Week-2

PL SQL programming

Exercise 7: Packages

BEGIN

EXECUTE IMMEDIATE 'DROP TABLE Customers';

EXCEPTION

WHEN OTHERS THEN

IF SQLCODE != -942 THEN

RAISE;

END IF;

END;

/

CREATE TABLE Customers (

CustomerID NUMBER PRIMARY KEY,

Name VARCHAR2(100),

DOB DATE,

Balance NUMBER,

LastModified DATE

);

INSERT INTO Customers VALUES (1, 'John Doe', TO\_DATE('1985-05-15', 'YYYY-MM-DD'), 1000, SYSDATE);

INSERT INTO Customers VALUES (2, 'Jane Smith', TO\_DATE('1990-07-20', 'YYYY-MM-DD'), 1500, SYSDATE);

COMMIT;

CREATE OR REPLACE PACKAGE CustomerManagement IS

PROCEDURE AddCustomer(p\_id NUMBER, p\_name VARCHAR2, p\_dob DATE, p\_balance NUMBER);

PROCEDURE UpdateCustomerBalance(p\_id NUMBER, p\_balance NUMBER);

FUNCTION GetCustomerBalance(p\_id NUMBER) RETURN NUMBER;

END CustomerManagement;

/

CREATE OR REPLACE PACKAGE BODY CustomerManagement IS

PROCEDURE AddCustomer(p\_id NUMBER, p\_name VARCHAR2, p\_dob DATE, p\_balance NUMBER) IS

BEGIN

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

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

DBMS\_OUTPUT.PUT\_LINE('Customer Added: '||p\_name);

EXCEPTION

WHEN DUP\_VAL\_ON\_INDEX THEN

DBMS\_OUTPUT.PUT\_LINE('Customer ID already exists.');

END;

PROCEDURE UpdateCustomerBalance(p\_id NUMBER, p\_balance NUMBER) IS

BEGIN

UPDATE Customers SET Balance = p\_balance, LastModified = SYSDATE

WHERE CustomerID = p\_id;

IF SQL%ROWCOUNT = 0 THEN

DBMS\_OUTPUT.PUT\_LINE('No such customer.');

ELSE

DBMS\_OUTPUT.PUT\_LINE('Customer Balance Updated.');

END IF;

END;

FUNCTION GetCustomerBalance(p\_id NUMBER) RETURN NUMBER IS

v\_balance NUMBER;

BEGIN

SELECT Balance INTO v\_balance FROM Customers WHERE CustomerID = p\_id;

RETURN v\_balance;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

RETURN NULL;

END;

END CustomerManagement;

/

BEGIN

CustomerManagement.AddCustomer(3, 'Sam Wilson', TO\_DATE('1975-01-01', 'YYYY-MM-DD'), 2000);

CustomerManagement.UpdateCustomerBalance(3, 2500);

DBMS\_OUTPUT.PUT\_LINE('Balance: '||CustomerManagement.GetCustomerBalance(3));

END;

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