

Task 6: Procedures, Function and Loops

AIM: To write a program using PL/SQL procedures, functions and loops on number theory and business scenarios like.

1. Write a PL/SQL block that calculates the average age of players and display the result.

2. Write a PL/SQL block that inserts a new player record into the player table.

3. To Create a function that returns the total number of teams in a particular Cricket Board.

4. To write a non-recursive PL/SQL Procedure to receive even-numbered players IDs registered for any tournament.

Write a PL/SQL block that calculates the average age of players and displays the result.

DECLARE

total_age NUMBER := 0;

num_players NUMBER := 0;

avg_age NUMBER := 0;

BEGIN

-- Using a cursor to loop through all players

FOR Player_rec IN (SELECT age FROM Player) Loop

total_age := total_age + Player_rec.age; -- summing up the ages

num_players := num_players + 1; -- counting the number of players

END Loop;

-- Calculating the average age

IF num_players > 0 THEN

avg_age := total_age / num_players;

END IF;

-- Displaying the result

DBMS_OUTPUT.PUT_LINE('Total Players:' || num_players);

DBMS_OUTPUT.PUT_LINE('Total Age:' || total_age);

DBMS_OUTPUT.PUT_LINE('Average Age:' || avg_age);

END;

Output:-

Total Players: 14

Total Age: 2842

Average Ag: 24.142



| Age Distribution - Age | |
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| 1000 | 1 |

Write a PL/SQL block that inserts a new player record into the Player table.

DECLARE

V-PlayerID VARCHAR(6) := & PlayerID; -- you can generate a unique
Player ID as needed

V-TeamID VARCHAR(6) := '& TeamID'; -- Replace with the actual Team ID

V-FName VARCHAR(30) = '& Fname';

V-LName VARCHAR(30) = '& Lname';

V-Age NUMBER(5,2) = & Age;

V-Date of Birth DATE := TO_DATE('& DOB', 'YYYY-MM-DD'); -- Replace with the actual Date of Birth.

V-Playing Role VARCHAR(25) := '& Playing Role';

V-email VARCHAR(40) := '& email';

V-Contact - No NUMBER := & Phone; -- Replace with the actual contact number

BEGIN

INSERT INTO Player (PlayerID, TeamID, FName, LName, Age, Date of Birth,
Playing Role, email, Contact-No)

VALUES (V-PlayerID, V-TeamID, V-FName, V-LName, V-Age, V-Date of Birth,
V-Playing Role, V-email, V-Contact-No);

COMMIT;

DBMS_OUTPUT.PUT_LINE('Player record inserted successfully.');

EXCEPTION

WHEN OTHERS THEN

DBMS_OUTPUT.PUT_LINE('Error:' || SQLERRM);

ROLL BACK;

END;

/

Enter the Player ID: 676

Enter the Team ID: CCB01

Enter the FName: Rahul

Enter the LName: Sharma

Enter the Age: 23

Enter the Date of Birth: 17-07-1999

Enter the Playing Role: All Rounder

Enter the Email: rahul.sharma@gmail.com

Enter the contact no: 9297181815

Player record inserted successfully.

To create a function that returns the total number of teams in a particular Cricket Board.

```
CREATE OR REPLACE FUNCTION Get_Total_Teams_In_Board (BoardID IN NUMBER)
RETURN NUMBER IS
    V_Total_Teams NUMBER := 0;
BEGIN
    SELECT COUNT(*) INTO V_Total_Teams FROM Team WHERE Board_ID = BoardID;
    RETURN V_Total_Teams;
EXCEPTION
    WHEN NO_DATA_FOUND THEN
        -- Handle the case when the Board doesn't exist or has no teams
        RETURN 0;
    WHEN OTHERS THEN
        -- Handle other exception as needed
        RETURN -1; -- Return a negative value to indicate an error
END Get_Total_Teams;
/
```

Function successfully created.

SQL >

Declare

number res;

Begin

res: Get_Total_Teams_In_Board('B1D01');

DBMS_OUTPUT.PUT_LINE('No of teams:' || res);

END;

/

No of teams: 2

To write a non-recursive PL/SQL Procedure to retrieve even-numbered Player IDs registered for any tournament.

CREATE OR REPLACE PROCEDURE Get_Even_numbered_Player_IDS IS

BEGIN

FOR Player_rec IN (SELECT PlayerID FROM Player WHERE TO_NUMBER(PlayerID) MOD 2 = 0)

Loop

DBMS_OUTPUT.PUT_LINE('Even-numbered Player-ID : '||Player_rec.PlayerID);

END LOOP;

END Get_Even_Numbered_PlayerIDs;

| V.E.TECH - CSE | |
|-------------------------|----|
| EX NO. | b |
| PERFORMANCE (5) | 5 |
| RESULT AND ANALYSIS (5) | 5 |
| VIVA VOCE (5) | 5 |
| RECORD (5) | 5 |
| TOTAL (20) | 15 |
| SIGN WITH DATE | ✓ |

Result:- Thus the PL/SQL procedures, functions Number-theory and business scenarios experiment was successfully completed and results are verified.