# Java Basics – Algorithms

The goal of this lab is to practice **creation of algorithms**. Your task is to write your interpretation of the algorithm (without rewriting the entire code).

## Problem 1.a Bubble Sort

Write a sorting algorithm of type **Bubble sort**. It should iterate through a list of integers and sort them. The way bubble sort algorithm works is:

- Compare two adjacent elements in the list.
- Swap them if the first one has a bigger value than the second one.

More information about the bubble sorting algorithm could be found here.

After you get the expected output, uncomment the comments in the pseudo code to see how long does it take for your algorithm to execute. Test it with a lot of elements to see the difference.

### Output

You should print out the sorted list in the format described below.

### Constraints

- The input list will hold integers in the range [−2147483648 … 2147483647].
- The size of the list could be [10…50000].
- There could be elements in the list that hold the same values.
- **You are forbidden to use .sort() methods**

### Tests

| Input | Expected Output |
|---|---|
| [66, 43, 88, 46, 12, 32, 77, 24, 81, 14] | [12, 14, 24, 32, 43, 46, 66, 77, 81, 88] |
| [-29, 17, -38, 21, 11, -15, 49, 42, -49, -36] | [-49, -38, -36, -29, -15, 11, 17, 21, 42, 49] |