**Exercise-2(Stored Procedures)**

**CODE:**

CREATE TABLE accounts (

account\_id NUMBER PRIMARY KEY,

account\_type VARCHAR2(20),

balance NUMBER(12, 2)

);

CREATE TABLE employees (

emp\_id NUMBER PRIMARY KEY,

name VARCHAR2(50),

department\_id NUMBER,

salary NUMBER(10, 2)

);

-- Sample accounts

INSERT INTO accounts VALUES (101, 'SAVINGS', 10000);

INSERT INTO accounts VALUES (102, 'SAVINGS', 15000);

INSERT INTO accounts VALUES (103, 'CURRENT', 20000);

INSERT INTO accounts VALUES (104, 'SAVINGS', 5000);

-- Sample employees

INSERT INTO employees VALUES (1, 'Alice', 10, 30000);

INSERT INTO employees VALUES (2, 'Bob', 10, 28000);

INSERT INTO employees VALUES (3, 'Charlie', 20, 32000);

INSERT INTO employees VALUES (4, 'Diana', 20, 35000);

COMMIT;

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

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest AS

BEGIN

UPDATE accounts

SET balance = balance + (balance \* 0.01)

WHERE account\_type = 'SAVINGS';

COMMIT;

END;

/

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

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus(

p\_department\_id IN NUMBER,

p\_bonus\_percent IN NUMBER

) AS

BEGIN

UPDATE employees

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

WHERE department\_id = p\_department\_id;

COMMIT;

END;

/

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

CREATE OR REPLACE PROCEDURE TransferFunds(

p\_from\_account IN NUMBER,

p\_to\_account IN NUMBER,

p\_amount IN NUMBER

) AS

v\_balance NUMBER;

BEGIN

-- Lock the source account row

SELECT balance INTO v\_balance

FROM accounts

WHERE account\_id = p\_from\_account

FOR UPDATE;

IF v\_balance < p\_amount THEN

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

END IF;

-- Deduct from source

UPDATE accounts

SET balance = balance - p\_amount

WHERE account\_id = p\_from\_account;

-- Credit to destination

UPDATE accounts

SET balance = balance + p\_amount

WHERE account\_id = p\_to\_account;

COMMIT;

END;

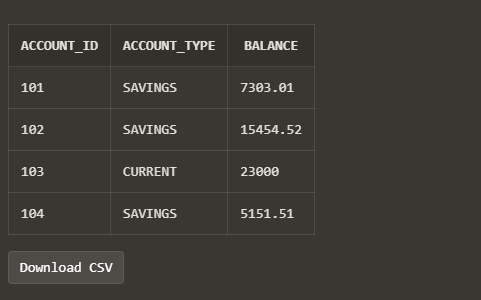
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EXEC TransferFunds(101, 103, 3000);

EXEC UpdateEmployeeBonus(10, 10);

EXEC ProcessMonthlyInterest;

Accounts :



Employees:

