Triggers

1. CREATE TABLE dbo.Customers (

CustomerID INT PRIMARY KEY,

CustomerName NVARCHAR(100),

LastModified DATETIME DEFAULT CURRENT\_TIMESTAMP

);

CREATE TRIGGER trg\_Customers\_UpdateLastModified

ON dbo.Customers

AFTER UPDATE

AS

BEGIN

UPDATE c

SET LastModified = CURRENT\_TIMESTAMP

FROM dbo.Customers c

INNER JOIN inserted i ON c.CustomerID = i.CustomerID;

END;

1. CREATE TABLE AuditLog (

LogID INT IDENTITY(1,1) PRIMARY KEY,

TransactionID INT,

TransactionDate DATETIME,

TransactionType NVARCHAR(20),

);

CREATE TRIGGER LogTransaction

ON Transactions

AFTER INSERT

AS

BEGIN

INSERT INTO AuditLog (TransactionID, TransactionDate, TransactionType)

SELECT i.TransactionID, GETDATE(), 'INSERT'

FROM inserted i;

END;

1. CREATE TRIGGER CheckTransactionRules

ON Transactions

AFTER INSERT

AS

BEGIN

DECLARE @TransactionType NVARCHAR(10);

DECLARE @AccountID INT;

DECLARE @Amount DECIMAL(18, 2);

SELECT @TransactionType = TransactionType,

@AccountID = AccountID,

@Amount = Amount

FROM inserted;

IF @TransactionType = 'Withdrawal'

BEGIN

DECLARE @CurrentBalance DECIMAL(18, 2);

SELECT @CurrentBalance = Balance

FROM Accounts

WHERE AccountID = @AccountID;

IF @Amount > @CurrentBalance

BEGIN

RAISEERROR('Withdrawal amount exceeds account balance.', 16, 1);

ROLLBACK;

END;

END

ELSE IF @TransactionType = 'Deposit'

BEGIN

IF @Amount <= 0

BEGIN

RAISEERROR('Deposit amount must be positive.', 16, 1);

ROLLBACK;

END;

END;

END;