

22C:16 (CS:1210) Quiz 10

You have 20 minutes to complete this quiz.

1. Write down the output produced (via the print statement) when the function given below is called as

```
generalMergeSort([5, 6, -2, 1, 9], 0, 4)
```

```
# The merge sort function; sorts the sublist L[first:last+1]
def generalMergeSort(L, first, last):
    # Base case: if first == last then it is already sorted

    # Recursive case: L[first:last+1] has size 2 or more
    if first < last:
        # divide step
        mid = (first + last)/2

        # conquer step
        generalMergeSort(L, first, mid)
        print L[first:mid+1]
        generalMergeSort(L, mid+1, last)

    # combine step
    merge(L, first, mid, last)
```

2. What is the number of lines of output we would get if we call the following function as:
`x = fibonacci(7):`

To receive partial credit, you'll have to show your work.

```
def fibonacci(n):
    if n == 1:
        return 1

    if n == 2:
        print "Base Case 2"
        return 1

    return fibonacci(n-1) + fibonacci(n-2)
```