

## Lab No-05

**Lab Report Name:** Connecting a database (MySQL) with Linux

### Objectives:

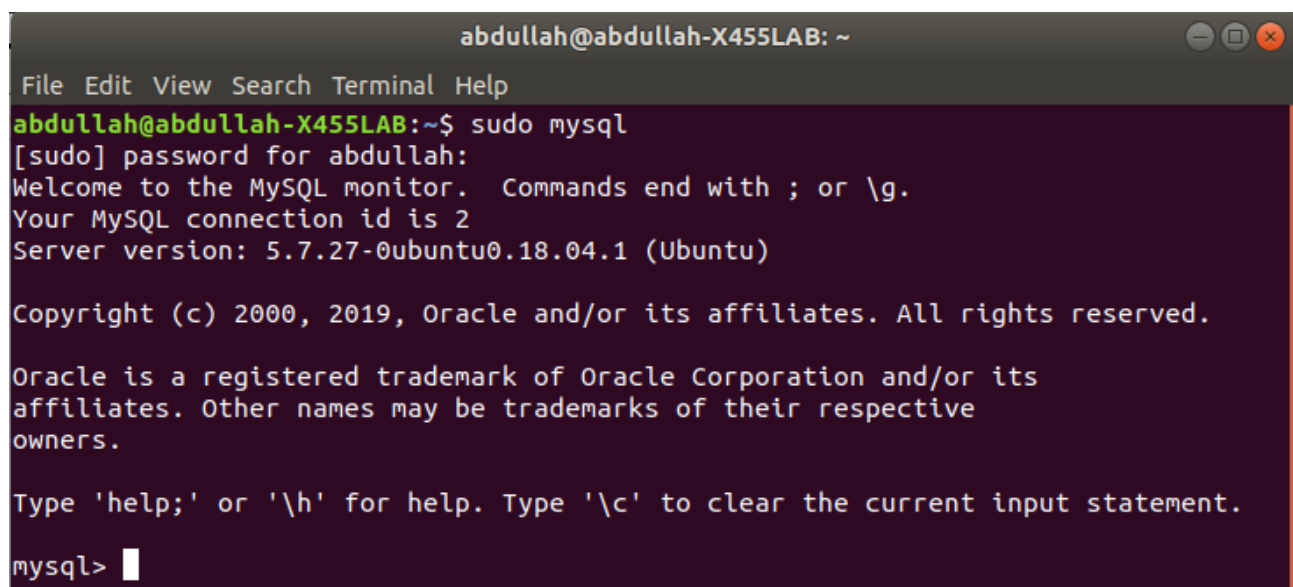
- i. Install mysql on Ubuntu
- ii. login into mysql
- iii. Create database table.
- iv. Insert data into table.
- v. Describe table.
- vi. Alter table.
- vii. Modify table.
- viii. Drop data from table.
- ix. Update data of table.
- x. Where and delete operation.

**1.Install mysql on ubuntu:** To install mysql on ubuntu we need to write the following commands on linux terminal.

```
sudo apt-get update
sudo apt-get install mysql-server
mysql_secure_installation
```

**2.Login into mysql:** For login into mysql after installation we need to write the following commands in linux terminal.

Sudo mysql

A screenshot of a Linux terminal window. The title bar shows the user 'abdullah' and the host 'abdullah-X455LAB'. The terminal output shows the command 'sudo mysql' being executed, followed by a password prompt. After successful authentication, the user is welcomed to the MySQL monitor, and the server version is displayed as 5.7.27-0ubuntu0.18.04.1 (Ubuntu). The prompt changes from '\$' to 'mysql>'.

```
abdullah@abdullah-X455LAB: ~
File Edit View Search Terminal Help
abdullah@abdullah-X455LAB:~$ sudo mysql
[sudo] password for abdullah:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.27-0ubuntu0.18.04.1 (Ubuntu)

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

mysql>
```

**3.Create and show databases:**To show databases we need to write a command "show databases".to create database we need to write "create database databaseName".

