

Lab-Report

Report No: 05

Course code: ICT-3110

Course title: Operating System Lab

Date of Performance:

Date of Submission:

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3rd year 1st semester

Session: 2017-2018

Dept. of ICT

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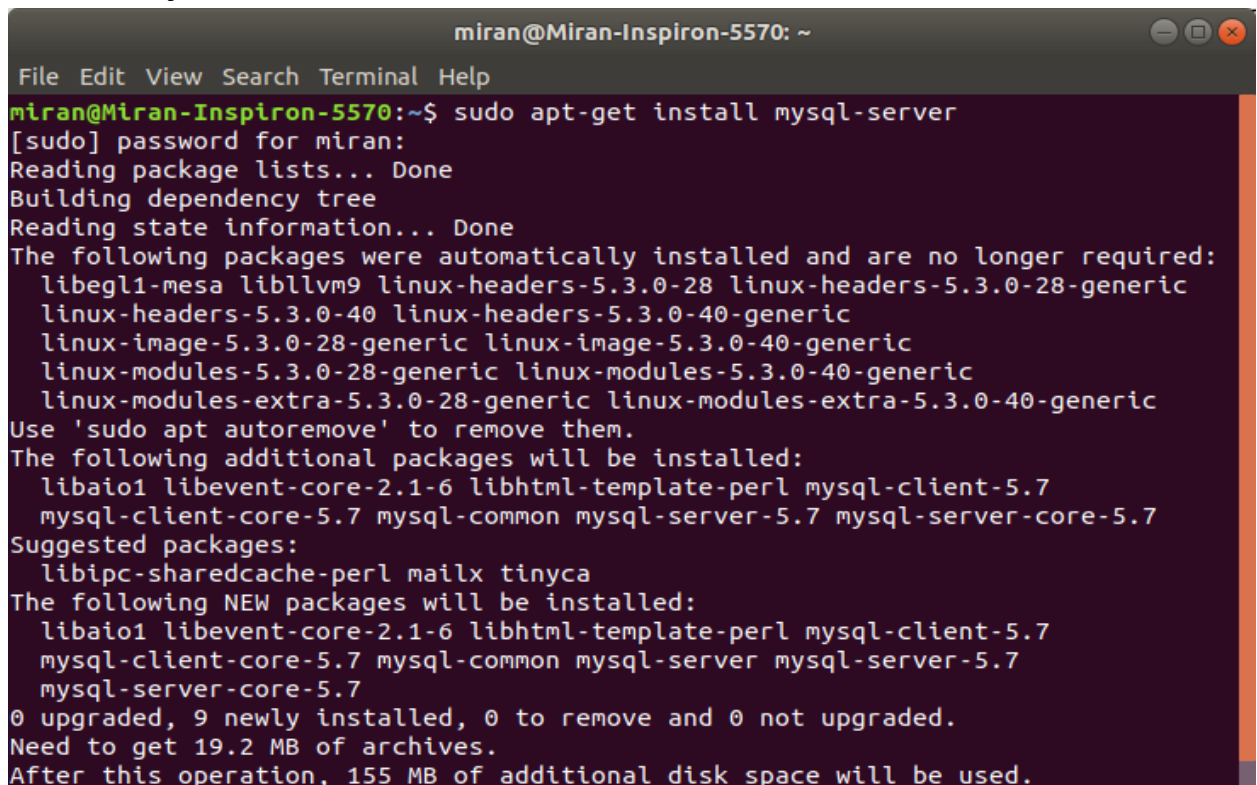
Experiment No: 05

Experiment Name: Connecting a database with linux.

Objectives:

- i) Install MySQL on Ubuntu.
- ii) Log into MySQL by Linux.
- iii) Create database table.
- iv) Insert data into table.
- v) Describe table.
- vi) Alter table.
- vii) Modify table.
- viii) Drop data form table.
- ix) Update data of table.
- x) Where and delete operation.

1. Install MySQL on Ubuntu.



```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
miran@Miran-Inspiron-5570:~$ sudo apt-get install mysql-server  
[sudo] password for miran:  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  libegl1-mesa libllvm9 linux-headers-5.3.0-28 linux-headers-5.3.0-28-generic  
  linux-headers-5.3.0-40 linux-headers-5.3.0-40-generic  
  linux-image-5.3.0-28-generic linux-image-5.3.0-40-generic  
  linux-modules-5.3.0-28-generic linux-modules-5.3.0-40-generic  
  linux-modules-extra-5.3.0-28-generic linux-modules-extra-5.3.0-40-generic  
Use 'sudo apt autoremove' to remove them.  
The following additional packages will be installed:  
  libaio1 libevent-core-2.1-6 libhtml-template-perl mysql-client-5.7  
  mysql-client-core-5.7 mysql-common mysql-server-5.7 mysql-server-core-5.7  
Suggested packages:  
  libipc-sharedcache-perl mailx tinycd  
The following NEW packages will be installed:  
  libaio1 libevent-core-2.1-6 libhtml-template-perl mysql-client-5.7  
  mysql-client-core-5.7 mysql-common mysql-server mysql-server-5.7  
  mysql-server-core-5.7  
0 upgraded, 9 newly installed, 0 to remove and 0 not upgraded.  
Need to get 19.2 MB of archives.  
After this operation, 155 MB of additional disk space will be used.
```

