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

**create table temp**

**(**

**num char(5),**

**status char(5)**

**);**

**select empno into @numbers from emp limit 1;**

**delimiter //**

**create procedure within\_range(num int)**

**begin**

**if num <= 10 and num >=1 then**

**insert into temp values(num,'true');**

**else**

**insert into temp values(num,'false');**

**end if;**

**end; //**

**delimiter ;**

**call within\_range(5);**

**call within\_range(15);**

**call within\_range(@numbers);**

**select \* from temp;**

1. 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.

**create table tempp**

**(**

**side1 int,**

**side2 int,**

**side3 int,**

**status bool**

**);**

**delimiter //**

**create procedure is\_Triangle(side1 int, side2 int, side3 int)**

**begin**

**declare is\_valid bool;**

**if (side3 < side1 + side2) AND (side2 < side1 + side3) AND (side1 < side2 + side3) then**

**set is\_valid = true;**

**else**

**set is\_valid = false;**

**end if;**

**insert into tempp values(side1,side2,side3,is\_valid);**

**end; //**

**delimiter ;**

**call is\_Triangle(12,15,32);**

**call is\_Triangle(12,15,22);**

**select \* from tempp;**

1. 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.

**create table temp**

**(**

**num char(5),**

**status bool**

**);**

**delimiter //**

**create procedure is\_Leap(year int)**

**begin**

**declare is\_valid bool;**

**if (year%4=0 and year%100<>0) or (year%4=0 and year%400=0) then**

**set is\_valid = true;**

**else**

**set is\_valid = false;**

**end if;**

**insert into temp values (year,is\_valid);**

**end; //**

**delimiter ;**

**call is\_Leap(1947);**

**call is\_Leap(2024);**

**select \* from temp;**

1. 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

**delimiter //**

**create procedure check\_String(string1 char(10), string2 char(10))**

**begin**

**declare if\_exist bool;**

**if instr(string1,string2) then**

**set if\_exist = true;**

**else**

**set if\_exist = false;**

**end if;**

**insert into tempp values(string1,string2,if\_exist);**

**end; //**

**delimiter ;**

**create table tempp**

**(**

**string1 char(10),**

**string2 char(10),**

**status bool**

**);**

**call check\_String('champion','champ');**

**call check\_String('champion','chat');**

**select \* from tempp;**