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| db          |
| mysql       |
| performance_schema |
| sys        |
+-----+
5 rows in set (0.03 sec)
```

```
mysql> create database abduallah;
Query OK, 1 row affected (0.00 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| abduallah          |
| db                  |
| mysql               |
| performance_schema |
| sys                 |
+-----+
```

**4.Create database table:**In mysql database table is created by using below command.

Create table tablename(attributes name type)

```
mysql> use abduallah
Database changed
mysql> create table course(course_code varchar(20),course_name varchar(20));
Query OK, 0 rows affected (0.24 sec)
```

```
mysql> select *from course;
Empty set (0.01 sec)
```

**5.Insert Data into table:** Data is inserted into table by using following commands:

```
insert into table_name values("value1","value2...");
```

```
mysql> insert into course values("ICT-3107","operating system");
Query OK, 1 row affected (0.07 sec)

mysql> insert into course values("ICT-3108","operating system lab");
Query OK, 1 row affected (0.04 sec)

mysql> insert into course values("ICT-3101","analog and digital communication");
ERROR 1406 (22001): Data too long for column 'course_name' at row 1
mysql> insert into course values("ICT-3101","analog and digital communication");
ERROR 1406 (22001): Data too long for column 'course_name' at row 1
mysql> insert into course values("ICT-3101","analog communication"); Query OK, 1 row affected (0.32 sec)
```

```
mysql> select *from course;
+-----+-----+
| course_code | course_name          |
+-----+-----+
| ICT-3107    | operating system     |
| ICT-3108    | operating system lab |
| ICT-3101    | analog communication |
+-----+-----+
3 rows in set (0.00 sec)
```

**6.Describe table:**list the contents of the table,types of attribute.

```
mysql> describe course;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| course_code | varchar(20) | YES  |     | NULL    |       |
| course_name | varchar(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> 
```

**7.Alter table:**we can change our table contents by alter commands.Here i Add an extra column credit of integer types.

```
mysql> alter table course add credit int;
Query OK, 0 rows affected (0.57 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> select *from course;
+-----+-----+-----+
| course_code | course_name          | credit |
+-----+-----+-----+
| ICT-3107    | operating system     | NULL   |
| ICT-3108    | operating system lab | NULL   |
| ICT-3101    | analog communication | NULL   |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

**8.Modify table:**Change the existence contents of a table.Here I delete the column credit.

```
mysql> alter table course drop credit;
Query OK, 0 rows affected (0.52 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> select *from course;
+-----+-----+
| course_code | course_name          |
+-----+-----+
| ICT-3107    | operating system     |
| ICT-3108    | operating system lab |
| ICT-3101    | analog communication |
+-----+-----+
3 rows in set (0.00 sec)
```

**9.Drop data from table:**

```
mysql> delete from course where course_code="ICT-3107";
Query OK, 1 row affected (0.04 sec)

mysql> select *from course;
+-----+-----+
| course_code | course_name          |
+-----+-----+
| ICT-3108    | operating system lab |
| ICT-3101    | analog communication |
+-----+-----+
2 rows in set (0.00 sec)
```

## 10.Update table:

```
mysql> update course set credit=3;
Query OK, 2 rows affected (0.06 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select *from course;
+-----+-----+-----+
| course_code | course_name          | credit |
+-----+-----+-----+
| ICT-3108    | operating system lab |      3 |
| ICT-3101    | analog communication |      3 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

## 11.where and Delete operations:

```
mysql> delete from course where course_code="ICT-3107";
Query OK, 1 row affected (0.04 sec)

mysql> select *from course;
+-----+-----+
| course_code | course_name          |
+-----+-----+
| ICT-3108    | operating system lab |
| ICT-3101    | analog communication |
+-----+-----+
2 rows in set (0.00 sec)
```