Ex:No: 15
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HIGH LEVEL PROGRAMMING EXTENSIONS (FUNCTIONS)

Program 1:

Create a function that returns the level of a customer based on credit limit.(Use the IF statement to determine the credit limit).

The table ‘customers’ should have the following attributes:

customers(cno , cname, creditlimit)

If credit limit > 50000 then customer_level = PLATINUM

If credit limit >= 10000 AND credit limit <= 50000 then customer_level = GOLD

If credit limit credit limit < 10000 then customer_level = SILVER

RECURSION in Mysql Procedures

Mysql version should be >= 5.

Have to set system parameters. This means putting the recursion count limit.
SET @@GLOBAL.max_sp_recursion_depth = 255;
SET @@session.max_sp_recursion_depth = 255;

```
mysql> create table customer(cno int, cname varchar(50), creditlimit int);
    -> //
Query OK, 0 rows affected (0.03 sec)

mysql> insert into customer values(1, "Bala", 50000), (2, "Seetha", 20000), (3, "Ra
dha", 5000);
    -> //
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

```
mysql> create function customerlevel1(n_creditlimit int) returns varchar(10)
    -> deterministic
    -> begin
    -> declare lvl varchar(10);
    -> if n_creditlimit=50000 then
    -> set lvl='Platinum';
    -> elseif(n_creditlimit <= 50000 and n_creditlimit >= 10000)then
    -> set lvl='Gold';
    -> elseif n_creditlimit < 10000 then
    -> set lvl='Silver';
    -> end if;
    -> return (lvl);
    -> end //
Query OK, 0 rows affected (0.01 sec)
mysql> select customerlevel1(creditlimit)
    -> from customer
    -> order by cname//
+-----------------------------+
| customerlevel1(creditlimit) |
+-----------------------------+
| Platinum                    |
| Silver                      |
| Gold                        |
+-----------------------------+
3 rows in set (0.00 sec)
```

Program 2

Write a recursive MySQL procedure compute the factorial of a number .

```
mysql> delimiter $$
mysql> create procedure find_fact(in n int)
    -> begin
    -> set @@global.max_sp_recursion_depth=255;
    -> set @@session.max_sp_recursion_depth=255;
    -> call factorial(n,@fact);
    -> select @fact;
    -> end $$
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> delimiter $$
mysql> create procedure factorial(in n int, out fact int)
    -> begin
    -> if n=1 then
    -> set fact:=1;
    -> else
    -> call factorial(n-1, fact);
    -> set fact:=n*fact;
    -> end if;
    -> end $$
Query OK, 0 rows affected (0.01 sec)

mysql> call find_fact(5) $$
+-------+
| @fact |
+-------+
|   120 |
+-------+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.02 sec)
```