

CS1050 – Prelab 9

Fall 2019

Concepts to Practice

- String Functions
- File Processing

Description

For the prelab assignment, you need to read a “comma-separated value” file (also called a “CSV” file). The input file will be called “prelab9.dat”. A sample is provided on Canvas and can be downloaded. This type of file can be opened by spreadsheet programs such as Microsoft Excel, but you can also open it with a text editor like VIM or Notepad.

The CSV file consists of some number of lines with a student’s last name, first name, student number, pawprint, and score separated by commas on each line. For example, the following line:

```
RIES,JAMES,423566,jer676,99.00
```

means that a student named JAMES RIES has a student id of 423566, a pawprint of “jer676”, and got a score of 99.00 on this particular project.

Your program should read in all of the data, printing out what each line means. For example:

```
FirstName=JAMES,LastName=RIES,StudentNumber=423566,Pawprint=jer676,Score=99.000000
```

would be printed for the data shown earlier.

After all lines of data have been read, you should print out a count of how many students are in the file as well as the average score for this group of students.

Functions You Must Write

You may write any functions you wish to implement this program. When I implemented it, I wrote a main() as well as a function to read in a single “field” – I then called the function that reads in a single field inside a loop in my main in order to get all of the data.

Important Note

You may **not** use scanf, sscanf, nor fscanf. The goal of the prelab is for you to use the lower-level tools to parse this data file on your own.

Sample Output

```
jmr@JimRHadesCanyon:~/CS1050/FS2019/lab9$ compile prelab9.c
jmr@JimRHadesCanyon:~/CS1050/FS2019/lab9$ ./a.out
FirstName=JAMES,LastName=RIES,StudentNumber=423566,Pawprint=jer676,Score=99.000000
FirstName=LAWRENCE,LastName=RIES,StudentNumber=459006,Pawprint=riesld,Score=23.500000
FirstName=LAURA,LastName=RIES,StudentNumber=123456,Pawprint=rieslc,Score=95.750000
FirstName=GRIZLY,LastName=ADAMS,StudentNumber=654321,Pawprint=grizz,Score=57.250000
FirstName=ADAM,LastName=WAINWRIGHT,StudentNumber=652031,Pawprint=waino,Score=72.000000
FirstName=SACHEL,LastName=PAIGE,StudentNumber=999999,Pawprint=dontlookback,Score=99.750000
```

```
Count of students=6
Average Score=74.541667
```