**2. Write a program to find a factorial of a number using recursion**

**Aim :** The aim of these program is to find factorial of number using recursion function

**Description:** The factorial of a number is the product of all positive integers up to that number.

For example, the factorial of 5 is 1\*2\*3\*4\*5 = 120.

**Recursion** is a programming technique where a function calls itself to solve a problem by breaking it down into smaller sub-problems. In this program, we use recursion to find the factorial of a number.

In this program, we used recursion to find the factorial of a number. The factorial function takes an integer n as input and returns its factorial. The base case is when n is 0, in which case the function returns 1. Otherwise, the function calls itself with the argument n-1 and multiplies the result by n.

**Program Implementation:**

def recursion\_fact(n):

if n == 1:

return n

else:

return n \* recursion\_fact(n-1)

num = int(input("Enter a num value : "))

if(num < 0):

print(f"Factorial of a given number {num} is not possible")

elif(num == 0):

print("Factorial of 0 is 1")

else:

print(f"Factorial of a given number {num} is = {recursion\_fact(num)} ")

**Result:**

