**Algorithm Workbench Exercise#3 – – WRITING RELATIONAL & LOGICAL EXPRESSIONS**

**EXTRA CREDIT (10pts) - DUE WEDNESDAY FEBRUARY 21, 2023**

Choose any one of the following programming challenges below for this algorithm workbench extra credit exercise…

1. **Finding median**

Use selection control structures to write a C++ program that determines the median of three input numbers. The median is the middle number when the three numbers are arranged in order by size. However, the user can input the values in any order, so your program must determine which value is between the other two. For example, given an appropriate prompt, if the user enters three "unique" real numbers here is a sample of the console program output...  
Sample screen output 1 using CodeBlocks:

Please enter three numbers:

**41.52**

**27.18**

**96.03**

The median of 41.52, 27.18, and 96.03 is 41.52.

Process returned 0 (0x0) execution time : 10.082 s

Press any key to continue.

5 points possible if you have the above portion of the program working showing the correct median number given three real number input values.  
  
Once you have the three-number case working, extend the program to handle five numbers. An additional 5 extra credit points will be provided if you are able to show the correct median number given five real number input values. Note: You may develop and implement your algorithm incrementally (i.e., with three numbers input and then the remaining two numbers) or choose to write your algorithm based on five input numbers.

***Input Validation:***No input validation is required for this program. Assumption is that the numbers input are real numbers and unique.  
Be sure to use proper program formatting and appropriate prompts to the user in your code. The output should be labeled clearly and formatted neatly. Turn in your source code followed by the program test output, reflecting the median for user input of the numbers similar to the sample screen output given above.  
*(HINT: Construct your algorithm using nested if/else statements with relational and/or logical expressions)*

Use the CANVAS assignment page to upload your completed algorithm along with a sample test output pasted in a multi-line comment at the bottom of your source code. Make sure to also include your name and section number in the comment section of source code submitted.

Since this short programming exercise is "optional" i.e.., not a required assignment and if you have completed assignments 1- 6, the 10 extra credit points earned here will be added as bonus points to your midterm examination point tally for the Spring 2023 session.

Thanks,  Sujan!

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