**Exercise 3: Stored Procedures**

CREATE TABLE SavingsAccounts(AccountID NUMBER PRIMARY KEY,HolderName VARCHAR2(100),Balance NUMBER);

CREATE TABLE Employees(EmpID NUMBER PRIMARY KEY,EmpName VARCHAR2(100),Department VARCHAR2(100),Salary NUMBER);

CREATE TABLE Accounts(AccountID NUMBER PRIMARY KEY,HolderName VARCHAR2(100),Balance NUMBER);

INSERT INTO SavingsAccounts VALUES(1,'Ravi',10000);

INSERT INTO SavingsAccounts VALUES(2,'Sneha',15000);

INSERT INTO Employees VALUES(101,'Amit','HR',40000);

INSERT INTO Employees VALUES(102,'Neha','Finance',50000);

INSERT INTO Employees VALUES(103,'Arun','HR',42000);

INSERT INTO Accounts VALUES(1,'John',8000);

INSERT INTO Accounts VALUES(2,'Jane',4000);

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest AS

BEGIN

    FOR acc IN (SELECT\*FROM SavingsAccounts) LOOP

        UPDATE SavingsAccounts

        SET Balance=Balance+(Balance\*0.01)

        WHERE AccountID=acc.AccountID;

        DBMS\_OUTPUT.PUT\_LINE('Interest added to Account ID: '||acc.AccountID|| ' | New Balance: '||TO\_CHAR(acc.Balance\*1.01,'99999.99'));

    END LOOP;

    COMMIT;

END;

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus(p\_department IN VARCHAR2,p\_bonus\_percent IN NUMBER) AS

BEGIN

    FOR emp IN (SELECT\*FROM Employees WHERE Department=p\_department) LOOP

        UPDATE Employees

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

        WHERE EmpID=emp.EmpID;

        DBMS\_OUTPUT.PUT\_LINE('Bonus applied to '||emp.EmpName|| ' | New Salary: '||TO\_CHAR(emp.Salary\*(1+p\_bonus\_percent/100),'99999.99'));

    END LOOP;

    COMMIT;

END;

CREATE OR REPLACE PROCEDURE TransferFunds(p\_from\_id IN NUMBER,p\_to\_id IN NUMBER,p\_amount IN NUMBER) AS v\_balance NUMBER;

BEGIN

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

    IF v\_balance<p\_amount THEN

        DBMS\_OUTPUT.PUT\_LINE('Error: Insufficient balance in Account ID '||p\_from\_id);

        RETURN;

    END IF;

    UPDATE Accounts SET Balance=Balance-p\_amount WHERE AccountID=p\_from\_id;

    UPDATE Accounts SET Balance=Balance+p\_amount WHERE AccountID=p\_to\_id;

    COMMIT;

    DBMS\_OUTPUT.PUT\_LINE('₹'|| p\_amount|| ' transferred from Account ID '||p\_from\_id|| ' to Account ID '||p\_to\_id);

EXCEPTION

    WHEN NO\_DATA\_FOUND THEN

        DBMS\_OUTPUT.PUT\_LINE('Error: One of the Account IDs not found.');

    WHEN OTHERS THEN

        DBMS\_OUTPUT.PUT\_LINE('Unexpected Error: '||SQLERRM);

        ROLLBACK;

END;

SELECT\*FROM SAVINGSACCOUNTS;

BEGIN

    ProcessMonthlyInterest;

END;

SELECT\*FROM SAVINGSACCOUNTS;

BEGIN

    UpdateEmployeeBonus('HR',10);

END;

BEGIN

    TransferFunds(1,2,2000);

END;

**Output:**





















