CS:1210 (22C:16) Quiz 12 (c)

You have 15 minutes to complete this quiz.

1. What is the output produced by the following function when it is called as

   partition([8, 1, 7, 6, 3, 4, 2, 5], 0, 7)

```
def partition(L, first, last):
    p = first

    for current in range(p+1, last+1):
        print L[first:p], L[p], L[p+1:current]
        if L[current] < L[p]:
            swap(L, current, p+1)
            swap(L, p, p+1)
            p = p + 1

    return p
```

2. This question is based on understanding the working of the following implementation of the quick sort algorithm.

```
def generalQuickSort(L, first, last):
    if first < last:
        p = partition(L, first, last)
        generalQuickSort(L, first, p-1)
        generalQuickSort(L, p+1, last)
```

Insert the statement
$$\text{print L[first:p], L[p], L[p+1:last+1]}$$
just after the line of code p = partition(L, first, last) in the above function. What output do we get if make the call
$$\text{generalQuickSort([1, 3, 9, 4], 0, 3)}$$