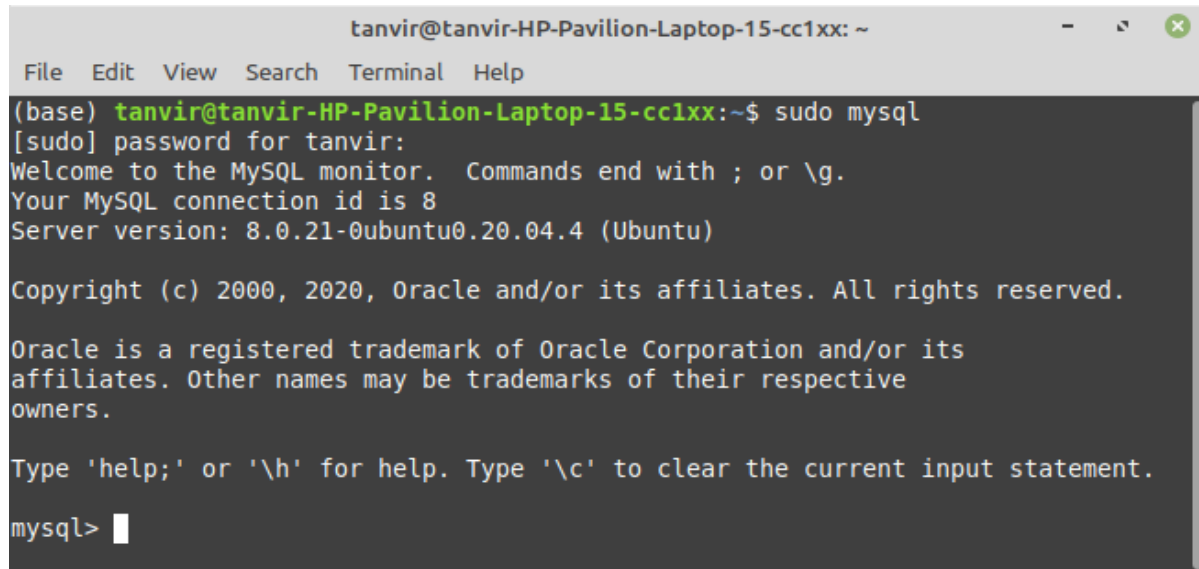# Lab 05 - Connecting a database (MySQL) with linux

1. Install MySQL on Ubuntu
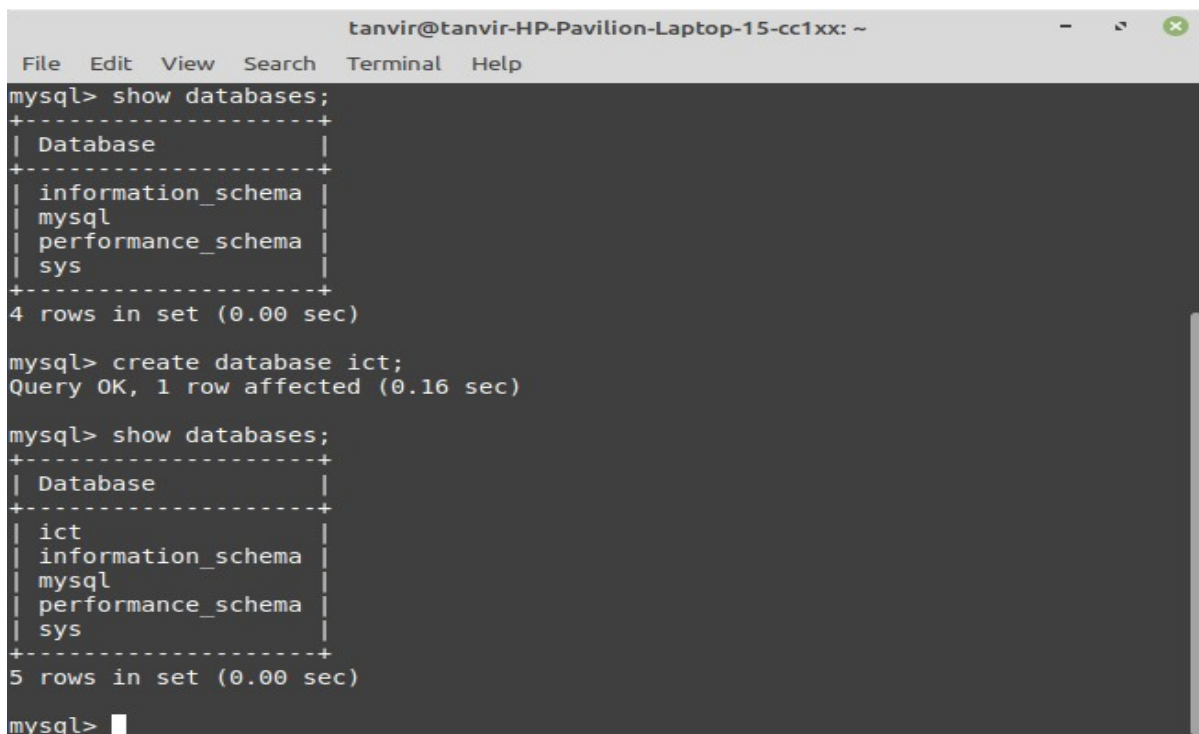
sudo apt-get install **mysql-server**

2. Log into mysql by linux ubuntu.

3.show and create database :

3. show and create table :

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

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

mysql> CREATE TABLE student(
    -> id INT NOT NULL,
    -> name VARCHAR(255) NOT NULL,
    -> dept VARCHAR(255) ,
    -> PRIMARY KEY(id)
    -> );
Query OK, 0 rows affected (0.60 sec)

mysql> show tables;
+---------------+
| Tables_in_ict |
+---------------+
| MyGuests      |
| student       |
+---------------+
2 rows in set (0.00 sec)

mysql>
```

4. insert data into table :

```
mysql> INSERT INTO student (id,name,dept) values (18043,'Tanvir Ahmed','ICT')
    -> ;
Query OK, 1 row affected (0.09 sec)

mysql> SELECT * FROM student;
+-------+--------------+------+
| id    | name         | dept |
+-------+--------------+------+
| 18043 | Tanvir Ahmed | ICT  |
+-------+--------------+------+
1 row in set (0.00 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: ~

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: ~

File   Edit   View   Search   Terminal   Help
mysql> UPDATE student SET mobile='elevenDigits';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 5  Changed: 0  Warnings: 0

mysql> SELECT * FROM student;
+-------+----------------------+------+--------------+
| id    | name                 | dept | mobile       |
+-------+----------------------+------+--------------+
| 18002 | Masud                | ICT  | elevenDigits |
| 18034 | Milon                | ICT  | elevenDigits |
| 18038 | Farhana Afrin Shikha | ICT  | elevenDigits |
| 18041 | Iqbal                | ICT  | elevenDigits |
| 18043 | Tanvir Ahmed         | ICT  | elevenDigits |
+-------+----------------------+------+--------------+
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>
```