Assignment No. 8(A)

Title: Database Trigger (All Types: Row level and Statement level triggers, Before and After Triggers).Write a database trigger on Library_Book 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.

```
mysql> CREATE DATABASE Library;
Query OK, 1 row affected (0.01 sec)

mysql> USE Library;
Database changed
mysql> CREATE TABLE lib_book(bid INT,bname VARCHAR(20),qty INT);
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE lib_audit(bid INT,bname VARCHAR(20),qty INT);
Query OK, 0 rows affected (0.01 sec)

mysql>    INSERT    INTO    lib_book    VALUES(1,"Secret",10),(2,"Hating    game",30),(3,"The
        Alchemist",50),(4,"Love Hypothesis",45);
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM lib_book;
+------+--------------------+------+
| bid  | bname              | qty  |
+------+--------------------+------+
|   1  | Secret             |  10  |
|   2  | Hating game        |  30  |
|   3  | The Alchemist      |  50  |
|   4  | Love Hypothesis    |  45  |
+------+--------------------+------+
4 rows in set (0.00 sec)

mysql> SELECT * FROM lib_audit;
Empty set (0.00 sec)

*****************************Defining Trigger*********************************
mysql> drop trigger if exists Make_audit1;
Query OK, 0 rows affected, 1 warning (0.00 sec)

mysql>
mysql> delimiter //
mysql>
mysql> CREATE TRIGGER Make_audit1
```

```
   ->  AFTER DELETE ON lib_book
   ->  FOR EACH ROW
   -> BEGIN
   ->  INSERT INTO lib_Audit (bid, bname, qty)
   ->  VALUES (OLD.bid, OLD.bname,OLD.qty);
   -> END;
   -> //
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> delimiter ;
********************************************************************************
```

*************************Deleting Record to trigger action***********************

```
mysql> DELETE FROM lib_book where bid=4 or bid=2;
Query OK, 2 rows affected (0.01 sec)

mysql> SELECT * FROM lib_book;
+------+------------------+------+
| bid | bname            | qty |
+------+------------------+------+
|   1  | Secret           |  10 |
|   3  | The Alchemist    |  50 |
+------+------------------+------+
2 rows in set (0.00 sec)

mysql> SELECT * FROM lib_audit;
+------+------------------+------+
| bid | bname            | qty |
+------+------------------+------+
|   2 | Hating game      |  30 |
|   4 | Love Hypothesis  |  45 |
+------+------------------+------+
2 rows in set (0.00 sec)
********************************************************************************
```

******************************Defining Trigger***********************************

```
mysql> drop trigger if exists Make_audit2;
Query OK, 0 rows affected, 1 warning (0.00 sec)

mysql>
mysql> delimiter //
mysql>
mysql> CREATE TRIGGER Make_audit2
   ->  AFTER UPDATE ON lib_book
```

```
    ->  FOR EACH ROW
    -> BEGIN
    ->  INSERT INTO lib_Audit (bid, bname, qty)
    ->  VALUES (OLD.bid, OLD.bname,OLD.qty);
    -> END;
    -> //
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> delimiter ;
******************************************************************************
```

**************************Updating Record to trigger action***********************

```
mysql> UPDATE lib_book set qty=100 where bname="Secret";
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM lib_book;
+------+------------------+-------+
| bid  | bname            | qty   |
+------+------------------+-------+
|   1  | Secret           | 100   |
|   3  | The Alchemist    |  50   |
+------+------------------+------+
2 rows in set (0.00 sec)

mysql> SELECT * FROM lib_audit;
+------+---------------------+------+
| bid  | bname               | qty  |
+------+---------------------+------+
|   2  | Hating game         | 30   |
|   4  | Love Hypothesis     | 45   |
|   1  | Secret              | 10   |
+------+---------------------+------+
3 rows in set (0.00 sec)

mysql>
******************************************************************************
```