Homework 0 – Practice & Review

100 Points

One Dimensional Arrays

Assignments & Grading

A. 20Points – Search: Find and fix errors	// **22B_H_0A.cpp**
B. 20Points – Sort: Find and fix errors	// **22B_H_0B.cpp**
C. 60Points – Exam Statistics	// **22B_H_0C.cpp**.

Run each program as required and save the output at the end of the source file as a comment. Compress the source file, input, and output files (if any) and upload the compressed file: 22A_LastName_FirstName_H0.zip

Project Exam Statistics

Here is what your program will do: first it welcomes the user and displays the purpose of the program. It then prompts the user to enter the name of an input file. Assume the file contains the scores of the final exams; each score is preceded by a 5 characters student id. Test your program with the following data:

scores.txt

```
DH232  89
DR123 100
AJ222  98
SW111  45
12AB1  82
516BC  99
2ABCD 100
333XY  92
TY4XZ  45
AC234  78
9QWE9  45
JP200  89
AK323 100
```

The program does the following:

- Reads data from an input file into two parallel arrays.
- Sorts the arrays in ascending order by student ID.
- Writes the sorted arrays to another output file named **scoresOut1.txt**
- Sorts the arrays in descending order by score.
- Writes the sorted arrays to an output file named **scoresOut2.txt**
- Displays the highest score in the array and the ids of the students with that score.
- Displays the lowest score in the array and the ids of the students with that score.
- Displays the total number of students in the array
- Displays the class average.

Design: Define and call functions: each function should be in charge of a single task, such as print a welcome message, read data from file into two parallel arrays, sort by score, sort by id, write to file, etc.

Extra Credit 1: This assignment does not have to be submitted. However, if you do submit it on time and if it is perfect, you will earn your first Extra Credit Point!