In PL/SQL (Procedural Language/Structured Query Language), a package is a database object that groups related functions, procedures, variables, and other PL/SQL constructs into a single, reusable unit. Packages are used to encapsulate and modularize code, making it easier to manage, maintain, and share code within a database. A package consists of two main parts: a **package specification** and a **package body**.

**package pl/sql programme -1**

CREATE OR REPLACE PACKAGE my\_package AS

-- Public variables/constants

pi CONSTANT NUMBER := 3.14159;

g\_counter NUMBER := 10;

-- Public procedure declaration

PROCEDURE squre\_number(n integer);

-- Public function declaration

FUNCTION calculate\_area(radius IN NUMBER) RETURN NUMBER;

END my\_package;

CREATE OR REPLACE PACKAGE BODY my\_package AS

-- Implementation of the reset\_counter procedure

PROCEDURE squre\_number( n integer) IS

BEGIN

g\_counter := 0;

dbms\_output.put\_line(n\*n||' '||g\_counter);

dbms\_output.put\_line('procedure reset calling vai package');

END squre\_number;

-- Implementation of the calculate\_area function

FUNCTION calculate\_area(radius IN NUMBER) RETURN NUMBER IS

BEGIN

RETURN pi \* radius \* radius;

END calculate\_area;

END my\_package;

set SERVEROUTPUT on

DECLARE

radius NUMBER := 5;

BEGIN

my\_package.squre\_number(8);

DBMS\_OUTPUT.PUT\_LINE('Area: ' || my\_package.calculate\_area(radius));

END;

**package pl/sql programme -2**

**employee table**

***id name salary***

1 John Doe 55100

2 Jane Smith 64100

3 Bob Johnson 60100

4 vikas 65100

8 jatin 13500

9 lakshaya 3000

10 bhumi 6000

12 null null

7 rohit 12500

12 vikas null

12 23 23

12 23 23

13 23 23

-- Create a package specification

CREATE OR REPLACE PACKAGE employee\_pkg AS

-- Public cursor declaration

-- CURSOR employee\_cursor RETURN SYS\_REFCURSOR;

CURSOR employee\_cursor IS

SELECT \* FROM employee;

-- Public procedure to retrieve employee information

PROCEDURE get\_employee\_info(employee\_id IN NUMBER);

END employee\_pkg;

-- Create a package body

CREATE OR REPLACE PACKAGE BODY employee\_pkg AS

-- Implementation of the cursor

-- CURSOR employee\_cursor IS

-- SELECT \* FROM employee;

-- Implementation of the procedure to retrieve employee information

PROCEDURE get\_employee\_info(employee\_id IN NUMBER) IS

emp\_record employee%ROWTYPE;

BEGIN

-- Open the cursor

OPEN employee\_cursor;

-- Loop through the cursor to find the employee by ID

LOOP

FETCH employee\_cursor INTO emp\_record;

EXIT WHEN employee\_cursor%NOTFOUND;

-- Check if the current record matches the requested employee ID

IF emp\_record.id = employee\_id THEN

DBMS\_OUTPUT.PUT\_LINE('Employee ID: ' || emp\_record.id);

DBMS\_OUTPUT.PUT\_LINE('Name: ' || emp\_record.name);

DBMS\_OUTPUT.PUT\_LINE('Salary: ' || emp\_record.salary);

EXIT;

END IF;

END LOOP;

-- Close the cursor

CLOSE employee\_cursor;

END get\_employee\_info;

END employee\_pkg;

set SERVEROUTPUT on

DECLARE

emp\_id NUMBER := 12; -- Replace with the desired employee ID

BEGIN

employee\_pkg.get\_employee\_info(emp\_id);

END;