C291 – System Programming in C and UNIX
Assignment 4

Task:

Write a C program to create array of students in C291. Each student will have two struct namely personal details and class record.

Personal details has the following attributes

- Name
- Contact no
- Address

University record has the following attributes

- Assignment
- Mid term
- Final mark
- Total

User should able to do the following

- User will input no of students that the user wants to create. (maximum of 3-5 students).
- User can update personal record and university record of a particular student
- Assign mark to individual students
- Once the mark is assigned, the program should calculate total marks.
- You should have a variable called average which gets updated automatically.

Sample Output:

Enter the no of students to be created: 1

1 student created.

Enter your option

1. Update record
2. Print all student record
3. Find out average of class
4. Exit

1

Enter student no: 1

Enter your option

1. name
2. contact no
3. address
4. assignment
5. mid term
6. final
7. Go back

1

Enter student name:

C program

Press number to update student record

1. name
2. contact no
3. address
4. assignment
5. mid term
6. final
7. Go back

7

Enter your option

1. Update record
2. Print all student record
3. Find out average of class
4. Exit

4

Program design:

All your struct definition should be in a separate file "student.h". Create functions to perform all operations in "operations.c". Client file "client.c" should display all options. Client.c will call function in operations.c to perform any operations like update record, print all student record and find out average of class.

NOTE: You are required to code only in open terminal. You should not use any IDE.

If you implement search student record using name you will get bonus point. The maximum bonus point 50 pts.

Due Date:

The submission is due on Monday 10/08/2015 11:59 PM

What to turn in:

Upload .c and .h file in canvas. We'll grade whatever version you've put there at 11:59PM on the due date.

Academic Integrity:

You may discuss the assignment with other people at a high level, e.g. discussing general strategies to solve the problem. You may also consult printed and/or online references, including books, tutorials, etc., but you must cite these materials in report. However, if you are submitting the code, then it must be your own work, which you personally designed and wrote. You may not share written code with any other students, nor may you possess code written by another student either in whole or in part, regardless of format. The professor and AI's are always available to help, so reach out through canvas if you need one!

Rubric:

- You will get 50% of total marks on successful compilation of program without any errors
- You will get 70% of total marks on successful execution of program
- You will get 90% of total marks on passing all test cases
- You will get 100% of total marks based on your code clarity
- The following falls under clean code
  - Proper names for variables.
  - Follow camel case patterns.
  - Comment where ever needed
  - Check for valid inputs & valid range
  - Output unambiguous & user friendly messages