Name-Aarya Sanjay Dange

PL-SQL Exercise 1

1. Write a program that computes the perimeter and the area of a rectangle. Define your own values for the length and width. (Assuming that L and W are the length and width of the rectangle, Perimeter = 2*(L+W) and Area = L*W.

```
Delimiter //

mysql> create procedure abc2()  begin declare L int;  declare W int; declare P int; set L = 20; set W = 25; set P = 2*(L+W); insert into tempp values(P, 'Perimeter'); end;

create procedure area()  begin declare L int;  declare W int; declare A int; set L = 20; set W = 25; set A = L*W; insert into tempp values(A, 'Area'); end;  //

Delimiter ;
```

2. Write a program that declares an integer variable called num, assigns a value to it, and computes and inserts into the tempp table the value of the variable itself, its square, and its cube.

```
mysql> delimiter //
mysql> create procedure sq()
    -> begin
    -> declare x int default 5;
    -> declare s  int;
    -> set s=x*x;
    -> insert into temp values(s,'square');
    -> end; //

mysql> call sq() //
```

```
create procedure cu() begin declare X int default 7; declare C int ; set C =
X*X*X; insert into tempp values(C, 'cube'); end; //

Delimiter ;
```

3. Convert a temperature in Fahrenheit (F) to its equivalent in Celsius (C) and vice versa. The required formulae are:- C= (F-32)*5/9 F= 9/5*C + 32

```
Delimiter //

mysql> create procedure cf() begin declare c int; declare f int;

        -> declare ctof int; declare ftoc int;

        -> set c=50; set f=60;

        -> set ctof=(9/5)*c+32;

        -> set ftoc=(f-32)*5/9;

        -> insert into temp values(ctof,'in fahr');

        -> insert into temp values(ftoc,'in cels');

        -> end; //

mysql> call cf()//

mysql> select * from temp  //

Delimiter ;
```

4. Convert a number of inches into yards, feet, and inches. For example, 124 inches equals 3 yards, 1 foot, and 4 inches.

```
Delimiter //
```

```
create procedure con() begin declare I int; declare Y int; declare F int; set Y = 124/36; set F = mod(124,36)/12; set I = mod(mod(124,36),12); insert into tempp values (Y,'Yard'); insert into tempp values (F,'foot');  insert into tempp values (I,'Inches'); end;//

Delimiter ;

mysql> call con()//

mysql> select * from tempp //
```

5. Write a program that enables a user to input an integer. The program should then state whether the integer is evenly divisible by 5.

```
Delimiter //

 create procedure even(x int ) begin if mod(x,5) = 0 then insert into tempp values(x,'even'); end if; end //


mysql> call even(20) //


mysql> select * from tempp //

 create procedure even() begin declare x int default 10; if mod(x,5) = 0 then insert into tempp values(x,'even'); end if; end //

mysql> call even() //

mysql> select * from tempp //

Delimiter ;
```

6. Your block should read in two real numbers and tell whether the product of the two numbers is equal to or greater than 100.

```
Delimiter //

create procedure gt(x decimal(10,2),y decimal(10,2)) begin declare pro
decimal (10,2); set pro = x*y; if pro >= 100 then insert into tempp
values(pro,'grater'); else insert into tempp values(pro,'less'); end if ; end //

mysql> call gt(100,50) //

mysql> select * from tempp //

Delimiter ;
```

PL-SQL Exercise 2

1. Select from any table a number and determine whether it is within a given range (for example, between 1 and 10).

```
mysql> create procedure rng3()
    -> begin
    -> declare x int;
    -> select emp_id into x from emp where status=10;
    -> if x between 1 and 10 then insert into temp values(x,'yes');
    -> else insert into emp values(x,'no');
    -> end if;
    -> end; //
Query OK, 0 rows affected (0.01 sec)

mysql> call rng3() //
```

```
Query OK, 1 row affected (0.01 sec)
```

2. Select from any table three positive integers representing the sides of a triangle, and determine whether they form a valid triangle. Hint: In a triangle, the sum of any two sides must always be greater than the third side.

```
mysql> create procedure tri5()
    -> begin declare a int; declare b int; declare c int; select status into a
from emp where salary= 3000; select status into b from emp where
salary=2500; select status into c from emp where salary=1800; if a+b >c
and b+c>a and a+c>b then insert into temp values(1,'triangle'); else insert
into temp values(0,'no tri'); end if; end; //
Query OK, 0 rows affected (0.01 sec)

mysql> call tri5()//
Query OK, 1 row affected (0.01 sec)

mysql> select * from temp//
```

3. Check if a given a year is a leap year. The condition is:- year should be (divisible by 4 and not divisible by 100) or (divisible by 4 and divisible by 400.). The year should be Selected from some table.

```
mysql> create procedure leap3()
    -> begin declare yr int; select salary into yr from emp where emp_id=5; if
(mod(yr,4)=0 and mod(yr,100)<>0) or (mod(yr,4)=0 and mod(yr,400)=0)
then insert into temp values(yr,'leap'); else insert into temp values(yr,'not
leap'); end if; end; //
Query OK, 0 rows affected (0.02 sec)

mysql> call leap3() //
Query OK, 1 row affected (0.00 sec)

mysql> select * from temp;//
```

4. Write a program that Selects from any table two character strings. Your program should then determine if one character string exists inside another character string.

```
mysql> create procedure str7() begin declare s varchar(10); declare c
varchar(10); declare res int;
    -> select emp_name into s from emp where emp_id=1;
    -> select substr(emp_name,2,4) into c from emp where emp_id=1;
    -> select instr(emp_name,c) into res from emp where emp_id=1;
    -> if res>0 then insert into temp values(1,'exists');
    -> else insert into temp values(0,'not exists');
    -> end if; end //
Query OK, 0 rows affected (0.01 sec)

mysql> call str7()//
Query OK, 1 row affected (0.01 sec)

mysql> select * from emp;//
```