**Exercise 3: Stored Procedures**

**Scenario 1:** The bank needs to process monthly interest for all savings accounts.

* + **Question:** Write a stored procedure **ProcessMonthlyInterest** that calculates and updates the balance of all savings accounts by applying an interest rate of 1% to the current balance.

**CODE:**

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest IS

BEGIN

UPDATE Accounts SET Balance = Balance \* 1.01 WHERE AccountType = 'Savings';

COMMIT;

END;

/

select \* from Accounts;

**Scenario 2:** The bank wants to implement a bonus scheme for employees based on their performance.

* + **Question:** Write a stored procedure **UpdateEmployeeBonus** that updates the salary of employees in a given department by adding a bonus percentage passed as a parameter.

**CODE:**

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus(p\_Dept VARCHAR2, p\_BonusPct NUMBER) IS

BEGIN

UPDATE Employees SET Salary = Salary + Salary \* p\_BonusPct / 100 WHERE Department = p\_Dept;

COMMIT;

END;

/

EXEC UpdateEmployeeBonus('IT', 10);

**Scenario 3:** Customers should be able to transfer funds between their accounts.

**Question:** Write a stored procedure **TransferFunds** that transfers a specified amount from one account to another, checking that the source account has sufficient balance before making the transfer.

**CODE:**

CREATE OR REPLACE PROCEDURE TransferFunds(p\_From NUMBER, p\_To NUMBER, p\_Amount NUMBER) IS

v\_Balance NUMBER;

BEGIN

SELECT Balance INTO v\_Balance FROM Accounts WHERE AccountID = p\_From;

IF v\_Balance < p\_Amount THEN

RAISE\_APPLICATION\_ERROR(-20003, 'Insufficient funds');

END IF;

UPDATE Accounts SET Balance = Balance - p\_Amount WHERE AccountID = p\_From;

UPDATE Accounts SET Balance = Balance + p\_Amount WHERE AccountID = p\_To;

COMMIT;

END;

/

EXEC TransferFunds(1,2, 300);