**CLASSWORK APPLICATIONS FOR ONE DIMENSIONAL ARRAYS**

**Q1.** Write a program to calculate the value of the following function:

$$f\left(x\right)=x^{2}$$

For x values from -5 to 5 with an increment of 0.5. Store the values of x and f(x) to one dimensional arrays. Then plot the data in Ms. EXCEL.

Copy x and fx columns in the output window, paste them to the Ms. EXCEL Sheet and plot the graph.

**Q2.** Write a program to calculate the integral of the function which is given in the previous question by considering the area under the function.

$$f\left(x\right)=x^{2}$$

For x values from -5 to 5 with an increment of 0.5. Store the values of x and f(x) to one dimensional arrays.

**Q3.** Write a program that can detect if a given array is sorted or not. To test your work, use the following list:

1.2

3.4

3.7

2.8

6.9

Your program should display that “the list is not sorted for the given example!”

**Q4.** Revise the previous program to sort a given list.