Mawlana Bhashani Science and Technology University

Lab-Report

Report No:05

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

Course code: ICT-3110

Course title: Operating System Lab

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Submitted by

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Submitted to

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Experiment no : 05
Experiment Name : Connecting a database (MySQL) with linux.

Theory : Many Linux distributions include a version of the MySQL server, client tools, and development components in their native software repositories and can be installed with the platforms' standard package management systems. This section provides basic instructions for installing MySQL using those package management systems.

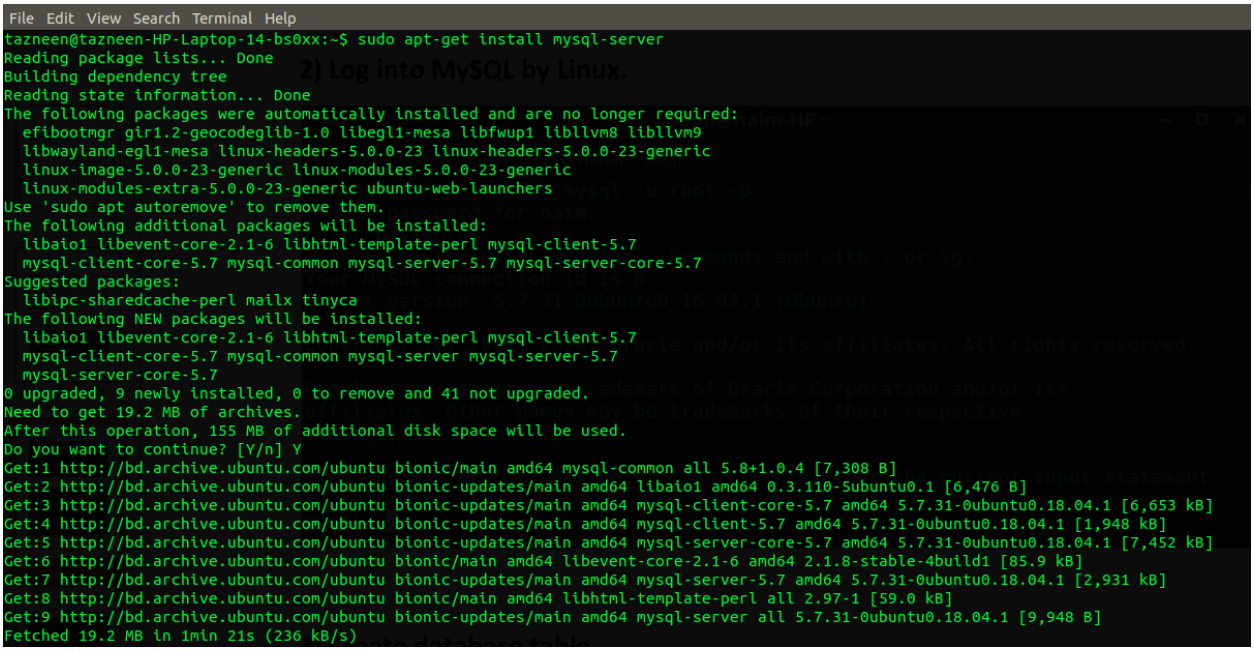
Working Process :

