Mawlana Bhashani Science and Technology University

Lab-Report

Report No:05

Report Name:Connecting a database(MYSQL)with Linux

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<u>Experiment No:</u>05

<u>Experiment Name:</u>Connecting a database(MYSQL)with Linux

Objectives:

From this lab,we learnt about how to
  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) Drop data from table.
  viii) Update data of table.
  ix) Where and delete operation.
     <u>Connecting a database (MySQL) with linux</u>

1. Install MySQL on Ubuntu .

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

2. Log into mysql by linux ubuntu.

```
piya@DESKTOP-JTFNBIK:~$ sudo mysql -u root
[sudo] password for piya:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.21-0ubuntu0.20.04.4 (Ubuntu)

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

3. show and create database :

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| new1               |
| performance_schema |
| sys                |
+--------------------+
 rows in set (0.00 sec)

mysql> create database piya;
Query OK, 1 row affected (0.04 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| new1               |
| performance_schema |
| piya               |
| sys                |
+--------------------+
 rows in set (0.00 sec)
```

4. show and create table :

```
mysql> CREATE TABLE STUDENT(
    -> NAME VARCHAR (50) NOT NULL,
    -> ID VARCHAR (50) NOT NULL,
    -> DEPT VARCHAR (50) NOT NULL,
    -> AGE INT (5) NOT NULL);
Query OK, 0 rows affected, 1 warning (0.92 sec)

mysql> SHOW TABLES;
+----------------+
| Tables_in_piya |
+----------------+
| STUDENT        |
+----------------+
1 row in set (0.01 sec)

mysql> describe STUDENT;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| NAME  | varchar(50) | NO   |     | NULL    |       |
| ID    | varchar(50) | NO   |     | NULL    |       |
| DEPT  | varchar(50) | NO   |     | NULL    |       |
| AGE   | int         | NO   |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
4 rows in set (0.04 sec)
```

5. insert data into table :

```
mysql> insert into STUDENT(NAME,ID,DEPT,AGE)values('Maira','IT-18020','ICT',22);
Query OK, 1 row affected (0.06 sec)

mysql> insert into STUDENT(NAME,ID,DEPT,AGE)values('Tethye','IT-18055','ICT',21);
Query OK, 1 row affected (0.04 sec)

mysql> insert into STUDENT(NAME,ID,DEPT,AGE)values('Jui','IT-18039','ICT',21);
Query OK, 1 row affected (0.02 sec)

mysql> select *from STUDENT;
+--------+----------+------+-----+
| NAME   | ID       | DEPT | AGE |
+--------+----------+------+-----+
| Maira  | IT-18020 | ICT  | 22  |
| Tethye | IT-18055 | ICT  | 21  |
| Jui    | IT-18039 | ICT  | 21  |
+--------+----------+------+-----+
3 rows in set (0.00 sec)
```

6. Describe table:

```
mysql> describe STUDENT;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| NAME   | varchar(50) | NO   |     | NULL    |       |
| ID     | varchar(50) | NO   |     | NULL    |       |
| DEPT   | varchar(50) | NO   |     | NULL    |       |
| AGE    | int         | NO   |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.04 sec)
```

7. alter table :

```
mysql> alter table STUDENT add DISTRICT varchar(20);
Query OK, 0 rows affected (0.30 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe STUDENT;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| NAME     | varchar(50) | NO   |     | NULL    |       |
| ID       | varchar(50) | NO   |     | NULL    |       |
| DEPT     | varchar(50) | NO   |     | NULL    |       |
| AGE      | int         | NO   |     | NULL    |       |
| DISTRICT | varchar(20) | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

8. drop data from table:

```
mysql> alter table STUDENT drop DISTRICT;
Query OK, 0 rows affected (0.99 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe STUDENT;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| NAME   | varchar(50) | NO   |     | NULL    |       |
| ID     | varchar(50) | NO   |     | NULL    |       |
| DEPT   | varchar(50) | NO   |     | NULL    |       |
| AGE    | int         | NO   |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

09.update data of table:

```
mysql> update STUDENT
    -> set AGE=20
    -> where NAME='jui';
Query OK, 1 row affected (0.03 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select *from STUDENT;
+--------+----------+------+-----+
| NAME   | ID       | DEPT | AGE |
+--------+----------+------+-----+
| Maira  | IT-18020 | ICT  |  22 |
| Tethye | IT-18055 | ICT  |  21 |
| Jui    | IT-18039 | ICT  |  20 |
+--------+----------+------+-----+
3 rows in set (0.00 sec)
```

10.delete data from table:

```
mysql> delete from STUDENT where NAME='Tethye';
Query OK, 1 row affected (0.02 sec)

mysql> select *from STUDENT;
+-------+----------+------+-----+
| NAME  | ID       | DEPT | AGE |
+-------+----------+------+-----+
| Maira | IT-18020 | ICT  |  22 |
| Jui   | IT-18039 | ICT  |  20 |
+-------+----------+------+-----+
2 rows in set (0.00 sec)

mysql> _
```

Discussion:From this experiment,I learnt some sql query and their operations in MYSQL database system.This query's must be learn to know about MYSQL database system.This is the easiest way to learn database management system.we can create table,add data,modify data, delete and update data easily by using MYSQL.I do this basic operations in this experiment and I feel it so easy and interesting.I don't face any problem doing it.