

QUESTION

An oil factory has N number of containers and each has a different capacity. During renovation, the manager decided to make some changes with the containers. He wishes to make different pairs for the containers in such a way that in the first pair, the container of maximum capacity is paired with the container of minimum capacity, and so on for the rest of the containers, to maintain a balance throughout all the pairs of containers.

Write an algorithm to make different pairs of containers in such a way that the first container in the pair is of maximum capacity and second container in the pair is of minimum capacity.

Input

The first line of the input consists of an integer - $numContainers$, representing the number of containers (N).
The next line consist of N space-separated integers - $cont_1, cont_2, \dots, cont_N$ representing container capacity.

Output

Print K lines consisting of two space-separated integers representing the pairs that will be formed to maintain the balance by pairing the container of maximum capacity with the container of minimum capacity and so on.

Constraints

$$1 \leq numContainers \leq 10^3$$

$$1 \leq cont_i \leq 10^3$$

$$1 \leq i \leq numContainers$$

QUESTION

Note

If only one container is left and no pair is possible then print the capacity of that container and the second value will be '0'.

Example

Example 1:

Input:

6

100 560 23 19 53 20

Output:

560 19

100 20

53 23

Explanation:

We have 6 containers with capacity (100, 560, 23, 19, 53, 20), so we can form the following pairs of containers - (560, 19), (100, 20), (53, 23).

Example 2:

Input:

7

99 123 77 12 43 8 50

Output:

123 8

99 12

77 43

50 0

Explanation:

We have 7 containers with capacity (99, 123, 77, 12, 43, 8, 50), so we can form the following pairs of containers - (123, 8), (99, 12), (77, 43). The container with capacity 50 has no container left to pair with so we will make a pair with '0' and the last pair is (50, 0).

So, the output is (123, 8), (99, 12), (77, 43), (50, 0).