

Lab 6 – Week 8 (Stored Procedures/Iterative Statements)

Submission

ON Blackboard

Create a new Worksheet in SQL Developer. Save the file as L06_ID#_LASTNAME.txt ← need a txt file

Your submission needs to be commented and include the question and the solutions.

In this Lab, you create PL/SQL stored procedures to perform the following tasks. As you know, a stored procedure does not return any value. To send values back to the caller, you can use OUT parameters.

A parameter can be

- IN parameter
- OUT parameter
- IN OUT parameter

See the following template:

```
CREATE OR REPLACE procedure_name(arg1 IN/OUT/IN OUT data_type, ...) AS
BEGIN

....

EXCEPTION

WHEN OTHERS

THEN

    DBMS_OUTPUT.PUT_LINE ('Error!');

END procedure_name;
```

For all the stored procedures make sure you handle all exceptions such as

- TOO_MANY_ROWS
- NO_DATA_FOUND
- OTHERS
- ...

Besides checking all required exceptions, have the OTHER exception checked just in case any error occurs that has not been anticipated at the time you write the code.

Tasks

1 The company wants to calculate what the employees' annual salary would be:

Do NOT change any salaries in the table.

Assume that the starting salary or sometimes called base salary was \$10,000.

Every year of employment after that, the salary increases by 5%.

Write a stored procedure named **calculate_salary**XX (where XX is your Oracle ID) which gets an employee ID from the user and for that employee, calculates the salary based on the number of years the employee has been working in the company. (Use a loop construct the calculation of the salary).

The procedure calculates and prints the salary.

Sample output:

First Name: first_name

Last Name: last_name

Salary: \$9999,99

If the employee does not exist, the procedure displays a proper message.

2 **Do these 3 tries without an exception handler.**

For a given CITY name, you need to find out Department_id and Department_name that exists in that city. There are 3 scenarios here;

In a given CITY, there is a SINGLE department

In a given CITY, there is a MORE THAN ONE department

In a given CITY, there is NO department

Do the problem using SOUTHLAKE as the city first and see the result.

Then try TORONTO

Then try SEATTLE

Submit the code and the results.

3 Write a stored procedure named **employee_works_here**XX to print the employee_id, employee Last name and department name.

This is sample output

Employee #	Last Name	Department Name
9999	Able	Manufacturing
9998	Notsoable	Shipping

If the value of the department name is null or does not exist, display "no department name".

The value of employee ID ranges from your Oracle id's last 2 digits (ex: dbs311_203g37 would use 37) to employee 105.

(NOTE: Check manually and not in the procedure, to see if your number is in the employee table. If not pick the first employee number higher that does exist)

Since you are looping there will be missing employee numbers. At that stage you can get out of the loop that displays the data about each employee.

DO NOT USE CURSORS

Go to next page to see sample submission

Example Submission

```
-- *****
-- Name: Your Name
-- ID: #####
-- Date: The current date
-- Purpose: Lab 6 DBS311
-- *****

-- Question 1 – write a brief note about what the question is asking
-- Q1 SOLUTION –

CREATE OR REPLACE procedure_name(arg1 data_type, ...) AS
BEGIN
    ...
EXCEPTION
WHEN OTHERS
THEN
    DBMS_OUTPUT.PUT_LINE (Error!);
END procedure_name;

-- Question 2 –

-- Q2 Solution –
```