MAWLANA BHASHANI SCIENCE AND TECHNOLOGY UNIVERSITY
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LAB REPORT

Lab Report No   : 05

Lab Report name   : **Connecting a database (MySQL) with linux**

Course Title   : Operating System Lab

Course Code   : ICT-3110

Date of Performance   : 20-08-2020

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<table>
<tr><td>

Submitted by,

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Session   : 2017-18

3rd Year 1st semester

Dept. of ICT

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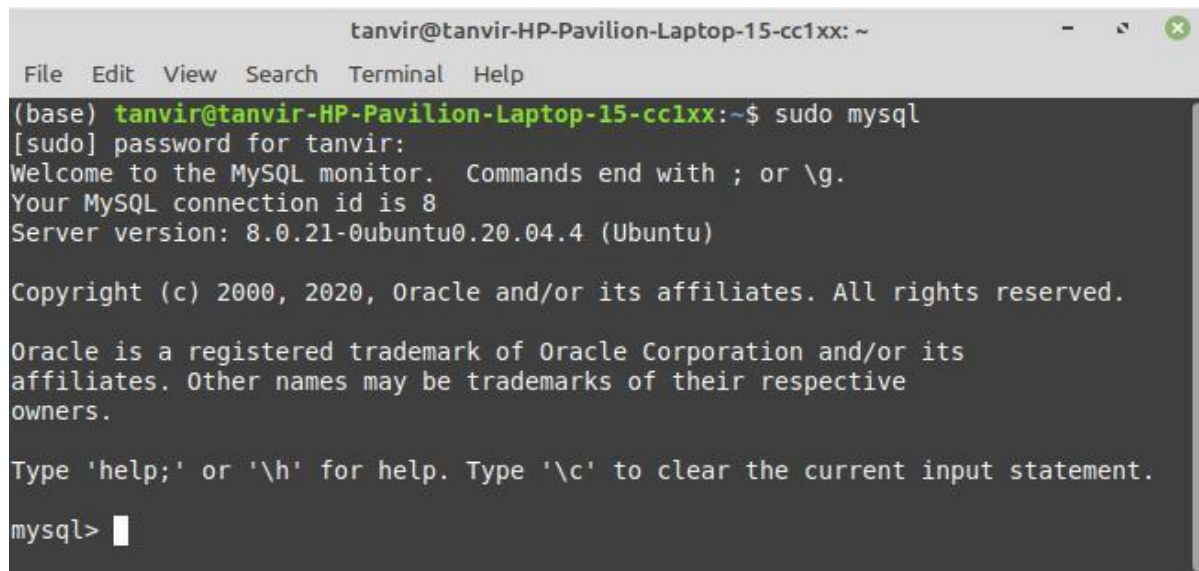Submitted to,

Nazrul Islam

Assistant Professor

Dept. of ICT,

MBSTU.

