|  |  |
| --- | --- |
| CETN 3010 | PROGRAMMING IN C |

ASSIGNMENT #5 – File IO

**Assignment score: 20 points**

**Due: Friday, Dec 15th, 2015 @ 12:30PM (ie, by end of Class)  
Value: 15% of course mark**

# You will continue building on your student entry application from Assignment 4 and add the following functionality.

# General Requirements

1. **Prompt the user to load student data from an existing file, or to ask for the number of students to enter into the program (4 points)**

In the previous assignment, you began the application by asking the user to enter the number of initial students in the application. You will now modify your application to prompt the user to decide whether they would like to load data from a text file or enter new data from scratch.

Welcome to our student information program.

Choose from the following options:

1 – Enter data from scratch into the system

2 – Load data from an existing file

Your choice: 1

If the user chooses the first option, then it’s business as usual with the functionality that you created in Assignment 4:

How many students do you wish to enter?: 3

…and so on

If the user chooses the second option, then they’ll need to be prompted for a file path

What is the file path of the file you wish to load?: c:\students.txt

1. **Add ability for students data to be loaded from a text file (8 points)**

You’ll need to be able to open the text file that you specified in the prompt from the first step. Your application will figure out based on the contents of the file, how many students are to be loaded into the program. This means that you’ll likely need to have the file contents follow a specific expected format.

You’re welcome to specify whatever format you wish but if you’re not sure, here’s a suggested text file contents format:

John

Doe

1995

4

25

123 Main St.

Halifax

95

Donny

Smith

1998

7

28

345 Happy St.

Dartmouth

80

Shelly

Jones

1980

9

23

789 Slippery Blvd.

Sackville

79

1. **Add a seventh option to the menu which allows saving of data to a file (8 points)**

You’ll add the ability for the program to save the data that was loaded into the program back to a text file. This could be the same text file from which you initially loaded the data, or it could be a different file that the program will be responsible for creating.

1 – Display all students’ names only

2 – Display all students and their dates of birth

3 – Display all students’ data

4 – Display the average grade for all students

5 – Display the student(s) with the highest grade

6 – Add another student

7 – Save student data to file

Your choice: 7

Please enter the name of the path file: c:\myfiles\students.txt

Data saved to c:\myfiles\students.txt

# Submission

You will submit this assignment via time-stamped commits to GitHub.

# Instructions

1. **Don’t forget that a code review is part of this project. You will need to show your code to the instructor in class on the due date while going through an evaluation of the application’s functionality. You will need to explain how the code works and complete the code review part of the rubric.**