

## MergeSort

**Description** Implement the mergesort algorithm for sorting an array of integers.

**Input structure** Each case starts with an integer number which indicates the number of elements to be sorted. Then, the elements follow, one per line. You can assume the input is correctly structured (i.e., no data are missing).

**Output structure** Output the sorted sequence separated by “;” (in non-decreasing order). Do not insert spaces or a new line at the beginning or at the end of any element.