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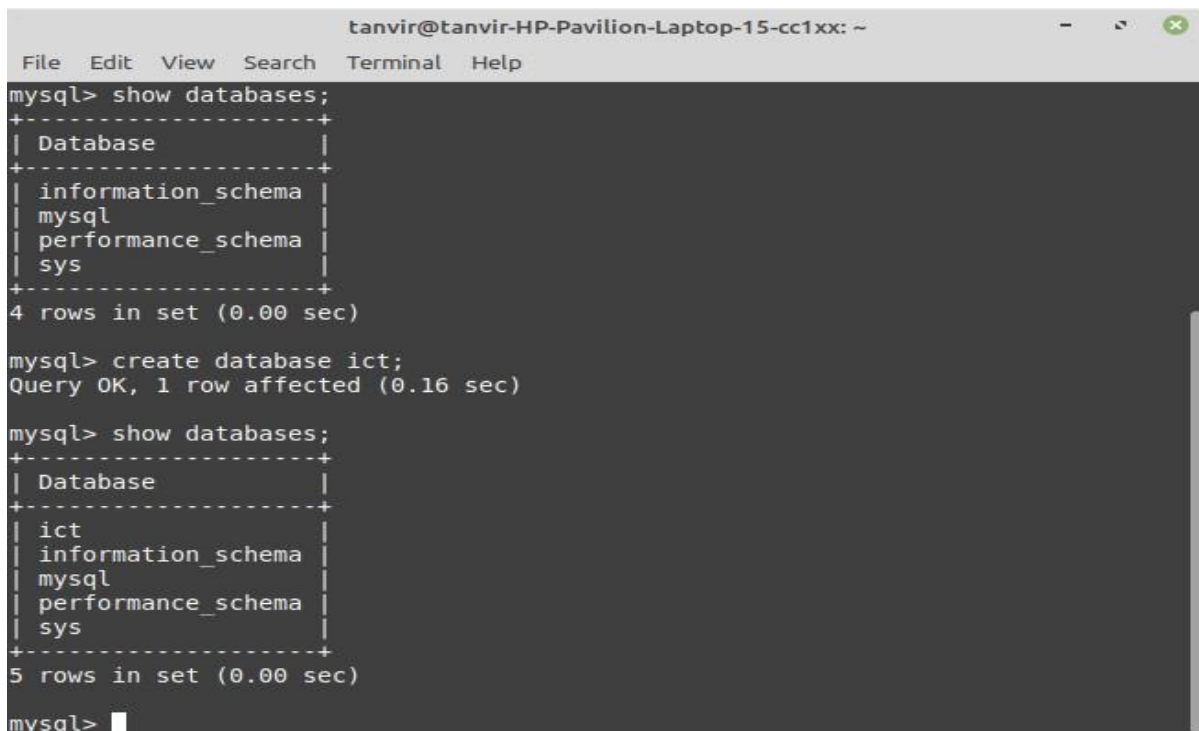# Lab 05 - Connecting a database (MySQL) with linux

1. Install MySQL on Ubuntu

sudo apt-get install **mysql-server**

2. Log into mysql by linux ubuntu.

3.show and create database :

3. show and create table :

```
                    tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx: ~          -   ℯ   ⊗

File   Edit   View   Search   Terminal   Help
mysql> show tables;
+---------------+
| Tables_in_ict |
+---------------+
| MyGuests      |
| student       |
+---------------+
2 rows in set (0.00 sec)

mysql> CREATE TABLE myTable(
    -> id INT NOT NULL,
    -> name VARCHAR(255) NOT NULL,
    -> cgpa VARCHAR(255),
    -> PRIMARY KEY(id)
    -> );
Query OK, 0 rows affected (0.56 sec)

mysql> show tables;
+---------------+
| Tables_in_ict |
+---------------+
| MyGuests      |
| myTable       |
| student       |
+---------------+
3 rows in set (0.01 sec)

mysql>
```

4. insert data into table :

```
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File   Edit   View   Search   Terminal   Help
mysql> INSERT INTO myTable values(18043,'Tanvir Ahmed','ICT');
Query OK, 1 row affected (0.21 sec)

mysql> SELECT* FROM myTable;
+-------+--------------+------+
| id    | name         | cgpa |
+-------+--------------+------+
| 18043 | Tanvir Ahmed | ICT  |
+-------+--------------+------+
1 row in set (0.01 sec)

mysql>
```

5. Describe table:

```
Empty set (0.02 sec)

mysql> DESCRIBE STUDENTS;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| ID      | int         | NO   | PRI | NULL    |       |
| NAME    | varchar(20) | NO   |     | NULL    |       |
| AGE     | int         | NO   |     | NULL    |       |
| ADDRESS | char(25)    | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.01 sec)

mysql>
```

6. alter table :

```
                    tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx: ~

File   Edit   View   Search   Terminal   Help

mysql> ALTER TABLE student ADD mobile VARCHAR(15);
Query OK, 0 rows affected (0.42 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE student;
+--------+--------------+------+-----+---------+-------+
| Field  | Type         | Null | Key | Default | Extra |
+--------+--------------+------+-----+---------+-------+
| id     | int          | NO   | PRI | NULL    |       |
| name   | varchar(255) | NO   |     | NULL    |       |
| dept   | varchar(255) | YES  |     | NULL    |       |
| mobile | varchar(15)  | YES  |     | NULL    |       |
+--------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

7.modify table:

