C++ STL – Lesson 3

Algorithm

When performing each task, use the functions only from the STL <algorithm>.

Restrictions: any cycles are not allowed.

1 Less then Average

[STL/03_templates/task01.cpp]

Create an integer array. Count the number of elements that are less than the arithmetic mean of all array elements.

2 Looks like a Number

[STL/03_templates/task02.cpp]

Create a string consisting of digits and letters. Display all the digits contained in the string, separated by commas. Try to make sure that the comma is not displayed after the last digit.

3 Count Digits

[STL/03_templates/task03.cpp]

Create a string consisting of digits & letters. Count the number of digits in a string.

4 Digits from String

[STL/03_templates/task04.cpp]

Create a string of digits and letters. Form a string from it, consisting only of numbers.

5 String to Int

[STL/03_templates/task05.cpp]

Remember the theme of the expanded form of the number (number systems). Write a function that returns an integer value passed to it in a string:

```
    int a = strToInt(“345”); // a <= 345
```

6 Algorithmic Heap

[STL/03_templates/task06.cpp]

Create two arrays. The first contains positive and negative integers. Fill the second one with zeros.

Copy the positive numbers from the first array to the second, let the remaining elements remain zero. Further work is carried out with the second array:

- print the maximum and minimum positive number
- sort the array in descending order
- compute count the number and multiplication of positive numbers in the array
- print positive elements on the screen (no need to print zeros)