Selection Sort

Time Limit : 1 sec, Memory Limit : 131072 KB

Selection Sort

> Write a program of the Selection Sort algorithm which sorts a sequence A in ascending order. The algorithm should be based on the following pseudocode:

```
SelectionSort(A)
1 for i = 0 to A.length-1
2     mini = i
3     for j = i to A.length-1
4         if A[j] < A[mini]
5             mini = j
6     swap A[i] and A[mini]
```

> Note that, indices for array elements are based on 0-origin.

> Your program should also print the number of swap operations defined in line 6 of the pseudocode in the case where i ≠ mini.

Input

> The first line of the input includes an integer *N*, the number of elements in the sequence.

> In the second line, *N* elements of the sequence are given separated by space characters.

Output

> The output consists of 2 lines.

> In the first line, please print the sorted sequence. Two contiguous elements of the sequence should be separated by a space character.

> In the second line, please print the number of swap operations.

Constraints

> $1 \leq N \leq 100$

Sample Input 1

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

Sample Output 1

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

Sample Input 2

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

Sample Output 2

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