CSI 2372 – Lab Task 9

Abdorrahim Bahrami

streams in C++

Your task in this lab is to get yourself familiarized with streams and particularly with file streams in C++. Also, you will see that C++ is a language that both structural and object-oriented style of programming are available. Namely, you do not have to write a class to have a program. In this lab, you can just write a main program that reads the binary file CSI2372.info, this binary file contains the following information for some students

The first name of the student (Separated by a ; from Student Family)
The last name of the student (Separated by a ; from the student ID)
An integer which represents the student ID of the student
A double value for the mark for all labs in total (out of 11)
A double value for the mark for assignment 1 (out of 30)
A double value for the mark for assignment 2 (out of 30)
A double value for the mark for assignment 3 (out of 30)
A double value for the mark for assignment 4 (out of 30)
A double value for the mark for assignment 5 (out of 30)
A double value for the mark for the term test (out of 15)
A double value for the mark for the midterm (out of 20)
A double value for the mark for the final (out of 30)

Note that this is just information of one student. You should read the whole file, which contains this information for many students written one after another.

Your task is to create a new binary file named CSI2372_final.info, that organizes the file above as follows

An integer which represents the number of characters in the first name of the student
The first name of the student
An integer which represents the number of characters in the last name of the student

The last name of the student
An integer which represents the student ID of the student
A double value for the mark for all labs in total (out of 11)
A double value for the mark for assignment 1 converted to a grade out of 5
A double value for the mark for assignment 2 converted to a grade out of 5
A double value for the mark for assignment 3 converted to a grade out of 5
A double value for the mark for assignment 4 converted to a grade out of 5
A double value for the mark for assignment 5 converted to a grade out of 5
A double value for the mark for the term test (out of 15)
A double value for the mark for the midterm (out of 20)
A double value for the mark for the final (out of 30)
The total mark of the student for the course out of 100
The letter grade of the student (Exactly two characters, if the grade has only one character, the second character is space, otherwise it is – or +)

This is how the letter grade is computed at university of Ottawa

The final mark >= 90	A+
85 <= The final mark < 90	A
80 <= The final mark < 85	A-
75 <= The final mark < 80	B+
70 <= The final mark < 75	B
65 <= The final mark < 70	C+
60 <= The final mark < 65	C
55 <= The final mark < 60	D+
50 <= The final mark < 55	D
40 <= The final mark < 50	E
The final mark < 40	F

A sample of CSI2372.info is available for you. You need to submit both your cpp file and CSI2372_Final.info