Business and Computer University College

1. Write a recursive function that calculates the factorial of a give number.
   fact(n) = n*(n-1)*(n-2) * … *1.

2. Write a recursive function that accepts two integers x and y and calculates x^y (x power y).

3. Write a program that uses a recursion function that takes two integers as arguments and returns the greatest common divisor (GCD) of these numbers. Use this function to find the GCD of two numbers entered by the user.

4. Write a C++ function that asks the user to input a number X, and then finds the sum of all numbers between 1 and X. you have to use a recursive function.