```
                    tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx: ~

File   Edit   View   Search   Terminal   Help

mysql> ALTER TABLE student MODIFY id VARCHAR(20);
Query OK, 5 rows affected (1.67 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> DESCRIBE student;
+--------+--------------+------+-----+---------+-------+
| Field  | Type         | Null | Key | Default | Extra |
+--------+--------------+------+-----+---------+-------+
| id     | varchar(20)  | NO   | PRI | NULL    |       |
| name   | varchar(255) | NO   |     | NULL    |       |
| dept   | varchar(255) | YES  |     | NULL    |       |
| mobile | varchar(15)  | YES  |     | NULL    |       |
+--------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

8. drop data from table:

```
                        tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx: ~          -  ᴅ  ⊗

File   Edit   View   Search   Terminal   Help
mysql> ALTER TABLE student DROP mobile;
Query OK, 0 rows affected (1.78 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM student;
+-------+---------------------+------+
| id    | name                | dept |
+-------+---------------------+------+
| 18002 | Masud               | ICT  |
| 18034 | Milon               | ICT  |
| 18038 | Farhana Afrin Shikha | ICT |
| 18041 | Iqbal               | ICT  |
| 18043 | Tanvir Ahmed        | ICT  |
+-------+---------------------+------+
5 rows in set (0.00 sec)

mysql>
```

9.update data of table:

```
                        tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx: ~          -  ᴅ  ⊗

File   Edit   View   Search   Terminal   Help
mysql> UPDATE myTable SET cgpa='3.75' WHERE id=18043;
Query OK, 1 row affected (0.11 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM myTable;
+-------+---------------------+------+
| id    | name                | cgpa |
+-------+---------------------+------+
| 18002 | Masud Rana          | 3.80 |
| 18034 | Milon Miah          | 3.70 |
| 18040 | Abdullah Ahmed Mamun | 3.70 |
| 18041 | Iqbal Ahmed         | 3.70 |
| 18043 | Tanvir Ahmed        | 3.75 |
+-------+---------------------+------+
5 rows in set (0.00 sec)

mysql>
```

10. Where and delete operation:

```
tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx: ~

File  Edit  View  Search  Terminal  Help
mysql> SELECT * FROM student;
+-------+----------------------+------+
| id    | name                 | dept |
+-------+----------------------+------+
| 18002 | Masud                | ICT  |
| 18034 | Milon                | ICT  |
| 18038 | Farhana Afrin Shikha | ICT  |
| 18041 | Iqbal                | ICT  |
| 18043 | Tanvir Ahmed         | ICT  |
+-------+----------------------+------+
5 rows in set (0.00 sec)

mysql> DELETE FROM student WHERE name='Iqbal';
Query OK, 1 row affected (0.13 sec)

mysql> SELECT * FROM student;
+-------+----------------------+------+
| id    | name                 | dept |
+-------+----------------------+------+
| 18002 | Masud                | ICT  |
| 18034 | Milon                | ICT  |
| 18038 | Farhana Afrin Shikha | ICT  |
| 18043 | Tanvir Ahmed         | ICT  |
+-------+----------------------+------+
4 rows in set (0.00 sec)

mysql>
```

Conclusion: MySQL is a very familiar database management system through all
over the world. It is free and very easy to use.
In this lab experiment we learned how to install mysql and how to use mysql through the
CLI. Here we learned how to show databases, create database, show tables, create and
delete tables and their columns and rows.
Mysql is very easy to learn and use. This is a relational database management system.
Which is great for web developers .
Database is actually a storage management system. It is more efficient and faster than file
system. That's why it is highly used where data manipulation is very necessary .
However this experiment was very easy and enjoyable to us.