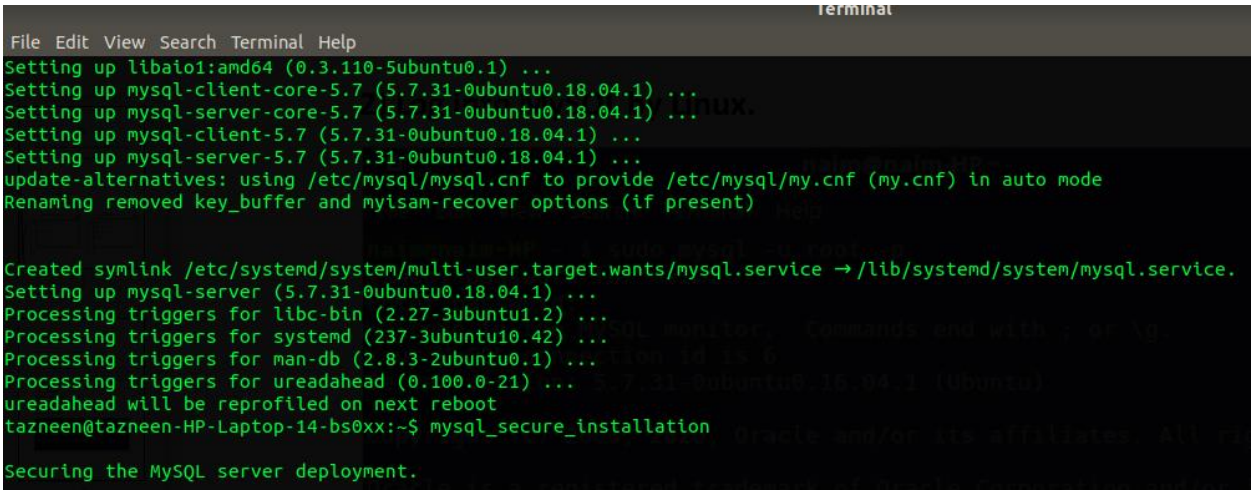
1) **Install MySQL on Ubuntu:**

sudo apt-get update

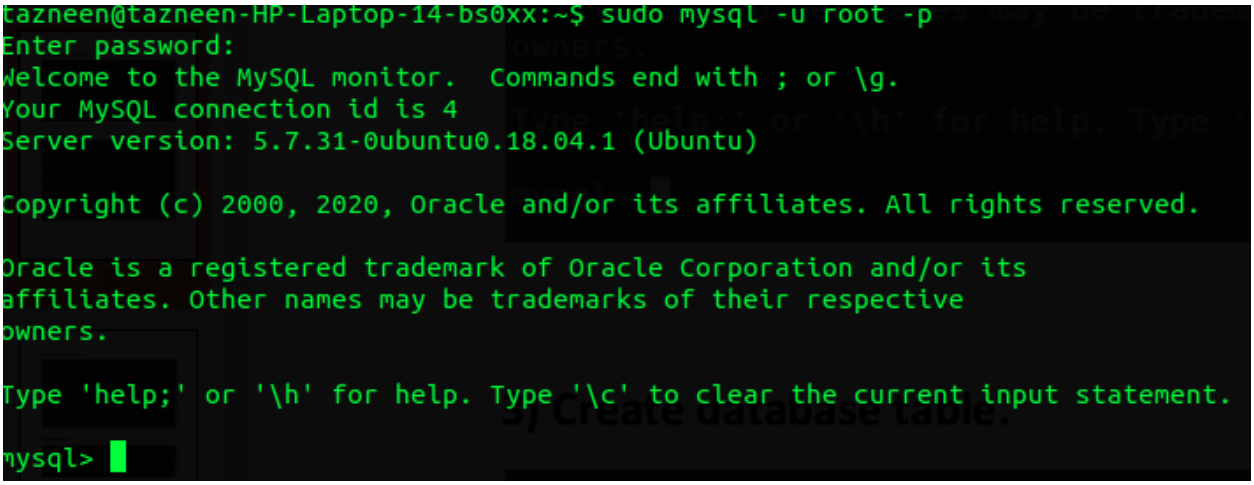
sudo apt-get install mysql-server

mysql_secure_installation





2) Log into MySQL by Linux



3) Create database table

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
4 rows in set (0.01 sec)

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
| tazneen            |
+--------------------+
5 rows in set (0.01 sec)
```

4) Insert data into table

```
mysql> insert into Student values('IT-18008','Rima',21,'Tangail');
Query OK, 1 row affected (0.08 sec)

mysql> insert into Student values('IT-18012','Dhina',21,'Netrokona');
Query OK, 1 row affected (0.10 sec)

mysql> insert into Student values('IT-18056','Tazneen',21,'Cumilla');
Query OK, 1 row affected (0.09 sec)

mysql> select *from Student;
+----------+---------+------+-----------+
| ID       | NAME    | AGE  | DISTRICT  |
+----------+---------+------+-----------+
| IT-18008 | Rima    |   21 | Tangail   |
| IT-18012 | Dhina   |   21 | Netrokona |
| IT-18056 | Tazneen |   21 | Cumilla   |
+----------+---------+------+-----------+
3 rows in set (0.00 sec)
```

5) Describe table

```
mysql> describe Student;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| ID       | varchar(20) | YES  |     | NULL    |       |
| NAME     | char(20)    | YES  |     | NULL    |       |
| AGE      | int(20)     | YES  |     | NULL    |       |
| DISTRICT | char(30)    | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

6) Alter table

```
mysql> alter table Student add Health varchar(20);
Query OK, 0 rows affected (0.86 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe Student;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| ID       | varchar(20) | YES  |     | NULL    |       |
| NAME     | char(20)    | YES  |     | NULL    |       |
| AGE      | int(20)     | YES  |     | NULL    |       |
| DISTRICT | char(30)    | YES  |     | NULL    |       |
| Health   | varchar(20) | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

7) Modify table

```
mysql> alter table Student modify Health varchar(40);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe Student;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| ID       | varchar(20) | YES  |     | NULL    |       |
| NAME     | char(20)    | YES  |     | NULL    |       |
| AGE      | int(20)     | YES  |     | NULL    |       |
| DISTRICT | char(30)    | YES  |     | NULL    |       |
| Health   | varchar(40) | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

8) Drop data from table

```
mysql> alter table Student drop Health;
Query OK, 0 rows affected (0.60 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe Student;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| ID       | varchar(20) | YES  |     | NULL    |       |
| NAME     | char(20)    | YES  |     | NULL    |       |
| AGE      | int(20)     | YES  |     | NULL    |       |
| DISTRICT | char(30)    | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

9) Update data of table

```
mysql> update Student
    -> set AGE=22
    -> where NAME='Rima';
Query OK, 1 row affected (0.08 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select *from Student;
+----------+---------+------+-----------+
| ID       | NAME    | AGE  | DISTRICT  |
+----------+---------+------+-----------+
| IT-18008 | Rima    |   22 | Tangail   |
| IT-18012 | Dhina   |   21 | Netrokona |
| IT-18056 | Tazneen |   21 | Cumilla   |
+----------+---------+------+-----------+
3 rows in set (0.00 sec)
```

10) Where and delete operation

```
mysql> select *from Student where age = 21;
+----------+---------+------+-----------+
| ID       | NAME    | AGE  | DISTRICT  |
+----------+---------+------+-----------+
| IT-18012 | Dhina   |   21 | Netrokona |
| IT-18056 | Tazneen |   21 | Cumilla   |
+----------+---------+------+-----------+
2 rows in set (0.00 sec)
```

```
mysql> delete from Student where NAME='Rima';
Query OK, 1 row affected (0.08 sec)

mysql> select *from Student;
+----------+---------+------+-----------+
| ID       | NAME    | AGE  | DISTRICT  |
+----------+---------+------+-----------+
| IT-18012 | Dhina   |   21 | Netrokona |
| IT-18056 | Tazneen |   21 | Cumilla   |
+----------+---------+------+-----------+
2 rows in set (0.00 sec)
```

Discussion: It takes less time to install mysql in linux and quite easier from windows.We can work in Mysql through some command which is very easy in linux operating system. It manages memory very well.