
Two rows of numbers

P83712_en

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

- $x_1 < x_2 < \dots < x_{n-1} < x_n$,
- $y_1 < y_2 < \dots < y_{n-1} < y_n$,
- 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 , ..., in case of a tie, those with the smaller x_n , in case of a tie, those with the smaller y_1 , ...

Sample input 1

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

Sample output 1

```
1 2 3
4 5 6

1 2 4
3 5 6

1 2 5
3 4 6

1 3 4
2 5 6

1 3 5
2 4 6
```

Sample input 2

```
1
0 -200
```

Sample output 2

```
-200
0
```

Problem information

Author: Salvador Roura

Translator: Salvador Roura

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