# 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.b Bubble Sort Enhanced

Enhance the sorting algorithm of type **Bubble sort** you just wrote. It should iterate through a list of integers and sort them while saving how many sorted integers are there. 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.
* At the end of the loop iteration, save the number of elements that are sorted.

More information about the bubble sorting algorithm could be found [here](http://visualgo.net/sorting.html).

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**

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| **Input** | **Expected Output** |
| [-37, -13, 23, -16, -8, -35, 50, 0, -33, 44, -36, -14, -44, 45, -28, 7, 37, 29, 18, -31] | [-44, -37, -36, -35, -33, -31, -28, -16, -14, -13, -8, 0, 7, 18, 23, 29, 37, 44, 45, 50] |