**Exercise 7: Packages**

**Scenario 1:** Group all customer-related procedures and functions into a package.

* + **Question:** Create a package **CustomerManagement** with procedures for adding a new customer, updating customer details, and a function to get customer balance.

ANS:

CREATE OR REPLACE PACKAGE CustomerManagement AS

PROCEDURE AddNewCustomer(p\_customer\_id IN NUMBER, p\_name IN VARCHAR2, p\_dob IN DATE, p\_balance IN NUMBER);

PROCEDURE UpdateCustomer(p\_customer\_id IN NUMBER, p\_name IN VARCHAR2, p\_dob IN DATE, p\_balance IN NUMBER);

FUNCTION GetCustomerBalance(p\_customer\_id IN NUMBER) RETURN NUMBER;

END CustomerManagement;

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CREATE OR REPLACE PACKAGE BODY CustomerManagement AS

PROCEDURE AddNewCustomer(p\_customer\_id IN NUMBER, p\_name IN VARCHAR2, p\_dob IN DATE, p\_balance IN NUMBER) IS

BEGIN

INSERT INTO Customers (CustomerID, Name, DOB, Balance, LastModified)

VALUES (p\_customer\_id, p\_name, p\_dob, p\_balance, SYSDATE);

COMMIT;

END AddNewCustomer;

PROCEDURE UpdateCustomer(p\_customer\_id IN NUMBER, p\_name IN VARCHAR2, p\_dob IN DATE, p\_balance IN NUMBER) IS

BEGIN

UPDATE Customers

SET Name = p\_name, DOB = p\_dob, Balance = p\_balance, LastModified = SYSDATE

WHERE CustomerID = p\_customer\_id;

COMMIT;

END UpdateCustomer;

FUNCTION GetCustomerBalance(p\_customer\_id IN NUMBER) RETURN NUMBER IS

v\_balance NUMBER;

BEGIN

SELECT Balance INTO v\_balance

FROM Customers

WHERE CustomerID = p\_customer\_id;

RETURN v\_balance;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

RETURN 0;

END GetCustomerBalance;

END CustomerManagement;