2. Log into MySQL by Linux.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
miran@Miran-Inspiron-5570:~$ sudo mysql  
[sudo] password for miran:  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 4  
Server version: 5.7.31-0ubuntu0.18.04.1 (Ubuntu)  
  
Copyright (c) 2000, 2020, Oracle and/or its affiliates. All rights reserved.  
  
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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> 
```

3. Create database table.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
4 rows in set (0.00 sec)  
  
mysql> create database miran;  
Query OK, 1 row affected (0.00 sec)  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| miran |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
5 rows in set (0.00 sec)  
mysql> 
```

4. Insert data into table.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
mysql> use miran;  
Database changed  
mysql> show tables;  
Empty set (0.00 sec)  
  
mysql> create table info(serial_no int,  
-> name varchar(30),  
-> occupation varchar(30),  
-> address varchar(30));  
Query OK, 0 rows affected (0.76 sec)  
  
mysql> show tables;  
+-----+  
| Tables_in_miran |  
+-----+  
| info             |  
+-----+  
1 row in set (0.00 sec)  
  
mysql> ;2~
```

5. Describe table.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
mysql> describe info;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| serial_no  | int(11)       | YES  |     | NULL    |       |  
| name       | varchar(30)   | YES  |     | NULL    |       |  
| occupation | varchar(30)   | YES  |     | NULL    |       |  
| address    | varchar(30)   | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.01 sec)  
  
mysql> 
```

6. Alter table.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
mysql> alter table info add age int;  
Query OK, 0 rows affected (0.87 sec)  
Records: 0 Duplicates: 0 Warnings: 0  
  
mysql> select * from info;  
+-----+-----+-----+-----+-----+  
| serial_no | name | occupation | address | age |  
+-----+-----+-----+-----+-----+  
| 1 | miran | student | tangail | NULL |  
| 1 | miran | student | tangail | NULL |  
| 1 | miran | student | tangail | NULL |  
| 1 | miran | student | tangail | NULL |  
+-----+-----+-----+-----+-----+  
4 rows in set (0.00 sec)  
  
mysql> 
```

7. Modify table.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
mysql> alter table info modify serial_no varchar(20);  
Query OK, 4 rows affected (1.17 sec)  
Records: 4 Duplicates: 0 Warnings: 0  
  
mysql> describe info;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| serial_no | varchar(20) | YES | | NULL | |  
| name | varchar(30) | YES | | NULL | |  
| occupation | varchar(30) | YES | | NULL | |  
| address | varchar(30) | YES | | NULL | |  
| age | int(11) | YES | | NULL | |  
+-----+-----+-----+-----+-----+-----+  
5 rows in set (0.00 sec)  
  
mysql> 
```

