

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](#).

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**

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]