You have $2n$ different numbers. Write a program to find all the ways to put the numbers in two rows $x_1 \ldots x_n$ and $y_1 \ldots y_n$ so that:

- $x_1 < x_2 < \cdots < x_{n-1} < x_n$,
- $y_1 < y_2 < \cdots < y_{n-1} < y_n$,
- for every $i$, it holds $x_i < y_i$.

**Input**

Input consists of $n$, followed by $2n$ different integer numbers. Assume $1 \leq n \leq 11$.

**Output**

Print all the ways to put the numbers fulfilling the required conditions. For every way, print three lines: two rows with $x_i$ and $y_i$ separated by spaces, and an empty line. Print the solutions in lexicographical order: first, those with the smaller $x_1$, in case of a tie, those with the smaller $x_2$, \ldots, in case of a tie, those with the smaller $x_n$, in case of a tie, those with the smaller $y_1$, \ldots.