

Write a C++ program to produce a combined sorted list from a collection of sorted lists. You may assume that the sorted lists are in increasing order. The input is sorted sequences separated by \$. The output must be the combined sorted list.

Example Input-Output

Input

4 5 6 7 8 \$ 1 3 5 7 9 11 15 \$ 18 19 20 \$ 21

Output

1 3 4 5 5 6 7 7 8 9 11 15 18 19 20 21