

NAME - Sayan Paul

ROLL - 21CS8056

REG - 21U10209

ASSIGNMENT - 8

1. Write a PL/SQL block of code for inverting a number 9635 to 5369.

```
mysql> delimiter 55
[mysql> create procedure rev_num()
    ->     begin
    ->     declare rev int;
    ->     declare n int;
    ->     set n = 9635;
    ->     set rev = 0;
    ->     while n > 0 do
    ->     set rev = (rev*10) + mod(n,10);
    ->     set n = floor(n/10);
    ->     end while;
    ->     select rev;
    ->     end 55
```

[Query OK, 0 rows affected (0.01 sec)]

```
mysql> call rev_num() 55
```

```
[+-----+
| rev  |
+-----+
| 5369 |
+-----+
```

1 row in set (0.00 sec)

2. Write a PL/SQL block of code to generate fibonacci series.

```
mysql> create procedure fib_num()
-> begin
-> declare n int default 5;
-> declare a int default 0;
-> declare b int default 1;
-> declare fib int;
-> while n > 0 do
-> select b as fibonacci;
-> set fib = a+b;
-> set a = b;
-> set b = fib;
-> set n = n-1;
-> end while;
[ -> end 55
Query OK, 0 rows affected (0.01 sec)
```

```
[mysql> call fib_num() 55
```

```
+-----+
| fibonacci |
```

```
+-----+
|          1 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
+-----+
| fibonacci |
```

```
+-----+
|          1 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
+-----+
| fibonacci |
```

```
+-----+
|          2 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
+-----+
| fibonacci |
```

```
+-----+
|          3 |
```

```
+-----+
```

3. Write a PL/SQL block of code to calculate the area of a circle

for a value of radius varying from 3 to 7. Store the radius and the corresponding values of calculated area in a table, Areas.

```
mysql> CREATE PROCEDURE area()  
-> BEGIN  
->     DECLARE pi DOUBLE DEFAULT 3.14;  
->     DECLARE ar DOUBLE DEFAULT 0.00;  
->     DECLARE i INT DEFAULT 3;  
->     CREATE TABLE Areas (  
->         radius INT,  
->         area DOUBLE  
->     );  
->  
->     WHILE i < 8 DO  
->         SET ar = pi * i * i;  
->         INSERT INTO Areas (radius, area) VALUES (i, ar);  
->         SET i = i + 1;  
->     END WHILE;  
->  
->     SELECT * FROM Areas;  
[ -> END 55
```

Query OK, 0 rows affected (0.01 sec)

```
[mysql> call area() 55
```

radius	area
3	28.259999999999998
4	50.24
5	78.5
6	113.03999999999999
7	153.86

5 rows in set (0.02 sec)

4. Write a PL/SQL block of code to calculate the factorial of a

number.

```
mysql> create procedure factorial()  
-> begin  
-> declare n int default 7;  
-> declare fact int default 1;  
-> while n > 0 do  
-> set fact = fact * n;  
-> set n = n-1;  
-> end while;  
-> select fact;  
[ -> end 55
```

Query OK, 0 rows affected (0.01 sec)

```
mysql> call fact() 55
```

ERROR 1305 (42000): PROCEDURE d077.fact does not exist

```
[mysql> call factorial() 55
```

```
+-----+  
| fact |  
+-----+  
| 5040 |  
+-----+
```