Exercise 3: Stored Procedures

SET SERVEROUTPUT ON

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest IS

BEGIN

FOR acc IN (SELECT account\_id, balance FROM savings\_accounts) LOOP

UPDATE savings\_accounts

SET balance = balance + (balance \* 0.01)

WHERE account\_id = acc.account\_id;

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

END LOOP;

COMMIT;

END;

/

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus (

p\_department\_id IN NUMBER,

p\_bonus\_percent IN NUMBER

) IS

v\_count NUMBER := 0;

BEGIN

UPDATE employees

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

WHERE department\_id = p\_department\_id;

v\_count := SQL%ROWCOUNT;

DBMS\_OUTPUT.PUT\_LINE(v\_count || ' employee(s) in department ' || p\_department\_id ||

' received a ' || p\_bonus\_percent || '% bonus.');

COMMIT;

END;

/

CREATE OR REPLACE PROCEDURE TransferFunds (

p\_from\_account IN NUMBER,

p\_to\_account IN NUMBER,

p\_amount IN NUMBER

) IS

v\_balance NUMBER;

BEGIN

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

IF v\_balance < p\_amount THEN

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

END IF;

UPDATE accounts

SET balance = balance - p\_amount

WHERE account\_id = p\_from\_account;

UPDATE accounts

SET balance = balance + p\_amount

WHERE account\_id = p\_to\_account;

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

p\_from\_account || ' to Account ' || p\_to\_account);

COMMIT;

END;

/

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BEGIN

ProcessMonthlyInterest;

UpdateEmployeeBonus(10, 10);

TransferFunds(301, 302, 2000);

END;

/

Output

**Before:**

| **AccountID** | **Balance** |
| --- | --- |
| 301 | 10000 |
| 302 | 5000 |
| 303 | 3000 |

**After (1% interest applied):**

| **AccountID** | **Balance** |
| --- | --- |
| 301 | 10100 |
| 302 | 5050 |
| 303 | 3030 |

