**Exercise 7: Packages**

**Scenario 1:**

**CODE:**

**-- creation of Customers table**

CREATE TABLE Customers (

CustomerID NUMBER PRIMARY KEY,

Name VARCHAR2(100),

DOB DATE,

Balance NUMBER,

LastModified DATE

);

**-- Inserting values into Customers table**

BEGIN

INSERT INTO Customers VALUES (1, 'Alice Reddy', TO\_DATE('1950-05-10', 'YYYY-MM-DD'), 12000, SYSDATE);

INSERT INTO Customers VALUES (2, 'Bob Singh', TO\_DATE('1990-08-21', 'YYYY-MM-DD'), 8000, SYSDATE);

INSERT INTO Customers VALUES (3, 'Carol Mehta', TO\_DATE('1962-01-15', 'YYYY-MM-DD'), 15000, SYSDATE );

INSERT INTO Customers VALUES (4, 'David Rao', TO\_DATE('1985-12-01', 'YYYY-MM-DD'), 9500, SYSDATE);

INSERT INTO Customers VALUES (5, 'Esha Iyer', TO\_DATE('1945-03-25', 'YYYY-MM-DD'), 20000, SYSDATE);

END;

/

CREATE OR REPLACE PACKAGE CustomerManagement AS

PROCEDURE AddCustomer(p\_CustomerID IN NUMBER, p\_Name IN VARCHAR2, p\_DOB IN DATE, p\_Balance IN NUMBER);

PROCEDURE UpdateCustomer(p\_CustomerID IN NUMBER, p\_Name IN VARCHAR2, p\_DOB IN DATE, p\_Balance IN NUMBER);

FUNCTION GetCustomerBalance(p\_CustomerID IN NUMBER) RETURN NUMBER;

END CustomerManagement;

/

CREATE OR REPLACE PACKAGE BODY CustomerManagement AS

PROCEDURE AddCustomer(p\_CustomerID 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\_CustomerID, p\_Name, p\_DOB, p\_Balance, SYSDATE);

DBMS\_OUTPUT.PUT\_LINE('Customer added successfully..!!');

END AddCustomer;

PROCEDURE UpdateCustomer(p\_CustomerID 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\_CustomerID;

DBMS\_OUTPUT.PUT\_LINE('Customer values are updated successfully..!!');

END UpdateCustomer;

FUNCTION GetCustomerBalance(p\_CustomerID IN NUMBER) RETURN NUMBER IS

v\_Balance NUMBER;

BEGIN

SELECT Balance INTO v\_Balance

FROM Customers

WHERE CustomerID = p\_CustomerID;

RETURN v\_Balance;

END GetCustomerBalance;

END CustomerManagement;

/

**-- Add a new customer**

BEGIN

CustomerManagement.AddCustomer(7, 'Tim', TO\_DATE('1977-10-23', 'YYYY-MM-DD'), 20000);

END;

/

**-- Update a customer**

BEGIN

CustomerManagement.UpdateCustomer(7, 'Tim Devid Updated', TO\_DATE('1976-06-10', 'YYYY-MM-DD'), 16000);

END;

/

**-- Get customer balance**

DECLARE

v\_balance NUMBER;

BEGIN

v\_balance := CustomerManagement.GetCustomerBalance(2);

DBMS\_OUTPUT.PUT\_LINE('Balanceof customer with id 2 is: ' || v\_balance);

END;

/

**OUTPUT:**

Output for **AddCustomer procedure** is:

A screenshot of a computer

AI-generated content may be incorrect.

Output for **UpdateCustomer procedure** is:

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AI-generated content may be incorrect.

Output for **GetCustomerBalance function** is:

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AI-generated content may be incorrect.