Problem 2—Alternate Sort

Unlike most old professors, Professor Plum likes change. While writing an array question for his final examination in CS 101, he invents the notion of an *alternate sort* where the smallest item is at the first index, the largest item is at the second index, the second smallest item is at the third index, the second largest item is at the fourth index, etc. All integers will fit in a 32-bit binary representation.

For example, an array initially ordered as: 20, 45, 30, 5, 15, 50, 10, 30 would be alternate sorted to:
5, 50, 10, 45, 15, 30, 20, 30.

INPUT SPECIFICATION

The input contains the array to be sorted, one integer per line.

OUTPUT SPECIFICATION

The output should contain the sorted array (in alternate sorted order), one integer per line.

SAMPLE INPUT

```
20
45
30
5
15
50
10
30
```

SAMPLE OUTPUT

```
5
50
10
45
15
30
20
30
```