Zeal College of Engineering and Research

Subject: DBMSL

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Div: B   Batch: B1

Roll No: T212009

Group A: Practical No: 8

Program Statement:

Database Trigger (All Types: Row level and Statement level triggers, Before and After Triggers). Write a database trigger on Library table. The System should keep track of the records that are being updated or deleted. The old value of updated or deleted records should be added in Library_Audit table.

Code:

```
mysql> create database Lib;
Query OK, 1 row affected (0.12 sec)
mysql> use Lib;
Database changed
mysql> create table Library (rollno int, name varchar(50), nameofbook VARCHAR(50));
Query OK, 0 rows affected (0.50 sec)

mysql> create table Library_Audit (rollno int, name varchar(50), nameofbook
VARCHAR(50));
Query OK, 0 rows affected (0.61 sec)

mysql> delimiter //
mysql> create trigger tr_ins77_Borrower
    -> before insert
    -> on Library
    -> for each row
    -> begin
    -> insert into Library_Audit values(new.rollno,new.name,new.nameofbook);
    -> end
    -> //
Query OK, 0 rows affected (0.16 sec)

mysql> delimiter ;
mysql> insert into Library values(1, "Jenil", "Sherlock Holmes");
Query OK, 1 row affected (0.09 sec)
```

```
mysql> select * from Library;
+--------+-------+----------------+
| rollno | name  | nameofbook     |
+--------+-------+----------------+
|      1 | Jenil | Sherlock Holmes |
+--------+-------+----------------+
1 row in set (0.00 sec)

mysql> select * from Library_Audit;
+--------+-------+----------------+
| rollno | name  | nameofbook     |
+--------+-------+----------------+
|      1 | Jenil | Sherlock Holmes |
+--------+-------+----------------+
1 row in set (0.00 sec)

mysql> delimiter //
mysql> create trigger tr_del_Borrower
    -> before delete
    -> on Library
    -> for each row
    -> begin
    -> delete from Library_Audit where rollno=old.rollno;
    -> end
    -> //
Query OK, 0 rows affected (0.14 sec)

mysql> delimiter ;
mysql> delete from Library where rollno = 1;
Query OK, 1 row affected (0.11 sec)

mysql> select * from Library;
Empty set (0.00 sec)

mysql> select * from Library_Audit;
Empty set (0.00 sec)

mysql> insert into Library values(2, "Zaid", "Harappa");
Query OK, 1 row affected (0.11 sec)

mysql> delimiter //
mysql> create trigger tr_up1_Borrower
    -> before update
    -> on Library
    -> for each row
    -> begin
    -> update Library_Audit set rollno=new.rollno where rollno=old.rollno;
    -> end
    -> //
Query OK, 0 rows affected (0.14 sec)
```

```
mysql> delimiter ;
mysql> update Library set rollno = 1 where rollno = 2;
Query OK, 1 row affected (0.08 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from Library;
+--------+------+------------+
| rollno | name | nameofbook |
+--------+------+------------+
|      1 | Zaid | Harappa    |
+--------+------+------------+
1 row in set (0.00 sec)

mysql> select * from Library_Audit;
+--------+------+------------+
| rollno | name | nameofbook |
+--------+------+------------+
|      1 | Zaid | Harappa    |
+--------+------+------------+
1 row in set (0.00 sec)
```