

Lab Ab Reflections Document

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Design

Prior to drafting a main function, I reviewed the source code for the average and summation .hpp/.cpp files. I ensured I included the code and the redefined the #include statements.

I reviewed the code for the sum and ave functions. I inserted comments and then drafted my main function (LabAbMain.cpp). I shortly realized I could copy the majority of my main function from Lab Aa and inserted the functions from the files provided to us by the TA. ‘

Test Case	Input Values	Driver Functions	Expected Outcomes	Observed Outcomes
Verified the user's input is validated	Entered characters and strings in the place of numbers		Error message and informing the user the input was incorrect and to re-enter a number	Error message printed onto console. And user was forced to enter a value until the system recognized it as a int or double
Array holds the appropriate number of elements wanted by user	Entered various values including less than 0		System to inform the user of the error, if any, and to continue prompting the user to enter numbers until the number of necessary elements was completed	If entered anything but a number or number less than 0 the system informed the user of the error and requested new input. Additionally, the user was asked to enter exactly the number of elements the user wanted in the array to calculate
Ensure the sum value correctly	Entered negative values		For the function to correctly sum	Function correctly

summed the numbers in the array	and positive values		the values in the array	summed all the value. Including when the array held negative values or multiple values of zero (0)
Enter the average (ave) function correctly provided the average of the array	Entered negative values and positive values		For the function to correctly provide the average of the values in the array	

Test values entered and provided:

Test 1

Welcome, this program provides the sum and average of a list of numbers. How many numbers would you like to add to the list?

5

Please provide a number you wish to add to the list: 1

Please provide a number you wish to add to the list: 2

Please provide a number you wish to add to the list: 3

Please provide a number you wish to add to the list: 4

Please provide a number you wish to add to the list: 5

The sum of the 5 numbers you entered is: 15

This average of the 5 numbers you entered is: 3

Program ended with exit code: 0

Test 2

Welcome, this program provides the sum and average of a list of numbers. How many numbers would you like to add to the list?

asdf

You must enter a number. How many numbers do you wish to add to the list?

ga

You must enter a number. How many numbers do you wish to add to the list?

3

Please provide a number you wish to add to the list: -15

Please provide a number you wish to add to the list: -30

Please provide a number you wish to add to the list: 0

The sum of the 3 numbers you entered is: -45

This average of the 3 numbers you entered is: -15

Program ended with exit code: 0

Test 3

Welcome, this program provides the sum and average of a list of numbers. How many numbers would you like to add to the list?

4

Please provide a number you wish to add to the list: -900

Please provide a number you wish to add to the list: 0

Please provide a number you wish to add to the list: 0

Please provide a number you wish to add to the list: 5000

The sum of the 4 numbers you entered is: 4100

This average of the 4 numbers you entered is: 1025

Program ended with exit code: 0