**Scoring Rubric for Project 3 : BubbleSort**

*Due 10/03/2019 @ 3:30 pm*

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| Student Name: Echo Liu |

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|  | **Score** | **Maximum** |
| **Execution (50 pts):** | | |
| Program compiles without errors (warnings are okay) | 50 | **50** |
| **Implementation (40 pts):** | | |
| Uses function declarations as provided | 5 | **5** |
| Main function includes at least one unit test for Swap (can use assert or printed output) | 5 | **5** |
| BubbleSort works for input size of 42 and 47 (all or nothing) | 5 | **5** |
| Use a dynamically allocated array for BubbleSort | 5 | **5** |
| Free the allocated array at the end of Main function | 0 | **5** |
| Complete the BubbleSort unit test | 5 | **5** |
| Use command line arguments to read the array size and the seed | 5 | **5** |
| Measure the execution times of MergeSort and BubbleSort and plot them on a graph | 0 | **5** |
| **Style (10 pts):** | | |
| The driver and functions are easy to follow based on the use of comments | 6 | **6** |
| Easily identifiable variable names | 4 | **4** |
| **Total (100 pts):** | 80 | **100** |

Notes:

The reason the assert was failing for the swap was because you had hardcoded the wrong answer (you put 1000 instead of 100). Since you’re printing the result of your unit test and I can see it worked, I didn’t take any points off. Also, your unit tests should go before the call to bubblesort since you want to make sure the functions work before you use them.

You need to free the memory at the end of the program like delete [] array; array = nullptr; The first statement frees the memory that stores all the array values, and the second statement ensures that array will not be a dangling pointer.