Time Limit: 1.000 s	Memory Limit: 256 MB

Insertion sort

Implement the Insertion Sort sorting algorithm. Sort the given array in the ascending order.

INPUT

The first line contains the integer N, the number of integers in the array ($1 \leq N \leq 100$).

The next line contains N integers separated by spaces. The integers are in $[-2147483648, 2147483647]$ (the range of 32-bit integer).

OUTPUT

Output the N steps of the Insertion Sort algorithm.

On the i^{th} line output i integers, which is the sorted part after the i^{th} integer is inserted to the correct position.

SAMPLE TESTS

	Input	Output
1	5 7 2 -3 0 1	7 2 7 -3 2 7 -3 0 2 7 -3 0 1 2 7
2	3 5 5 5	5 5 5 5 5 5