

CPSC 121
Lab 5
Fall 2018
Eric May

Using Arrays

Create a program that:

1. Prompts the user to input values for an array of five integers
 - a. HINT: It helps your programming flow a LOT if you call the same function used in part 2.g
2. Displays a menu, where the user may choose
 - a. Sum - Calculates and displays the sum of numbers in the array
 - i. Use this definition (with reference variable as parameter):
 1. `void Sum(int array[], int & result)//stores sum in result`
 - b. Mean - Calculates and displays the average of numbers in the array. Should not round.
 - i. Should not be an integer!
 - ii. Should use the "Sum" function defined above
 - c. Display - Displays the current values held in the array
 - i. Alternatively, you can just display it at the start of the menu's prompt
 - d. Sequencing - Displays the difference between each adjacent set of values
 - i. Ie if we had {3, 5, 2, 9, 0}, we would get the output 2 -3 7 -9
 - ii. This just needs to be printed, not saved
 - e. Search - Indicate whether the user's chosen value is contained in the array, or not (boolean result should be returned, ie bool function).
 - f. Sort - Arrange the values within the array so that they are in ascending order.
 - i. Bubble or Selection sort will be relevant
 - ii. Extra Credit for BOGO sort (google/wiki)
 - g. Edit - The user is re-prompted for input into the array (all elements)
 - h. Exit - terminate the program
3. Loop back to step 2

There should be at least 4 functions used in this program, including the function definition provided to you. The argument should be the array itself in most of these functions.

You should probably use a global const int for array size. Do not use global variables unless they're constants!

Points:

- 1 - Documentation, readability, format
- 2 - Proper use of functions
- 3 - Proper program flow (conditionals, loops, etc)
- 2 - Filename and Header

2 - Output testing

Header

//Author: Eric May (your name)

//CPSC 121 Lab 5

//<MM/DD/YY> (Current Date)

Filename

<Last Name><First Initial>lab5.cpp

For example, my assignment would be named MayElab5.cpp