

The laboratory work 2

1. Create a program to ask the user for 5 numbers, store them in an array and show them in reverse order.
2. Write a C# program to ask the user for 10 integer numbers and display the even ones.
3. Create a C# program to ask the user for 10 real numbers and display the average of the positive ones and the average of the negative ones.
4. Create a program which asks the user for several numbers (until he enters "end" and displays their sum). When the execution is going to end, it must display all the numbers entered, and the sum again, as follows:

Enter a number: 5

Sum = 5

Enter a number: 3

Sum = 8

Enter a number: end

The numbers are: 5 3

The sum is: 8

5. Write a C# program to ask the user for marks for 20 pupils (2 groups of 10, using a two-dimensional array), and display the average for each group.
6. Create a statistical program which will allow the user to:
 - Add new data
 - See all data entered
 - Find an item, to see whether it has been entered or not
 - View a summary of statistics: amount of data, sum, average, maximum, minimum
 - Exit the program

These options must appear as a menu. Each option will be chosen by a number or a letter.

The program must reserve space for a maximum of 1000 data, but keep count of how many data actually exist.

7. Create a "struct" to store data of 2D points. The fields for each point will be:

x coordinate (short)

y coordinate (short)

r (red colour, byte)

g (green colour, byte)

b (blue colour, byte)

Write a program which creates two "points", asks the user for their data, and then displays their content.

8. Create a small database, which will be used to store data about books. For a certain book, we want to keep the following information:

Title

Author

The program must be able to store 1000 books, and the user will be allowed to:

Add data for one book

Display all the entered books (just title and author, in the same line)

Search for the book(s) with a certain title

Delete a book at a known position (for example, book number 6)

Exit the program

Hint: to delete an item in an array, you must move backwards every item which was placed after it, and the decrease the counter.

9. Write a C# program to ask the user for his/her name and display a triangle with it, starting with 1 letter and growing until it has the full length:

Enter your name: Juan

J

Ju

Jua

Juan

10. Create a program that asks the user for a string and displays a right-aligned triangle:

____n

____an

__uan

Juan