# Merge Sort

**Description**   In this lab assignment your job is to implement Merge-Sort. See the textbook for the algorithm and its pseudo-code. You must output the given elements (integers) in non-decreasing order.

**Input structure**   The input starts with an integer number which indicates the number of elements, $n$. Then, the elements follow, one per line.

**Output structure**   Output the elements in non-decreasing order. Each element must be followed by ;.

**Examples of input and output:**

*Input*

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

*Output*

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

Note that the output has only one line and has no white characters.
See the lab guidelines for submission/grading, etc., which can be found in Files/Labs.