

Problem 1:

Using good coding practices, write a program that compares the contents of two “.txt” files and then saves the properties of the files in another “Properties.txt” file. The properties of the each file should include the name of the file, the number of characters, the number of words, and a sentence stating if one file has more lines than the other or the same amount of lines.

Your program should prompt the user for the name of the files. Use operator overloading to write functions that compare both files by the amount of lines such that `(file1 > file2)` returns true if `file1` contains more lines than `file2` and false otherwise. Similarly `(file1 == file2)` returns true if the files contain the same amount of lines.

Figure 1 shows a sample output for the given `file1` and `file2`.

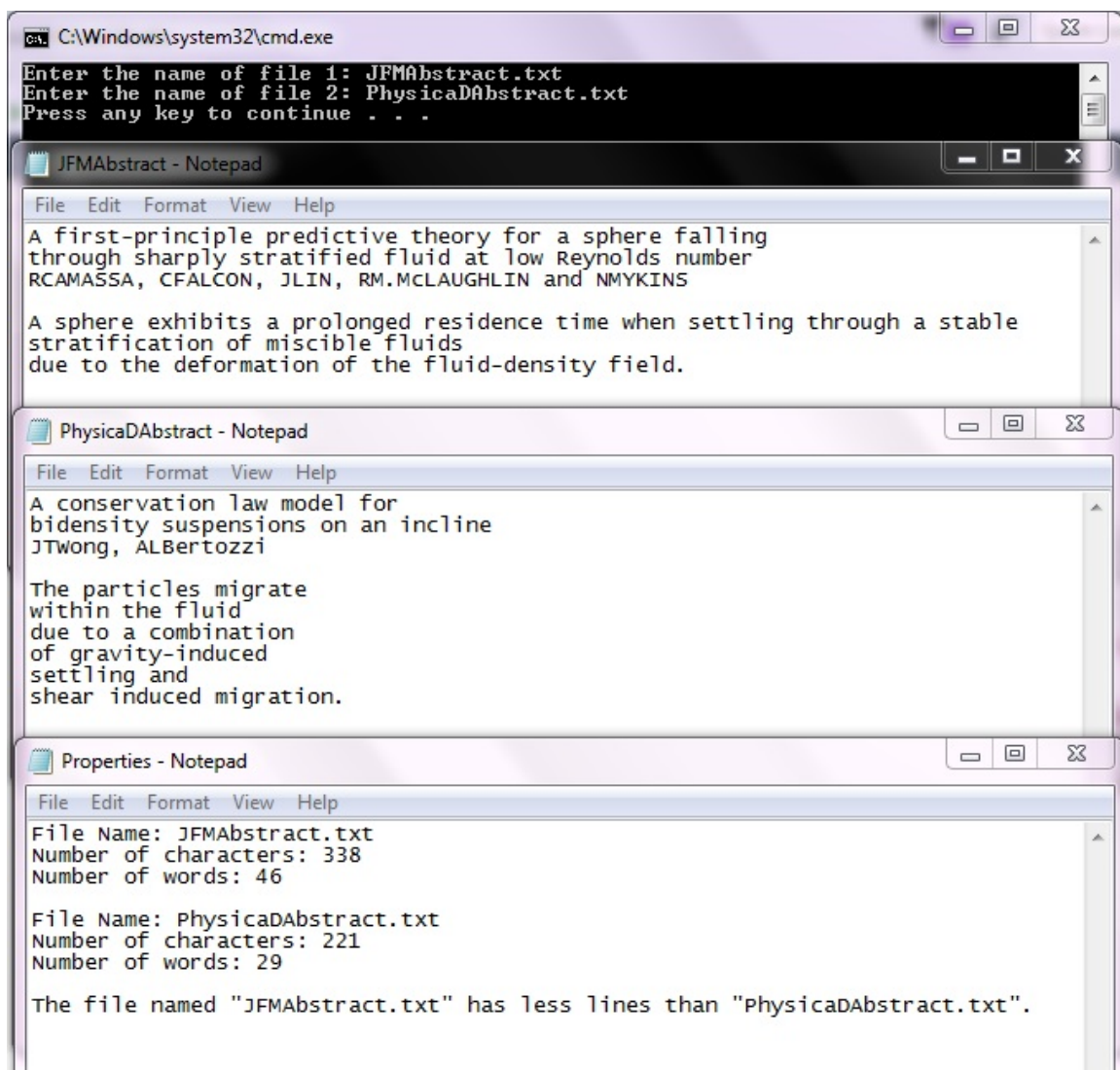


Figure 1: Homework 3 sample console, input files “JFMAbstract.txt” and “PhysicaDAbstract”, and resulting output file “Properties.txt”

Good Coding Practices:

- think about cross-platform. Don't use Windows or Mac only commands. For example, `pause == cin.get()` twice, write many `\n` vs. `system('clear')` or `system('cls')`.
- passing objects by reference `&` or `const &` when possible
- using field initializer list when possible in all constructors

Instructions for submission:

- Name your file exactly `hw3.cpp`, `textfile.h` and `textfile.cpp`.
- You may not use `#include "stdafx.h"`.
- Add code description in the comment at the beginning of the file.
A sample description may look like:

```
/*  
    PIC 10B 2A, Homework 1  
    Purpose: Tic-tac-toe game  
    Author: Hanqin Cai  
    Date: 10/10/2019  
*/
```

- Submit your header files and source codes to CCLE in separate files. Only `.h` and `.cpp` files should be uploaded.