

Quiz Section for Program Design (II)

Bonus #3

You will receive a list of unordered numbers, and your task is to sort the list in ascending order and print out each intermediate results during the sorting procedure. There are three kinds of sorting algorithms that you need to implement: bubble sort, selection sort, and insertion sort. Please print the result according to the required sorting algorithm.

Input:

The first line has an integer n : the size of the number list.

The next line has n integers $x_1, x_2, x_3, \dots, x_n$.

The last line has a string s to indicate which sorting algorithms need to be applied.

Output:

Print the procedure according to the required sorting algorithm.

Constraints:

- $1 \leq n \leq 10^3$
- $1 \leq x_i \leq 10^9$

Input	Output
9 43 10 84 37 95 71 29 57 62 BUBBLE	10 43 37 84 71 29 57 62 95 10 37 43 71 29 57 62 84 95 10 37 43 29 57 62 71 84 95 10 37 29 43 57 62 71 84 95 10 29 37 43 57 62 71 84 95 10 29 37 43 57 62 71 84 95 10 29 37 43 57 62 71 84 95 10 29 37 43 57 62 71 84 95
9 43 10 84 37 95 71 29 57 62 INSERTION	10 43 84 37 95 71 29 57 62 10 43 84 37 95 71 29 57 62 10 37 43 84 95 71 29 57 62 10 37 43 84 95 71 29 57 62 10 37 43 71 84 95 29 57 62 10 29 37 43 71 84 95 57 62

	10 29 37 43 57 71 84 95 62 10 29 37 43 57 62 71 84 95
9 43 10 84 37 95 71 29 57 62 SELECTION	10 43 84 37 95 71 29 57 62 10 29 84 37 95 71 43 57 62 10 29 37 84 95 71 43 57 62 10 29 37 43 95 71 84 57 62 10 29 37 43 57 71 84 95 62 10 29 37 43 57 62 84 95 71 10 29 37 43 57 62 71 95 84 10 29 37 43 57 62 71 84 95