Let's Sort!!

Time limit: 3 second Memory limit: 2048 megabytes

You will receive a list of unordered numbers, and your task is to sort the list. There is a special rule of the sorting algorithm. You need to sort the list in ascending order but all the odd numbers should appear before the even numbers. Please print the result according to the required method.

• Input Format

The first line has an integer \mathbf{n} : the size of the number list. The next line has \mathbf{n} integers x_1 , x_2 , x_3 , ..., x_n .

• Output Format

Print the result according to the required sorting algorithm.

• Technical specifications

- $1 \le n \le 10^4$
- $1 \le x_i \le 10^9$

Input	Output
7 3 4 6 9 7 5 1	1 3 5 7 9 4 6
9 43 10 84 37 95 71 29 57 62	29 37 43 57 71 95 10 62 84