MS SQL SERVER – LABS

Lab 6: Trigger

Q1. Create a trigger to implement banking scenario. Whenever the bank balance is updated for any bank account a transaction is captured in a  
Bank Transaction table. The Bank Transaction table acts as a source to generate bank statements.  
Hint: Need to create two tables (BankAccounts with some rows and BankTransactions with no records) and a trigger for  
Update on Balance column of BankAccounts table.  
Table: BankAccounts  
Columns:  
•    AccountID (Numeric- Autogenerated)  
•    CustomerName  
•    AccountType (Current / Saving)  
•    Balance (>0)  
•    Modified Date  
Table: BankTransactions  
Columns  
•    TransactionID (Numeric- Autogenerated)  
•    AccountID (FK)  
•    TransactionDate  
•    TransactionType (Debit / Credit)  
•    TransactionAmount

CREATE TABLE BankAccounts.BankAccounts(

AccountID INT PRIMARY KEY IDENTITY(1,1),

CustomerName VARCHAR(100) NOT NULL,

AccountType VARCHAR(10) NOT NULL CHECK (AccountType IN('Current ','Saving')),

BALANCE MONEY CHECK (BALANCE>0),

LastModified DATE DEFAULT GETDATE()

)

INSERT INTO BankAccounts.BankAccounts (CustomerName,AccountType,BALANCE) VALUES

('ARNAV','Saving',5000),

('ADITYA','Saving',10000),

('RAHUL','Saving',5000),

('ROHAN','Saving',10000),

('RAJEEV','Current',150000),

('SATYAM','Current',150000),

('SANJEEV','Current',2500000),

('SRIKANT','Current',2500000)

CREATE TABLE BankAccounts.BankTransactions(

TransactionID INT PRIMARY KEY IDENTITY(1,1),

AccountID INT REFERENCES BankAccounts.BankAccounts(AccountID) NOT NULL,

TransactionDate DATE CHECK (TransactionDate<=GETDATE()),

TransactionType VARCHAR(10) NOT NULL CHECK (TransactionType IN('Debit ','Credit')),

TransactionAmount MONEY CHECK (TransactionAmount>0)

)

CREATE TRIGGER update\_bankAccount

ON BankAccounts.BankTransactions

AFTER INSERT

AS

BEGIN

IF(SELECT TransactionType FROM inserted)='Credit'

UPDATE BankAccounts.BankAccounts SET BALANCE=BALANCE+(SELECT TransactionAmount FROM inserted) WHERE AccountID=(SELECT AccountID FROM inserted)

ELSE

UPDATE BankAccounts.BankAccounts SET BALANCE=BALANCE-(SELECT TransactionAmount FROM inserted) WHERE AccountID=(SELECT AccountID FROM inserted)

Print 'Balance updated in account table for the customer!'

END

INSERT INTO BankAccounts.BankTransactions (AccountID,TransactionDate,TransactionType,TransactionAmount)

VALUES (1,'02-APR-2022','Debit',1000);

INSERT INTO BankAccounts.BankTransactions (AccountID,TransactionDate,TransactionType,TransactionAmount)

VALUES (2,'02-APR-2022','Credit',1000);

SELECT \* FROM BankAccounts.BankAccounts

SELECT \* FROM BankAccounts.BankTransactions