**Exercise 3: Stored Procedures**

**Scenario 1:**

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest AS

BEGIN

UPDATE Accounts

SET Balance = Balance + (Balance \* 0.01)

WHERE AccountType = 'Savings';

COMMIT;

END;

**Scenario 2:**

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus (

p\_department IN VARCHAR2,

p\_bonus\_percentage IN NUMBER

) AS

BEGIN

IF p\_bonus\_percentage <= 0 THEN

RAISE\_APPLICATION\_ERROR(-20001, 'Bonus percentage should be greater than zero');

END IF;

UPDATE Employees

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

WHERE Department = p\_department;

COMMIT;

END;

**Scenario 3:**

CREATE OR REPLACE PROCEDURE TransferFunds (

p\_from\_account\_id IN NUMBER,

p\_to\_account\_id IN NUMBER,

p\_amount IN NUMBER

) AS

v\_from\_balance NUMBER;

v\_to\_balance NUMBER;

BEGIN

IF p\_amount <= 0 THEN

RAISE\_APPLICATION\_ERROR(-20001, 'Transfer amount sholud be greater than zero');

END IF;

SELECT Balance INTO v\_from\_balance

FROM Accounts

WHERE AccountID = p\_from\_account\_id

FOR UPDATE;

IF v\_from\_balance < p\_amount THEN

RAISE\_APPLICATION\_ERROR(-20002, funds not sufficient in the account');

END IF;

SELECT Balance INTO v\_to\_balance

FROM Accounts

WHERE AccountID = p\_to\_account\_id

FOR UPDATE;

UPDATE Accounts

SET Balance = Balance - p\_amount

WHERE AccountID = p\_from\_account\_id;

UPDATE Accounts

SET Balance = Balance + p\_amount

WHERE AccountID = p\_to\_account\_id;

COMMIT;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

ROLLBACK;

RAISE\_APPLICATION\_ERROR(-20003, ‘ the accounts do not exist.');

WHEN OTHERS THEN

ROLLBACK;

RAISE\_APPLICATION\_ERROR(-20004, 'An error occurred: ' || SQLERRM);

END;