# Write a recursive function receiving one parameter n where the function  
# generates the Fibonacci number fib(n). The value of integer n must be  
# 0 or positive. From main, call this function so that the program displays  
# the Fibonacci numbers from fib(0) through fib(n).  
  
# fib(0) is 1 What is the base case or cases?  
# fib(1) is 1  
# fib(2) is 2  
# fib(3) is 3  
# fib(4) is 5  
# In general, fib(i+2) is fib(i) + fib(i+1) for i = 0, 1, 2, ...

# NOTE: the full recursive version is not efficient. An iterative solution is  
# best. This function computes and discards many of the Fibonacci numbers   
# too many times. This kind of recursion is called "umbrella   
# recursion" because it spreads, re-computing some values many times.