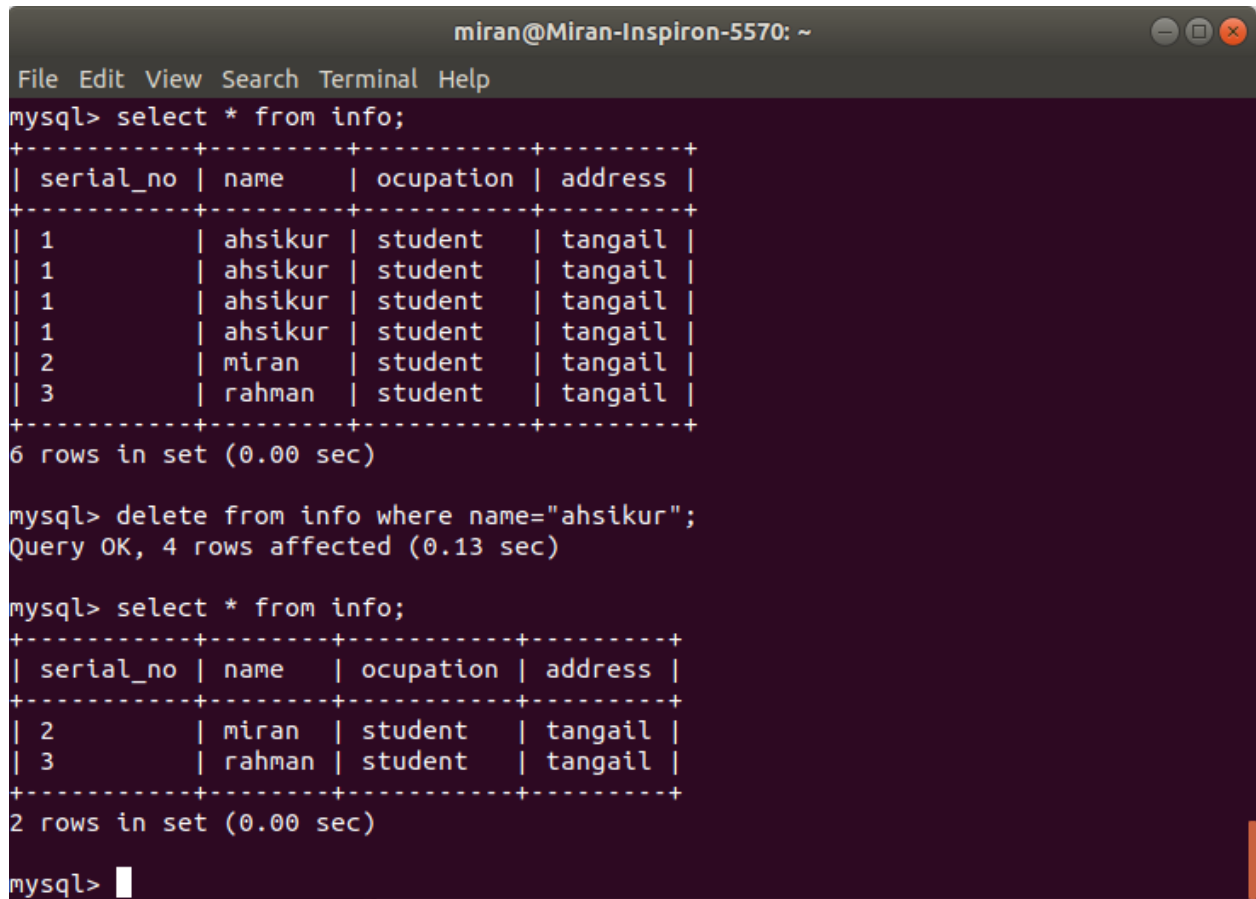
8. Drop data form table.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
  
mysql> alter table info drop age;  
Query OK, 0 rows affected (0.85 sec)  
Records: 0 Duplicates: 0 Warnings: 0  
  
mysql> select * from info;  
+-----+-----+-----+-----+  
| serial_no | name | occupation | address |  
+-----+-----+-----+-----+  
| 1         | miran | student    | tangail |  
| 1         | miran | student    | tangail |  
| 1         | miran | student    | tangail |  
| 1         | miran | student    | tangail |  
+-----+-----+-----+-----+  
4 rows in set (0.00 sec)  
  
mysql> 
```

9. Update data of table.

```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
  
mysql> update info set name="ahsikur" where serial_no=1;  
Query OK, 4 rows affected (0.13 sec)  
Rows matched: 4 Changed: 4 Warnings: 0  
  
mysql> select * from info;  
+-----+-----+-----+-----+  
| serial_no | name    | occupation | address |  
+-----+-----+-----+-----+  
| 1         | ahsikur | student    | tangail |  
| 1         | ahsikur | student    | tangail |  
| 1         | ahsikur | student    | tangail |  
| 1         | ahsikur | student    | tangail |  
+-----+-----+-----+-----+  
4 rows in set (0.00 sec)  
  
mysql> 
```

10. Where and delete operation:



```
miran@Miran-Inspiron-5570: ~  
File Edit View Search Terminal Help  
mysql> select * from info;  
+-----+-----+-----+-----+  
| serial_no | name   | occupation | address |  
+-----+-----+-----+-----+  
| 1         | ahsikur | student   | tangail |  
| 1         | ahsikur | student   | tangail |  
| 1         | ahsikur | student   | tangail |  
| 1         | ahsikur | student   | tangail |  
| 2         | miran   | student   | tangail |  
| 3         | rahman  | student   | tangail |  
+-----+-----+-----+-----+  
6 rows in set (0.00 sec)  
  
mysql> delete from info where name="ahsikur";  
Query OK, 4 rows affected (0.13 sec)  
  
mysql> select * from info;  
+-----+-----+-----+-----+  
| serial_no | name   | occupation | address |  
+-----+-----+-----+-----+  
| 2         | miran   | student   | tangail |  
| 3         | rahman  | student   | tangail |  
+-----+-----+-----+-----+  
2 rows in set (0.00 sec)  
  
mysql> 
```

Conclusion:

In this lab I learn how to install mysql server in Ubuntu, create database, create table, alter table . I also run all the code and show the output.