**EXERCISE 6 : CURSURS**

DELIMITER //

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-- Scenario 1: GenerateMonthlyStatements

-- Retrieves current month's transactions per customer

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CREATE PROCEDURE GenerateMonthlyStatements()

BEGIN

DECLARE done INT DEFAULT FALSE;

DECLARE acc\_id INT;

DECLARE cust\_name VARCHAR(100);

DECLARE txn\_date DATE;

DECLARE amount DECIMAL(10,2);

DECLARE txn\_type VARCHAR(10);

DECLARE cur CURSOR FOR

SELECT T.AccountID, C.Name, T.TransactionDate, T.Amount, T.TransactionType

FROM Transactions T

JOIN Accounts A ON T.AccountID = A.AccountID

JOIN Customers C ON A.CustomerID = C.CustomerID

WHERE MONTH(T.TransactionDate) = MONTH(CURDATE())

AND YEAR(T.TransactionDate) = YEAR(CURDATE());

DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

OPEN cur;

read\_loop: LOOP

FETCH cur INTO acc\_id, cust\_name, txn\_date, amount, txn\_type;

IF done THEN

LEAVE read\_loop;

END IF;

SELECT CONCAT('Customer: ', cust\_name, ', AccountID: ', acc\_id,

', ', txn\_type, ' of ₹', amount, ' on ', txn\_date) AS Statement;

END LOOP;

CLOSE cur;

END;

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-- Scenario 2: ApplyAnnualFee

-- Deducts ₹100 annual fee from all accounts

-- ==========================================

CREATE PROCEDURE ApplyAnnualFee()

BEGIN

DECLARE done INT DEFAULT FALSE;

DECLARE acc\_id INT;

DECLARE fee DECIMAL(10,2) DEFAULT 100.00;

DECLARE cur CURSOR FOR SELECT AccountID FROM Accounts;

DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

OPEN cur;

apply\_fee\_loop: LOOP

FETCH cur INTO acc\_id;

IF done THEN

LEAVE apply\_fee\_loop;

END IF;

UPDATE Accounts

SET Balance = Balance - fee

WHERE AccountID = acc\_id;

END LOOP;

CLOSE cur;

SELECT 'Annual fee of ₹100 applied to all accounts.' AS Message;

END;

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-- ==========================================

-- Scenario 3: UpdateLoanInterestRates

-- Adds 0.5% to all loan interest rates

-- ==========================================

CREATE PROCEDURE UpdateLoanInterestRates()

BEGIN

DECLARE done INT DEFAULT FALSE;

DECLARE loan\_id INT;

DECLARE current\_rate DECIMAL(5,2);

DECLARE new\_rate DECIMAL(5,2);

DECLARE cur CURSOR FOR

SELECT LoanID, InterestRate FROM Loans;

DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

OPEN cur;

update\_loop: LOOP

FETCH cur INTO loan\_id, current\_rate;

IF done THEN

LEAVE update\_loop;

END IF;

SET new\_rate = current\_rate + 0.5;

UPDATE Loans

SET InterestRate = new\_rate

WHERE LoanID = loan\_id;

END LOOP;

CLOSE cur;

SELECT 'Loan interest rates updated as per new policy (+0.5%).' AS Message;

END;

//

DELIMITER ;

**OUTPUT:**

USE bankdb;

CALL GenerateMonthlyStatements();

CALL ApplyAnnualFee();

CALL UpdateLoanInterestRates();











