**C and C++ Strings**

**Introduction**

This lab uses a combination of C strings and C++ strings. In particular, you will have to use one or more functions from table 10-1 on page 558, 10-2 on page 561, and the concepts from sections 10.4 to 10.6 for C strings. You will also have to understand the concepts of pointers in working with C strings.

For C++ strings, you will have to use functions from table 10-9 on page 598.

**Problem**

When a new student comes to Truman, ITS needs to generate a username for the student’s network and email accounts. This program models that process.

[Here](http://borax.truman.edu/180/lab13strings/framework.cpp) is a C++ program that does the following:

1. Opens the data file that is named on the command line, which contains the names and ID numbers of students.
2. Reads the file line-by-line, with each line containing a comma-separated list of an 8-digit ID number, a first name, and a last name.
3. Splits each line on the comma to get a vector of three tokens.
4. Generates a username consisting of the first name first initial, last name first initial (both lower case) and last four digits of the ID number.
5. Creates a new file with lines corresponding to the input consisting of the last name, a comma and space, the first name, and the new username in a column.

[Here](http://borax.truman.edu/180/lab13strings/students.txt) is a data file you can use to test the program. A run of the finished program produces no output to the screen. It generates an output file that looks like this:

Howerton, Chuck ch3524

Neighbors, Seymour sn2611

King, Sarah sk9177

Furtivo, John jf1967

de Marco, Donald dd6121

Liao, Christine cl7402

Somerfield, Lana ls7259

...

There are two tasks. First, the split function is incomplete. It finds the first token correctly, but you need to make it find the second and third token, and add them to the vector of strings.

Second, you need to complete the code of the main program to make it do the tasks described above.

Inside the while loop of the main function, you should use C++ strings and their functions. In the split function, you should use only C strings and their functions.