**Question – 2**

Scenario 2: Maintain an audit log for all transactions.

* Question: Write a trigger LogTransaction that inserts a record into an AuditLog table whenever a transaction is inserted into the Transactions table.

PL/SQL Code –

/\*Because the user is SYSTEM so cannot create triggers on objects owned by the SYS user.

It Rejects the Trigger

To resolve this, you should ensure that you are creating the trigger in a user schema rather than the SYS schema.

1. Connect to non-SYS user Schema: In this case I connect to \*DB\_USER\*

2. create the tables for the TRIGGER

3. create the TRIGGER \*/

-- Connect to the database as SYSDBA and grant necessary quota

CONNECT SYS/&&ORCL\_PASSWORD@&&DB\_HOST AS SYSDBA;

/\*1. in the &&ORCL\_PASSWORD paste your sys password as a String input

2. in the &&DB\_HOST paste the Database host \*/

ALTER USER &&DB\_USER QUOTA UNLIMITED ON USERS;

CONNECT &&DB\_USER/&&DB\_PASSWORD@&&DB\_HOST

/\*3.in the &&DB\_PASSWORD paste the password of DB\_USER\*/

-- create the tables for the TRIGGER

CREATE TABLE AuditLog (

AuditID NUMBER PRIMARY KEY,

TransactionID NUMBER,

AccountID NUMBER,

TransactionDate DATE,

Amount NUMBER,

TransactionType VARCHAR2(10),

LogTimestamp DATE

);

CREATE TABLE Transactions (

TransactionID NUMBER PRIMARY KEY,

AccountID NUMBER,

TransactionDate DATE,

Amount NUMBER,

TransactionType VARCHAR2(10)

);

-- Create Sequence for AuditLog

CREATE SEQUENCE AuditLog\_seq

START WITH 1

INCREMENT BY 1;

-- Create Trigger

CREATE OR REPLACE TRIGGER LogTransaction

AFTER INSERT ON Transactions

FOR EACH ROW

BEGIN

INSERT INTO AuditLog (AuditID, TransactionID, AccountID, TransactionDate, Amount, TransactionType, LogTimestamp)

VALUES (

AuditLog\_seq.NEXTVAL,

:NEW.TransactionID,

:NEW.AccountID,

:NEW.TransactionDate,

:NEW.Amount,

:NEW.TransactionType,

SYSDATE

);

END;

/

INSERT INTO Transactions (TransactionID, AccountID, TransactionDate, Amount, TransactionType)

VALUES (1, 123, SYSDATE, 500, 'Deposit');

INSERT INTO Transactions (TransactionID, AccountID, TransactionDate, Amount, TransactionType)

VALUES (2, 124, SYSDATE, 300, 'Withdrawal');

INSERT INTO Transactions (TransactionID, AccountID, TransactionDate, Amount, TransactionType)

VALUES (3, 125, SYSDATE, 1000, 'Deposit');

INSERT INTO Transactions (TransactionID, AccountID, TransactionDate, Amount, TransactionType)

VALUES (4, 126, SYSDATE, 450, 'Withdrawal');

SELECT \* FROM AuditLog;

SELECT \* FROM Transactions;