Q1. Perform Bubble sort using function in python.

```
def bubble_sort(list):
    for i in range(0,len(list)-1):
        for j in range(len(list)-1):
            if(list[j]>list[j+1]):
                temp = list[j]
                list[j] = list[j+1]
                list[j+1] = temp
    return list

list = [6, 2, 1, 5, 7, 4]
print("The unsorted list is: ", list)
print("The sorted list is: ", bubble_sort(list))
```

```
 The unsorted list is:  [6, 2, 1, 5, 7, 4]
 The sorted list is:  [1, 2, 4, 5, 6, 7]
```

Q2. Perform Selection sort using function in python.

```
def selection_sort(list1):
  n = len(list1)
  for i in range(n):
    minimum = i

    for j in range(i+1, n):
      if (list1[j] < list1[minimum]):
        minimum = j

    temp = list1[i]
    list1[i] = list1[minimum]
    list1[minimum] = temp

  return list1

list1 = [6, 2, 1, 5, 7, 4]
print("The unsorted list is: ", list1)
print("The sorted list is: ", selection_sort(list1))
```

```
 The unsorted list is:  [6, 2, 1, 5, 7, 4]
 The sorted list is:  [1, 2, 4, 5, 6, 7]
```

Perform Insertion sort using function in python.

```
def insertion_sort(list2):
        for i in range(1, len(list2)):
```

```
            for i in range(1, len(list2)):
                value = list2[i]
                j = i - 1
                while j >= 0 and value < list2[j]:
                    list2[j + 1] = list2[j]
                    j -= 1
                list2[j + 1] = value
            return list2

    list2 = [6, 2, 1, 5, 7, 4]
    print("The unsorted list is:", list2)
    print("The sorted list1 is:", insertion_sort(list2))
```

```
The unsorted list is: [6, 2, 1, 5, 7, 4]
The sorted list1 is: [1, 2, 4, 5, 6, 7]
```