

Title: PL/SQL stored procedure and stored function.

Problem Statement:

Write a stored procedure namely prog_grade for the categorization of customer. If purchase by customer in year is ≤ 20000 and ≥ 10000 then customer will be placed in platinum category. If purchase is between 9999 and 5000, then category is gold and if purchase is between 4999 and 2000 then category is silver. Write a PL/SQL block of code using procedure created with above requirement.

Customer (cust_id, name, total_purchase)

Category (cust_id, name, class)

Objective:

1. Understand PL/SQL stored procedure.
2. Understand PL/SQL stored function.

Outcome:

We will be able to implement and understand stored functions and procedures.

Requirements:

Fedora 29, i5 processor, mouse, keyboard, monitor, 8 GB RAM, MySQL

Theory:

Stored Procedure: A stored procedure is a named PL/SQL block which performs one or more specific tasks. This is similar to a procedure in another programming language. A procedure has a header and a body. The header consists of the name of the procedure and parameter list. The body consists of declaration section, execution section and exception section similar to a general PL/SQL block. A procedure is similar to an anonymous PL/SQL block but it is named for repeated usage.

Syntax:

```
Create [or Replace] Procedure proc_name (  
  list of parameters  
)
```

Is declaration section

Begin

 execution section

Exception

 exception section

End;

Stored Function: A function is a named PL/SQL block which is similar to a procedure. The major difference between a procedure and a function is, a function must always return a value, but a procedure may or may not return a value.

Syntax:

```
Create [or Replace] Function function_name (  
    parameters  
)
```

Is

declaration section

Begin

↓
execution section

Return value-1

Exception

Return value-2

End;

Conclusion:

We have successfully understood and implemented stored procedure and function.

Output

```
Command Prompt - mysql -u root -p
Database changed
mysql> select * from customer;
+-----+-----+-----+
| cust_id | name | total_purchase |
+-----+-----+-----+
| 1 | a | 15000 |
| 2 | b | 5000 |
+-----+-----+-----+
2 rows in set (0.21 sec)

mysql> select * from category;
+-----+-----+-----+
| cust_id | name | class |
+-----+-----+-----+
| 1 | a | platinum |
| 2 | b | gold |
+-----+-----+-----+
2 rows in set (0.14 sec)

mysql> insert into customer values(3,'c',7500);
Query OK, 1 row affected (0.40 sec)

mysql> call test(3);
Query OK, 1 row affected (0.27 sec)

mysql> select * from customer;
+-----+-----+-----+
| cust_id | name | total_purchase |
+-----+-----+-----+
| 1 | a | 15000 |
| 2 | b | 5000 |
| 3 | c | 7500 |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from category;
+-----+-----+-----+
| cust_id | name | class |
+-----+-----+-----+
| 1 | a | platinum |
| 2 | b | gold |
| 3 | c | gold |
+-----+-----+-----+
3 rows in set (0.00 sec)
```