

HW #1. Sort (Text Input)

(Due: 3/19/2017)

This homework helps you to get familiar with the code sensor system (<https://codesensor.tw>), which we will use throughout the semester for the programming homework assignments. As the focus of this course is about algorithms and their complexities, the scores given by the code sensor system will be based on correctness, time complexity (# of instruction counts), and space complexity (peak memory usage) of your code. You should focus on improving your algorithms and implementations for getting higher scores. Scores attained by exploiting bugs of the system will be disregarded.

For each programming assignment, the input data will be given in the file `input.txt`. Your program has to read the data, solve the problem, and output the result to the file `output.txt`.

For HW1, the problem to be solved is sorting a sequence of integer numbers in ascending order. The formats of `input.txt` and `output.txt` are given as follows.

input.txt

```
N          ; an integer indicating the number of sequences that follow

SEQINPUT_1 ; a sequence of integers to be sorted

SEQINPUT_2

...

SEQINPUT_N
```

For example,

3

5 2 3

1

2 1 3 4

output.txt

```
SEQOUTPUT_1 ; the integers of SEQINPUT_1 sorted in ascending order  
  
SEQOUTPUT_2 ; the integers of SEQINPUT_2 sorted in ascending order  
  
...  
SEQOUTPUT_N
```

For example,

```
2 3 5  
1  
1 2 3 4
```