CS 135
Exercise #10
Point value: 40
Date due: email your source file (.cpp file) to your lab instructor by 11:59pm Sunday, April 2

New Skills Practiced (Learning Goals)

- Problem solving and debugging.
- User-defined functions.
- C++ strings.

Design a program that will read a series of titles from an input file (via Linux redirection), one per line.

The titles will be in an unorthodox mix of upper and lowercase letters and words may be separated by more than 1 blank.

Reformat each title so that

- the first character (if it is a letter) of each word is capitalized and all remaining letters are lowercase
- each word is separated by exactly one blank space

For example, "thE CAT in tHe hat" becomes "The Cat In The Hat".

REQUIREMENTS

- At least one function (in addition to main) must be used.
- The string data type must be used.
- Never use global variables.
- Never use goto statements.
- File can only be read one time.

The required output (displayed to the screen) from the program is

- your name, lab and lecture section #s and exercise #
- a list of the reformatted titles, one per line

ASSUMPTIONS

- The input file will not be empty.
- There will be one title per line.
- Each title will consist of 1 or more words.
- There will be no leading spaces before the first word in the title.
- There will be at least 1 blank space between each word (there may be more).
- There will be a linefeed after the last character of the last word in a title (no trailing blanks).
- The program need only attempt to capitalize the first character of a word. For example, if a word in the title is "9TH", it should be reformatted to "9th". In other words, the program does not have to find the first letter in a word and capitalize it.

When the program compiles and runs correctly, use the mail utility to email a copy of the program file to your lab instructor. Make sure the subject line of your email includes your name, lecture and lab section #s, and the exercise # if you wish to receive full credit.

NOTES:

- Make sure you choose enough test data to ensure that your program meets all the requirements.
- It is a good idea to send a carbon copy to yourself (-c option) of all emails sent to your lab or course instructor when using the mail utility.
- A comment with your name, lecture section#, lab section#, and exercise# should be at the start of your program file.

Sample terminal session:

```
[lee@bobby exercises]$ more data4ten
the       5TH    wAVE
the  cAT  in thE   HAT
onE fish two FISh     red fISh bLuE Fish
[lee@bobby exercises]$ g++ exercise10.cpp
[lee@bobby exercises]$ ./a.out < data4ten
Lee Misch  Lec# 10__  Lab# 10__   Exercise #10
The 5th Wave
The Cat In The Hat
One Fish Two Fish Red Fish Blue Fish
```

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