Lab 7

Deadline 11:59PM Nov 13

Descriptions

This lab will build upon the previous lab. We will add a few more options to the previous lab. The requirements of the previous lab stays the same including how to filter students using GPA. However, we will add 3 more options using only merge sort. The input file format will stay the same.

Requirements

1. We will add option 4, 5, and 6. Specifications are in following requirements.
2. Option 4 will print to a file and sort domestic student based on GPA. If the tie occurs, then we will use the first name as the next sorting criteria. If the tie occurs, then the last name will be used.
3. Option 5 will print to a file and sort international students only. However, the sorting criteria will be, GPA > TOEFL > First Name > Last Name.
4. Option 6 will print to a file and sort all students. The sorting criteria remains the same as the above.
5. The first argument is the intput file namd and the second argument is the output file name. The run command will be ./a.out <input file> <output file> <option>
6. You will write sort.c and sort.h, which will have declarations and implementations of the sorting algorithm. I will not dictate the input parameters, but it must be a merge sort.
7. There will NOT be corner cases in this lab testing.
8. Assume that everyone has a first name and last name.
9. Assume that the maximum number of characters per line will be 50 (for those of you using fgets).
10. Make sure to run your code in debug run. Your code must exit with exit code 0. A code failed to run due to not checking in debug mode will result in penalties.
11. Your main function is in lab7.c.

Grading

This lab will be marked out of 5. For full marks this week, you must:

- (1 point) Correctly use git/GitHub and the repository following the handout
- (3 points) Generate a correct solution to the problem(s) in this lab
- (1 point) Reasonable comments that explain functions and variables

Submissions

1. Github link is posted on Learning Hub
2. lab7.c (lower case)
3. file_handler.c/file_handler.h
4. sort.c/sort.h
5. AXXXX.txt (empty file, but with you're A number as file name)
6. Your main function must be in lab7.c.

7. If you have any other auxiliary files (.c and .h), please include them in thie github as well.
8. Do not use subdirectories. All files must reside in the top source directory.