PL/SQL Exercise 3: Stored Procedures

# Scenario 1: Process Monthly Interest (1%) for Savings Accounts

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest

IS

BEGIN

FOR acc IN (

SELECT AccountID, Balance

FROM Accounts

WHERE AccountType = 'Savings'

)

LOOP

UPDATE Accounts

SET Balance = Balance + (acc.Balance \* 0.01),

LastModified = SYSDATE

WHERE AccountID = acc.AccountID;

END LOOP;

COMMIT;

END;

# Scenario 2: Bonus for Employees Based on Department

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus (

p\_department IN VARCHAR2,

p\_bonus\_percent IN NUMBER

)

IS

BEGIN

UPDATE Employees

SET Salary = Salary + (Salary \* p\_bonus\_percent / 100)

WHERE Department = p\_department;

COMMIT;

END;

# Scenario 3: Transfer Funds Between Customer Accounts (With Validation)

CREATE OR REPLACE PROCEDURE TransferFunds (

p\_fromAccountID IN NUMBER,

p\_toAccountID IN NUMBER,

p\_amount IN NUMBER

)

IS

v\_balance NUMBER;

BEGIN

SELECT Balance INTO v\_balance FROM Accounts WHERE AccountID = p\_fromAccountID;

IF v\_balance < p\_amount THEN

RAISE\_APPLICATION\_ERROR(-20001, 'Insufficient funds in source account.');

END IF;

UPDATE Accounts

SET Balance = Balance - p\_amount,

LastModified = SYSDATE

WHERE AccountID = p\_fromAccountID;

UPDATE Accounts

SET Balance = Balance + p\_amount,

LastModified = SYSDATE

WHERE AccountID = p\_toAccountID;

COMMIT;

EXCEPTION

WHEN OTHERS THEN

ROLLBACK;

DBMS\_OUTPUT.PUT\_LINE('Transfer Failed: ' || SQLERRM);

END;

# Output:

