LABORATORY WORK №3

The processing of one dimensional arrays

The purpose of the work's - master the methods of work with one-dimensional arrays.

Task for individual execution

Table 5

N	Array	The task
1	2	3
1	X (10)	Calculate the sum of the array elements
2	A (8)	Calculate the arithmetic mean (**average**) of the array A
3	X (7)	Copy the array X to the array Y in inverse order
4	B (1 0)	Determine the maximum element in the array B and serial number and remove them
5	B (1 0)	Determine the minimum element in the array B and serial number and replace it to 555
6	D (1 0)	Find the minimum and maximum elements and their serial number of this array and swap their places
7	Y (20)	Calculate the geometric mean of the non divisible by 7 elements in array Y
8	Z (1 0)	Place of the positive elements of Z array into array R and negative into array P
9	N (1 0)	Calculate the sum of array elements N divisible by 3
10	X (10)	Determine the amount of the even elements of the array X
11	A (10)	Calculate the geometric mean of positive elements of the array A
12	X (10)	Place the odd elements of array X into the array Y and negative to the array Z
13	X (10)	Place the positive elements of the array X into Y and negative to the array Z
14	B (10)	Find the maximum element of the array B and its serial number and replace it to value 44
15	A(3),B(3)	Calculate **scalar prod** of these arrays ()

Example

For an array of N elements $X_1, X_2, ..., X_N$ determine the maximum element and its index, i.e. the serial number in the array. In the beginning, the first element and 1 are selected as the expected maximum element and the serial number, respectively. The cycle starting with the second element is compared with the expected value, if the next greater element are replaced maximum element and its index, otherwise the comparison process continues. After the cycle is completed, the results are displayed.

```
#include <iostream>

using namespace std;
int main(int argc, char** argv)
{

// Aqabalaev Jafar qr. 606
 int n, i, imax;
int x [10] = {2, 3, 4,12, 5, -7, 8,10,5, 4}; int   xmax;
imax = 0;
xmax = x [0];
for (i = 1; i <10; i ++)
if (x [i]> xmax )
{xmax = x [i]; imax = i;}
cout<<"xmax ="<<xmax;
cout<<"imax ="<<imax;

return 0;

return 0;
}
```

Answer