Lab6
Deadline: In lab on Nov 9

Requirements
You are required to write a program that reads the content of a file. The number of lines in the file is not known (it could be thousands of lines). The format of each line is:
FirstName LastName GPA Status TOEFL

Sample input:
Mary Jackson 4.0 I 60
Jack He 2.45 D
….
Mike Johnson 3.125 D
Jane Zhang 3.8 I 120

Implementation Details
1. Your program should read all the lines and store each line as a struct named DomesticStudent and InternationalStudent.
2. Your program should then write to an output file a list of students whose GPA is greater than 3.9 to a file. GPA can be up to 3 decimal places.
3. An international student has a TOEFL score ranging from 0-120. If the international student has a TOEFL score less than 70, then it should not be written to an output file. TOEFL is an integer.
4. DomesticStudent struct does not have the TOEFL field.
5. I stands for an international student and D stands for a domestic student in status column.
6. The order of students must be the same order as in the original file.
7. If the format of a student does not conform the specified format, your program must write an appropriate message to an output file and exit.
8. 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>
9. The option field is the command line is an integer (1, 2 or 3). Here are descriptions of options and outputs only those students that meet the requirements of the above.
    a. 1 only saves the filtered output of domestic students (no international students in the output file)
    b. 2 only saves the filtered output of international students (no domestic students in the output file)
    c. 3 only saves the output of all students
10. You must handle corner cases with an output messages that contains “Error: XX”. This must be written to an output file.
11. Assume that everyone has a first name and last name.
12. Every line must end with \n including the last line in the output with no extra trailing spaces.

How to Compile and Run
```
gcc lab6.c -o <output executable>
```

```
./<executable> <input file> <output file> <option>
```

Grading

Any grading failure due to not following instructions will result in 0. You will get one chance to show your work to the instructor.

- (1 point) All files are submitted correctly using the instructions.
- (3 point) Generate a correct solution to the problem(s) in this lab. 3 test inputs will be used.

Submission Files

- You must submit only one file named to Learning Hub: **lab6.c**
- Submit it to learning hub before the deadline