This assignment was locked Feb 14 at 11:59pm.

Implement the following functions:

1. Write a function called fact that takes an integer parameter and returns n factorial (n!)  
For example, 5! = 120.  Use an appropriate data type so that your function works with at least n = 30 (probably NOT int then....)

2. Write a function called fact2 that compute n factorial using recursion.  We did this in class, so it will just be a matter of writing it down, but get used to writing recursive functions, they are very important in computer science.

3. Write a function called fibo that calculates the fibonacci sequence: 1, 1, 2, 3, 5, 8, 13, 21, up to the nth one.  
For example, fibo(1) =1 , fibo(2) = 1, fibo(7) =13, etc.  
Use a loop to count, and starting from 1, 1 keep adding the previous terms to get the new one (hint, this will require 3 variables in addition to the loop variable)

4.  Write a recursive fibonacci function fibo2 using the relation: fibo(n) = fibo(n-1)  + fibo(n-2)

In setup, your program should demonstrate that it works by printing out the value of:  
fact(n) for n from 0, 3, 6, 9, 12, ... 30

skip a line, then print

fact2(n) for n from 0, 3, 6, 9, 12, ... 30

skip a line, then print

fibo(n) for n from 1 to 20

skip a line, then print

fibo2(n) for n from 1 to 20

Note: Your functions are not recursive if they contain loops.  Learn both how to write iterative code using a for loop, and recursive code.  Both are required.