Array 1D - Pair the Container

- 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 Format

- The first line of the input consists of an integer - numContainers, representing the number of containers (N).
- The next line consists of N space-separated integers - cont1, cont2, ... contN, representing container capacity.

Constraints

- 1 <= numContainers <= 1000
- 1 <= conti <= 1000
- 1 <= i <= numContainers

Output Format

- 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.
- 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'.

Sample Input 0

```
6
100 560 23 19 53 20
```

Sample Output 0

```
560 19
100 20
53 23
```

Sample Input 1

```
5
```

```
15 25 35 45 55
```

Sample Output 1

```
55 15
45 25
35 0
```

Submissions: 473
Max Score: 100
Difficulty: Medium

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C

```c
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>

int main() {

    int x,t;
    scanf("%d",&x);
    int a[x];
    for(int i=0;i<x;i++){
        scanf("%d",&a[i]);
    }
    for(int i=0;i<x;i++){
        for(int j=i+1;j<x;j++){
            if(a[i]>a[j]){
                t=a[i];
                a[i]=a[j];
                a[j]=t;
            }
        }
    }
    if(x%2==0){
        for(int i=0;i<(x/2);i++){
            printf("%d %d\n",a[x-1-i],a[i]);
        }
    }
    else{
        for(int i=0;i<(x/2);i++){
            printf("%d %d\n",a[x-1-i],a[i]);
        }
        printf("%d 0",a[x/2]);
    }
    /*for(int i=0;i<(x/2);i++){
        if(x%2==0){
            printf("%d %d\n",a[x-1-i],a[i]);
        }
        else{
                printf("%d %d\n",a[x-1-i],a[i]);
                printf("%d 0",a[x/2]);
        }
    }*/
     return 0;
```

```
44 }
```

Line: 1 Col: 1

Upload Code as File | Test against custom input | Run Code | Submit Code

Testcase 0 ✔ | Testcase 1 ✔

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
6
100 560 23 19 53 20
```

Your Output (stdout)

```
560 19
100 20
53 23
```

Expected Output

```
560 19
100 20
53 23
```