**2021 – 2022 Spring, CMPE 114/211 Fundamentals of Programming II**

**Lab Assignment 9**

**Question 1**

The file *Sorting.java* contains the Sorting class from below. This class implements the selection sort for sorting any array of Comparable objects in descending order.

```java
public class Sorting
{
    public static void selectionSortDescending(Comparable[] list)
    {

      int max;
      Comparable temp;


      for (int index = 0; index < list.length-1; index++)
          {
            max = index;

            for (int scan = index+1; scan < list.length; scan++)
                if (list[scan].compareTo(list[max]) > 0)
                  max = scan;

            // Swap the values

                    temp = list[max];
                    list[max] = list[index];
                    list[index] = temp;
        }
    }
}
```

1. Add a new method selectionSortAscending to *Sorting.java* for sorting any array of Comparable objects in **ascending** order.
2. Create the driver class *Numbers.java* that will ask the user the number of integers to be sorted and reads in an array of integer, prints the array both in ascending and descending orders. Your expected output will be as below:

```
How many integers do you want to sort? 6

Enter the numbers...
5
89
2
45
1
67

Your numbers in ascending order...
1  2  5  45  67  89
Your numbers in descending order...
89  67  45  5  2  1
```