**Assignment 8**

**Problem 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.**

**Row level triggers**

mysql> create database assi8library

-> ;

Query OK, 1 row affected (0.02 sec)

mysql> use assi8library;

Database changed

mysql> create table stud(sid int primary key,name varchar(20),class varchar(10),bname varchar(20) ,issued char(1));

Query OK, 0 rows affected (0.05 sec)

mysql> create table returned(sid int, bname varchar(20),bauthor varchar(20));

Query OK, 0 rows affected (0.04 sec)

mysql> create table issued(sid int,bname varchar(20));

Query OK, 0 rows affected (0.04 sec)

mysql> delimiter //

mysql> create trigger tr\_insert\_stud

-> before insert

-> on stud

-> for each row

-> begin

-> insert into issued values(new.sid,new.bname);

-> end;

-> //

Query OK, 0 rows affected (0.02 sec)

mysql> insert into stud values(1,'stud2','te1','CNS','I');//

Query OK, 1 row affected (0.02 sec)

mysql> select \* from issued;//

+------+-------+

| sid | bname |

+------+-------+

| 1 | CNS |

+------+-------+

1 row in set (0.00 sec)

mysql> delimiter //

mysql> create trigger tr\_delete\_stud

-> after delete

-> on stud

-> for each row

-> begin

-> delete from issued where sid=old.sid;

-> end;

-> //

Query OK, 0 rows affected (0.01 sec)

mysql> delete from stud where sid=1;

-> //

Query OK, 1 row affected (0.02 sec)

mysql> select \* from issued;//

Empty set (0.00 sec)

mysql> delimiter //

mysql> create trigger tr\_update\_stud

-> after update

-> on stud

-> for each row

-> begin

-> update issued

-> set sid=new.sid where sid=old.sid;

-> end;

-> //

Query OK, 0 rows affected (0.02 sec)

mysql> insert into stud values(1,'stud2','te1','CNS','I');//

Query OK, 1 row affected (0.02 sec)

mysql> update stud set sid=3 where sid=1;

-> //

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from issued;//

+------+-------+

| sid | bname |

+------+-------+

| 3 | CNS |

+------+-------+

1 row in set (0.00 sec)

mysql> select \* from stud;//

+-----+-------+-------+-------+--------+

| sid | name | class | bname | issued |

+-----+-------+-------+-------+--------+

| 3 | stud2 | te1 | CNS | I |

+-----+-------+-------+-------+--------+

1 row in set (0.00 sec)

mysql>exit

**Statement level triggers: Live SQL**