**Exercise 3: Stored Procedures**

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

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest

IS

BEGIN

FOR acc IN (

SELECT account\_id, balance

FROM accounts

WHERE account\_type = 'SAVINGS'

) LOOP

UPDATE accounts

SET balance = balance + (balance \* 0.01)

WHERE account\_id = acc.account\_id;

DBMS\_OUTPUT.PUT\_LINE('Interest added to Account ID ' || acc.account\_id ||

', New Balance: ' || (acc.balance + (acc.balance \* 0.01)));

END LOOP;

COMMIT;

END;

/

Sample Call:

EXEC ProcessMonthlyInterest;

**Output:**

Interest added to Account ID 101, New Balance: 5050

Interest added to Account ID 104, New Balance: 8080

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

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus(

p\_department IN VARCHAR2,

p\_bonus\_pct IN NUMBER

)

IS

BEGIN

FOR emp IN (

SELECT emp\_id, name, salary

FROM employees

WHERE department = p\_department

) LOOP

UPDATE employees

SET salary = salary + (salary \* p\_bonus\_pct / 100)

WHERE emp\_id = emp.emp\_id;

DBMS\_OUTPUT.PUT\_LINE('Bonus applied to ' || emp.name ||

', New Salary: ' || (emp.salary + (emp.salary \* p\_bonus\_pct / 100)));

END LOOP;

COMMIT;

END;

/

**Sample Call**

EXEC UpdateEmployeeBonus('HR', 5);

Output:

Bonus applied to Priya, New Salary: 52500

Bonus applied to Arjun, New Salary: 47250

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

CREATE OR REPLACE PROCEDURE TransferFunds(

p\_from\_acc\_id IN NUMBER,

p\_to\_acc\_id IN NUMBER,

p\_amount IN NUMBER

)

IS

v\_balance NUMBER;

BEGIN

SELECT balance INTO v\_balance FROM accounts WHERE account\_id = p\_from\_acc\_id;

IF v\_balance < p\_amount THEN

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

END IF;

UPDATE accounts

SET balance = balance - p\_amount

WHERE account\_id = p\_from\_acc\_id;

UPDATE accounts

SET balance = balance + p\_amount

WHERE account\_id = p\_to\_acc\_id;

COMMIT;

DBMS\_OUTPUT.PUT\_LINE('Transferred ' || p\_amount || ' from Account ' ||

p\_from\_acc\_id || ' to Account ' || p\_to\_acc\_id);

EXCEPTION

WHEN OTHERS THEN

ROLLBACK;

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

END;

/

**Sample Call**

EXEC TransferFunds(101, 102, 1000);

**Output**

Transferred 1000 from Account 101 to Account 102