql_script.sh
[ec2-user@ip-172-31-38-50 ~]$
```

Executing the script:

```
./insert_data.sh
```

Prompts for password

```
[ec2-user@ip-172-31-38-50 ~]$ ./mysql_script.sh
Enter password:
[ec2-user@ip-172-31-38-50 ~]$
```

**Confirming input:**

1. Logging to MySQL shell as the root user:

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

*prompted for password*

2. Switch to database:

```
USE mydatabase;
```

3. Checking data in table1:

```
SELECT * FROM table1;
```

#### 4. Checking data in table2:

```
SELECT * FROM table2;
```

```
[ec2-user@ip-172-31-38-50 ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 16
Server version: 8.0.32 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql> USE mydatabase;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SELECT * FROM table1;
+----+-----+-----+
| id | name  | age  |
+----+-----+-----+
| 1  | Alice | 30   |
| 2  | Bob   | 40   |
| 3  | Charlie | 50  |
| 4  | Dave  | 60   |
+----+-----+-----+
4 rows in set (0.00 sec)

mysql> SELECT * FROM table2;
+----+-----+-----+
| id | product | price |
+----+-----+-----+
| 1  | Laptop  | 1000  |
| 2  | Phone   | 500   |
| 3  | TV      | 1500  |
| 4  | Camera  | 800   |
+----+-----+-----+
4 rows in set (0.00 sec)

mysql> |
```