CS:1210 (22C:16) Quiz 11 (a)

You have 15 minutes to complete this quiz.

1. Consider the recursive implementation of the function `fibo`. What output does the function produce, if we execute the function call `fibo(6)`?

```
def fibo(n):
    # Base cases
    if n == 1 or n == 2:
        return 1
    # Recursive case
    else:
        answer1 = fibo(n-1)
        print n
        answer2 = fibo(n-2)
        return answer1 + answer2
```

2. Consider the recursive function `binarySearch` given below. Let L be the list [3, 15, 16, 21, 100, 103, 160, 178, 200]. What output would the function produce if we executed the function call `binarySearch(L, 196, 0, 8)`? Also, write down the sequence of numbers that 196 is compared with during the course of the function execution.

```
def binarySearch(L, k, left, right):
    print left, right
    if left > right:
        return -1

    mid = (left + right)/2 # index of the middle element
    if L[mid] == k:
        return mid
    elif L[mid] < k:
        return binarySearch(L, k, mid+1, right)
    elif L[mid] > k:
        return binarySearch(L, k, left, mid-1)
```