**ASSIGNMENT NO- 07**

TCOA35 -Shrutee Pimpare

**TITLE:**

Write a database Trigger on Library table. The system should keep track of the records that are being updated or deleted

**SOLUTION**

mysql> CREATE TABLE LIB\_AUDIT(RNO INT,

-> B\_TITLE VARCHAR(20), -> ACTION VARCHAR(20));^C mysql> CREATE TABLE BOOKS(RNO INT, -> B\_TITLE VARCHAR(20));

Query OK, 0 rows affected (0.04 sec)

mysql> mysql> CREATE TABLE LIB\_AUDIT(RNO INT,

-> B\_TITLE VARCHAR(20),

-> ACTION VARCHAR(20));

Query OK, 0 rows affected (0.03 sec)

mysql> DESC LIB\_AUDIT;

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

| Field | Type | Null | Key | Default | Extra |

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

| RNO | int | YES | | NULL | |

| B\_TITLE | varchar(20) | YES | | NULL | |

| ACTION | varchar(20) | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> DESC BOOKS;

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

| Field | Type | Null | Key | Default | Extra |

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

| RNO | int | YES | | NULL | |

| B\_TITLE | varchar(20) | YES | | NULL | |

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

2 rows in set (0.00 sec)

mysql> INSERT INTO BOOKS VALUES(1, 'ABC');

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO BOOKS VALUES(2, 'DEF');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO BOOKS VALUES(3, 'GHI');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO BOOKS VALUES(4, 'JKL');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO BOOKS VALUES(5, 'MNO');

Query OK, 1 row affected (0.01 sec)

mysql> SELECT \*FROM BOOKS; +------+---------+

| RNO | B\_TITLE |

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

| 1 | ABC |

| 2 | DEF |

| 3 | GHI |

| 4 | JKL |

| 5 | MNO |

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

5 rows in set (0.00 sec)

mysql> SELECT \*FROM LIB\_AUDIT;

Empty set (0.00 sec)

mysql> DELIMITER $

mysql> CREATE TRIGGER before\_book\_delete

-> AFTER DELETE -> ON books

-> FOR EACH ROW

-> BEGIN

-> INSERT INTO LIB\_AUDIT

-> SET action ='DELETE',

-> RNO=OLD.RNO,

-> B\_TITLE=OLD.B\_TITLE;

-> END;

-> $

Query OK, 0 rows affected (0.01 sec)

mysql> DELIMITER ; mysql> DELETE FROM BOOKS WHERE RNO = 1;

Query OK, 1 row affected (0.01 sec)

mysql> SELECT \*FROM BOOKS; +------+---------+

| RNO | B\_TITLE |

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

| 2 | DEF |

| 3 | GHI |

| 4 | JKL |

| 5 | MNO |

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

4 rows in set (0.00 sec)

mysql> SELECT \*FROM LIB\_AUDIT; +------+---------+--------+

| RNO | B\_TITLE | ACTION |

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

| 1 | ABC | DELETE |

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

1 row in set (0.00 sec)

mysql> DELIMITER $ mysql> CREATE TRIGGER before\_book\_update

-> BEFORE UPDATE

-> ON BOOKS

-> FOR EACH ROW

-> BEGIN

-> INSERT INTO LIB\_AUDIT

-> SET action ='UPDATE',

-> RNO=NEW.RNO,

-> B\_TITLE=NEW.B\_TITLE;

-> END;

-> $

Query OK, 0 rows affected (0.02 sec)

mysql> DELIMITER ;

mysql> UPDATE BOOKS SET B\_TITLE = 'XYZ' WHERE RNO = 2;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT\* FROM BOOKS;

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

| RNO | B\_TITLE |

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

| 2 | XYZ |

| 3 | GHI |

| 4 | JKL |

| 5 | MNO |

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

4 rows in set (0.00 sec)

mysql> SELECT\* FROM LIB\_AUDIT; +------+---------+--------+

| RNO | B\_TITLE | ACTION |

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

| 1 | ABC | DELETE |

| 2 | XYZ | UPDATE |

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

2 rows in set (0.00 sec)