**Scenario 1: Automatically Update the Last Modified Date When a Customer's Record Is Updated**

This trigger UpdateCustomerLastModified updates the LastModified column of the Customers table to the current date whenever a customer's record is updated.

CREATE OR REPLACE TRIGGER UpdateCustomerLastModified

BEFORE UPDATE ON Customers

FOR EACH ROW

BEGIN

:NEW.LastModified := SYSDATE;

END UpdateCustomerLastModified;

/

**Scenario 2: Maintain an Audit Log for All Transactions**

This trigger LogTransaction inserts a record into an AuditLog table whenever a transaction is inserted into the Transactions table.

**Assuming the AuditLog table has the following structure:**

CREATE TABLE AuditLog (

log\_id NUMBER PRIMARY KEY,

transaction\_id NUMBER,

transaction\_date DATE,

transaction\_amount NUMBER,

log\_date DATE

);

**Trigger:**

sql

Copy code

CREATE OR REPLACE TRIGGER LogTransaction

AFTER INSERT ON Transactions

FOR EACH ROW

BEGIN

INSERT INTO AuditLog (log\_id, transaction\_id, transaction\_date, transaction\_amount, log\_date)

VALUES (

audit\_log\_seq.NEXTVAL, -- Assuming you have a sequence named audit\_log\_seq

:NEW.transaction\_id,

:NEW.transaction\_date,

:NEW.transaction\_amount,

SYSDATE

);

END LogTransaction;

/

**Scenario 3: Enforce Business Rules on Deposits and Withdrawals**

This trigger CheckTransactionRules ensures that withdrawals do not exceed the balance and deposits are positive before inserting a record into the Transactions table.

CREATE OR REPLACE TRIGGER CheckTransactionRules

BEFORE INSERT ON Transactions

FOR EACH ROW

DECLARE

v\_balance NUMBER;

BEGIN

-- Check if the transaction is a withdrawal

IF :NEW.transaction\_type = 'WITHDRAWAL' THEN

SELECT balance INTO v\_balance FROM accounts WHERE account\_id = :NEW.account\_id;

-- Ensure the withdrawal does not exceed the balance

IF :NEW.transaction\_amount > v\_balance THEN

RAISE\_APPLICATION\_ERROR(-20001, 'Insufficient balance for the withdrawal.');

END IF;

ELSIF :NEW.transaction\_type = 'DEPOSIT' THEN

-- Ensure the deposit amount is positive

IF :NEW.transaction\_amount <= 0 THEN

RAISE\_APPLICATION\_ERROR(-20002, 'Deposit amount must be positive.');

END IF;

END IF;

END CheckTransactionRules;

/

**Summary**

* **Scenario 1**: UpdateCustomerLastModified updates the LastModified column of the Customers table to the current date whenever a record is updated.
* **Scenario 2**: LogTransaction inserts a record into the AuditLog table whenever a transaction is inserted into the Transactions table.
* **Scenario 3**: CheckTransactionRules ensures that withdrawals do not exceed the balance and deposits are positive before inserting a record into the Transactions table.