

Insertion Sort

Description In the first lab assignment, your job is to implement insertion-sort (Yes, this is just a warm-up, and the labs will be increasingly difficult. So heads up!)

Input structure The input starts with an integer number which indicates the number of elements (integers) to be sorted, n . Then, the elements follow, one per line.

Output structure Recall that Insertion Sort first sorts the first two elements (in non-decreasing order), then the first three elements, and so on. You are asked to output the snapshot of the array at the end of each iteration. More precisely, for each $2 \leq k \leq n$, output the first k elements (in non-decreasing order) in a separate line where each element is followed by `;`. A new line is followed by an enter.

Examples of input and output:

Input

```
6
5
3
2
1
6
4
```

Output

```
3;5;
2;3;5;
1;2;3;5;
1;2;3;5;6;
1;2;3;4;5;6;
```

More precisely, the above output example has 6 lines since a “`cout << endl;`” call was made at the end of each of the first 5 lines; those are the only white characters.

See the lab guidelines for submission/grading, etc., which can be found in Files/Labs.