Ex. No: 7b **Date: 15-11-2021**

RECURSIVE FUNCTIONS

PROBLEM GIVEN:

Write a program to find factorial of a number using recursive functions.

ALGORITHM:

Step 1: Start

Step 2: Declare all the required variables and function fact(int). Step 3:

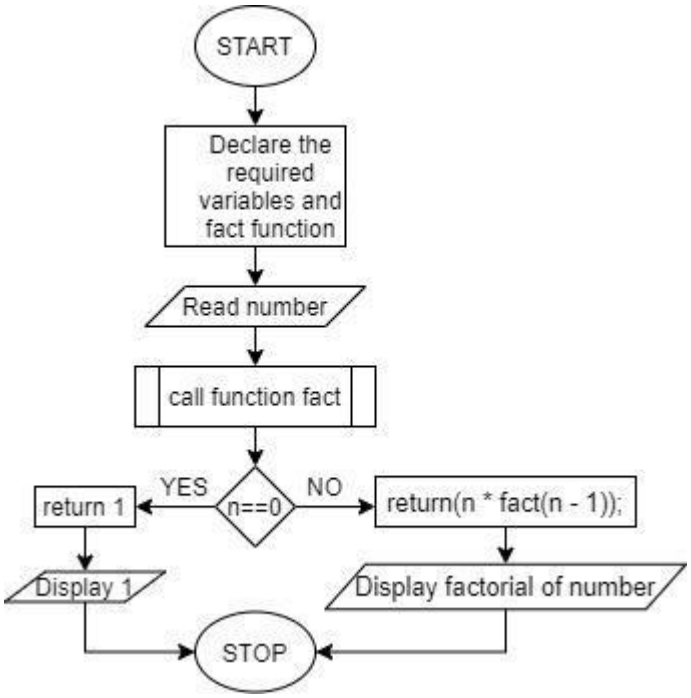
Get number from the user.

Step 4: Call the function fact(n) with arguments as the reference variable. Step 5:

Check if n==0. If true, return 1. Else return (n * fact (n - 1).

Step 6: Display the factorial of the number.

FLOWCHART:



PROGRAM:

```
//EXP-7b
//WAP in C to find Factorial of a number using recursive functions
#include<stdio.h>
//Declare function fact(int)
int fact(int);
void main()
{
   //Declare variables
   int x, n;
   //Read number
   printf(" Enter number: ");
   scanf("%d", &n);
   //Call function fact(int n) and store return value in variable x
   x = fact(n);
   //Display the result
   printf(" Factorial of %d is %d\n", n, x);
}
//fact(int n) function
int fact(int n)
{
   //Check if number is zero
   if (n == 0)
      //Return 1 if yes
      return(1);
   return(n * fact(n - 1));
}
```

OUTPUT: