Exercise 3: Stored Procedures

SET SERVEROUTPUT ON;

BEGIN

EXECUTE IMMEDIATE 'DROP TABLE SavingsAccounts';

EXCEPTION WHEN OTHERS THEN NULL;

END;

/

BEGIN

EXECUTE IMMEDIATE 'DROP TABLE Employees';

EXCEPTION WHEN OTHERS THEN NULL;

END;

/

BEGIN

EXECUTE IMMEDIATE 'DROP TABLE Accounts';

EXCEPTION WHEN OTHERS THEN NULL;

END;

/

CREATE TABLE SavingsAccounts (

AccountID NUMBER PRIMARY KEY,

CustomerID NUMBER,

Balance NUMBER

);

CREATE TABLE Employees (

EmployeeID NUMBER PRIMARY KEY,

Name VARCHAR2(100),

DepartmentID NUMBER,

Salary NUMBER

);

CREATE TABLE Accounts (

AccountID NUMBER PRIMARY KEY,

CustomerID NUMBER,

Balance NUMBER

);

INSERT INTO SavingsAccounts VALUES (1, 101, 5000);

INSERT INTO SavingsAccounts VALUES (2, 102, 8000);

INSERT INTO Employees VALUES (1, 'John', 10, 3000);

INSERT INTO Employees VALUES (2, 'Jane', 10, 3200);

INSERT INTO Employees VALUES (3, 'Tom', 20, 2800);

INSERT INTO Accounts VALUES (1001, 101, 7000);

INSERT INTO Accounts VALUES (1002, 101, 4000);

INSERT INTO Accounts VALUES (1003, 102, 6000);

COMMIT;

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest IS

BEGIN

UPDATE SavingsAccounts SET Balance = Balance \* 1.01;

COMMIT;

END;

/

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus(

dept\_id IN NUMBER,

bonus\_pct IN NUMBER

) IS

BEGIN

UPDATE Employees

SET Salary = Salary + (Salary \* bonus\_pct / 100)

WHERE DepartmentID = dept\_id;

COMMIT;

END;

/

CREATE OR REPLACE PROCEDURE TransferFunds(

from\_acc IN NUMBER,

to\_acc IN NUMBER,

amount IN NUMBER

) IS

from\_balance NUMBER;

BEGIN

SELECT Balance INTO from\_balance FROM Accounts WHERE AccountID = from\_acc FOR UPDATE;

IF from\_balance >= amount THEN

UPDATE Accounts SET Balance = Balance - amount WHERE AccountID = from\_acc;

UPDATE Accounts SET Balance = Balance + amount WHERE AccountID = to\_acc;

COMMIT;

ELSE

RAISE\_APPLICATION\_ERROR(-20001, 'Insufficient balance');

END IF;

END;

/

SELECT \* FROM SavingsAccounts;

SELECT \* FROM Employees;

SELECT \* FROM Accounts;

**OUTPUT:**



