PL/SQL Exercise 7 - Packages

# Scenario 1: Package - CustomerManagement

CREATE OR REPLACE PACKAGE CustomerManagement AS  
 PROCEDURE AddCustomer(p\_id NUMBER, p\_name VARCHAR2, p\_dob DATE, p\_balance NUMBER);  
 PROCEDURE UpdateCustomer(p\_id NUMBER, p\_name VARCHAR2);  
 FUNCTION GetCustomerBalance(p\_id NUMBER) RETURN NUMBER;  
END CustomerManagement;  
/  
  
CREATE OR REPLACE PACKAGE BODY CustomerManagement AS  
  
 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);  
 END;  
  
 PROCEDURE UpdateCustomer(p\_id NUMBER, p\_name VARCHAR2) IS  
 BEGIN  
 UPDATE Customers SET Name = p\_name, LastModified = SYSDATE WHERE CustomerID = p\_id;  
 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;  
 END;  
  
END CustomerManagement;

# Scenario 2: Package - EmployeeManagement

CREATE OR REPLACE PACKAGE EmployeeManagement AS  
 PROCEDURE HireEmployee(p\_id NUMBER, p\_name VARCHAR2, p\_position VARCHAR2, p\_salary NUMBER, p\_dept VARCHAR2);  
 PROCEDURE UpdateEmployee(p\_id NUMBER, p\_salary NUMBER);  
 FUNCTION GetAnnualSalary(p\_id NUMBER) RETURN NUMBER;  
END EmployeeManagement;  
/  
  
CREATE OR REPLACE PACKAGE BODY EmployeeManagement AS  
  
 PROCEDURE HireEmployee(p\_id NUMBER, p\_name VARCHAR2, p\_position VARCHAR2, p\_salary NUMBER, p\_dept VARCHAR2) IS  
 BEGIN  
 INSERT INTO Employees (EmployeeID, Name, Position, Salary, Department, HireDate)  
 VALUES (p\_id, p\_name, p\_position, p\_salary, p\_dept, SYSDATE);  
 END;  
  
 PROCEDURE UpdateEmployee(p\_id NUMBER, p\_salary NUMBER) IS  
 BEGIN  
 UPDATE Employees SET Salary = p\_salary WHERE EmployeeID = p\_id;  
 END;  
  
 FUNCTION GetAnnualSalary(p\_id NUMBER) RETURN NUMBER IS  
 v\_salary NUMBER;  
 BEGIN  
 SELECT Salary INTO v\_salary FROM Employees WHERE EmployeeID = p\_id;  
 RETURN v\_salary \* 12;  
 END;  
  
END EmployeeManagement;

# Scenario 3: Package - AccountOperations

CREATE OR REPLACE PACKAGE AccountOperations AS  
 PROCEDURE OpenAccount(p\_accID NUMBER, p\_custID NUMBER, p\_type VARCHAR2, p\_balance NUMBER);  
 PROCEDURE CloseAccount(p\_accID NUMBER);  
 FUNCTION GetTotalBalance(p\_custID NUMBER) RETURN NUMBER;  
END AccountOperations;  
/  
  
CREATE OR REPLACE PACKAGE BODY AccountOperations AS  
  
 PROCEDURE OpenAccount(p\_accID NUMBER, p\_custID NUMBER, p\_type VARCHAR2, p\_balance NUMBER) IS  
 BEGIN  
 INSERT INTO Accounts (AccountID, CustomerID, AccountType, Balance, LastModified)  
 VALUES (p\_accID, p\_custID, p\_type, p\_balance, SYSDATE);  
 END;  
  
 PROCEDURE CloseAccount(p\_accID NUMBER) IS  
 BEGIN  
 DELETE FROM Accounts WHERE AccountID = p\_accID;  
 END;  
  
 FUNCTION GetTotalBalance(p\_custID NUMBER) RETURN NUMBER IS  
 v\_total NUMBER;  
 BEGIN  
 SELECT SUM(Balance) INTO v\_total FROM Accounts WHERE CustomerID = p\_custID;  
 RETURN v\_total;  
 END;  
  
END AccountOperations;

# Output:

