# MEET COCKTAIL SORT

## CHALLENGE DESCRIPTION:

Quite often we need to arrange items in a certain order: numbers in an ascending or descending order, words – in an alphabetical order, people – according to their height, and so on. There are many different sorting algorithms. Some of them are quick, while others seem to suit in a particular case only.
In this challenge, your task is to use a cocktail sort.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 2 | 1 | 3 | 9 | 0 | 4 | 6 | 8 | 7 |

## INPUT SAMPLE:

The first argument is a path to a file. Each line includes a test case with numbers that you need to order using cocktail sort. There is also a number of iterations for an algorithm to carry out. The numbers themselves and the number of iterations are separated by a pipeline '|'.

```
5 4 9 10 7 3 2 1 6 | 1
9 8 7 6 5 4 3 2 1 | 3
```

## OUTPUT SAMPLE:

Print sorted numbers after they pass the required number of iterations. One iteration of a cocktail sort is a pass through the list of numbers in both directions: from the beginning to the end and from the end to the beginning.

```
1 4 5 9 7 3 2 6 10
1 2 3 6 5 4 7 8 9
```

## CONSTRAINTS:

1. The number of iterations can be from 1 to 30.
2. One iteration of a cocktail sort is a pass through the list of numbers in both directions: from the beginning to the end and from the end to the beginning.
3. The number of test cases is 40.