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**Assignment:- 08**

SQL> CREATE TABLE LIBRARY (

2 BOOK\_ID NUMBER PRIMARY KEY,

3 BOOK\_NAME VARCHAR2(10),

4 BOOK\_PRICE NUMBER CHECK (BOOK\_PRICE > 0)

5 );

Table created.

SQL> CREATE TABLE LIBRARY\_AUDIT\_ROW (

2 BOOK\_ID NUMBER,

3 BOOK\_NAME VARCHAR2(10),

4 BOOK\_PRICE NUMBER CHECK (BOOK\_PRICE > 0),

5 AUDIT\_CHANGE VARCHAR2(20),

6 UPDATE\_TIME TIMESTAMP DEFAULT SYSTIMESTAMP,

7 TRIGGER\_TYPE VARCHAR2(20)

8 );

Table created.

SQL>CREATE OR REPLACE TRIGGER trig\_Row

BEFORE INSERT OR UPDATE OR DELETE ON library

FOR EACH ROW

BEGIN

IF INSERTING THEN

INSERT INTO LIBRARY\_AUDIT\_ROW (BOOK\_ID, BOOK\_NAME, BOOK\_PRICE, AUDIT\_CHANGE, UPDATE\_TIME, TRIGGER\_TYPE)

VALUES (:NEW.BOOK\_ID, :NEW.BOOK\_NAME, :NEW.BOOK\_PRICE, 'INSERT', SYSTIMESTAMP, 'ROW-LEVEL');

END IF;

IF UPDATING THEN

INSERT INTO LIBRARY\_AUDIT\_ROW (BOOK\_ID, BOOK\_NAME, BOOK\_PRICE, AUDIT\_CHANGE, UPDATE\_TIME, TRIGGER\_TYPE)

VALUES (:OLD.BOOK\_ID, :OLD.BOOK\_NAME, :OLD.BOOK\_PRICE, 'UPDATE', SYSTIMESTAMP, 'ROW-LEVEL');

END IF;

IF DELETING THEN

INSERT INTO LIBRARY\_AUDIT\_ROW (BOOK\_ID, BOOK\_NAME, BOOK\_PRICE, AUDIT\_CHANGE, UPDATE\_TIME, TRIGGER\_TYPE)

VALUES (:OLD.BOOK\_ID, :OLD.BOOK\_NAME, :OLD.BOOK\_PRICE, 'DELETE', SYSTIMESTAMP, 'ROW-LEVEL');

END IF;

END;

SQL> CREATE OR REPLACE TRIGGER trig\_Statement\_Level

AFTER INSERT OR UPDATE OR DELETE ON library

BEGIN

IF INSERTING THEN

INSERT INTO LIBRARY\_AUDIT\_ROW (BOOK\_ID, BOOK\_NAME, BOOK\_PRICE, AUDIT\_CHANGE, UPDATE\_TIME, TRIGGER\_TYPE)

SELECT BOOK\_ID, BOOK\_NAME, BOOK\_PRICE, 'INSERT', SYSTIMESTAMP, 'STATEMENT-LEVEL'

FROM library;

END IF;

IF UPDATING THEN

INSERT INTO LIBRARY\_AUDIT\_ROW (BOOK\_ID, BOOK\_NAME, BOOK\_PRICE, AUDIT\_CHANGE, UPDATE\_TIME, TRIGGER\_TYPE)

SELECT BOOK\_ID, BOOK\_NAME, BOOK\_PRICE, 'UPDATE', SYSTIMESTAMP, 'STATEMENT-LEVEL'

FROM library;

END IF;

IF DELETING THEN

INSERT INTO LIBRARY\_AUDIT\_ROW (AUDIT\_CHANGE, UPDATE\_TIME, TRIGGER\_TYPE)

VALUES ('DELETE', SYSTIMESTAMP, 'STATEMENT-LEVEL');

END IF;

END;

SQL> INSERT INTO LIBRARY (BOOK\_ID, BOOK\_NAME, BOOK\_PRICE) VALUES (1, 'Book1', 500)

1 row created.

SQL> SELECT \* FROM LIBRARY\_AUDIT\_ROW;

no rows selected

SQL> UPDATE LIBRARY SET BOOK\_PRICE = 550 WHERE BOOK\_ID = 1;

1 row updated.

SQL> SELECT \* FROM LIBRARY\_AUDIT\_ROW;

no rows selected

SQL> DELETE FROM LIBRARY WHERE BOOK\_ID = 1;

1 row deleted.

SQL> SELECT \* FROM LIBRARY\_AUDIT\_ROW;

no rows selected