SENG1000 – C/C++ PROGRAMMING

FOCUSED ASSIGNMENT 5 - ARRAYS AND FUNCTIONS

OVERVIEW

Revise Focused 4 to use functions.

GENERAL COURSE OBJECTIVES ADDRESSED IN THIS ASSIGNMENT

- Pass arrays as parameters.
- Design computer programs and functions for modularity, maintainability, and ease of reuse.

ACADEMIC INTEGRITY AND LATE PENALTIES

- Link to Academic Integrity Information
- Link to Late Policy

EVALUATION

- The evaluation of this assignment will be done as detailed in the Marking lecture from Week 2.

PREPARATION

- View Week 3 and 5 videos.

REQUIREMENTS

FOCUSED 4:

- All requirements from Focused 4 apply to this assignment except those changed below.
- The loop that you used in Focused 4 is replaced by calling the following two functions in main(). They must be called from main().
- Your final output statement (displaying the lowest element's value and index) must still be in main().

CHANGING ARRAY VALUES:

- Create a function called modifyArrayValues.
    - This replaces getting the user values in main.

- modifyArrayValues() takes the array and the number of elements in the array as parameters (failing to do this may result in a mark of 0 for the Focused Assignment).
- modifyArrayValues() prompts the user and gets values (using getNum or cin) for all of the array elements. The user is to press ENTER after each of the array elements.
- modifyArrayValues() returns nothing.

LOWEST VALUE:

- Create a function called minArrayValue.
  - This replaces figuring out the minimum value in main().
  - minArrayValue() takes the array and the number of elements in the array as parameters (failing to do this may result in a mark of 0 for the Focused Assignment).
  - minArrayValue() loops through the array, figuring out which element has the lowest value.
  - minArrayValue() returns the index of the lowest valued element.
    - It does **not** return the value of the lowest valued element.
  - Do not do **any** output in minArrayValue().

OTHER REQUIREMENTS:

- This section is identical to that found in Focused Assignment 4.

CHECKLIST REQUIREMENTS

- Create a requirements checklist. This should contain the specific requirements from this assignment as well as any relevant requirements that have been covered in lecture or that are found in the SET Coding Standards or SET Submission Standards. Do it in whatever form you wish. Hand in your completed checklist in PDF form as checklist.pdf. Not having this checklist will result in a cap of 80 on your mark.

FILE NAMING REQUIREMENTS

- You must call your source file f5.cpp.
- You must call your checklist checklist.pdf.

SUBMISSION REQUIREMENTS

- Do not hand in any other source files besides those mentioned in the File Naming Requirements.
- Follow the instructions in the SET Submission Standards and the lecture on Submitting Assignments to submit your program. Submit both files to the correct Assignment folder.

- Once you have submitted your files, make sure that you've received the eConestoga e-mail confirming your submission. Do not submit that e-mail (simply keep it for your own records until you get your mark).

ADDITIONAL INFORMATION

- This Focused Assignment separates the act of getting the input from the determination of the lowest value. It also makes main() much smaller and encourages the use of reusable modular functions.
    - The two functions that you've created can be used in future programs as they are generic enough to apply in other situations. This would **not** be true if you didn't pass both parameters.