

Practice Lab Eleven
(You have to solve all the problems)
Total Problems: Four

Task One: Surprised

In the previous lab, we solve the same problem. However, in this lab, you just need to take the input from a file instead of the console. Moreover, you must print the output into a file(say task_one_output.txt).

Define a structure, named StudentInfo, with the following members: name, roll, cgpa, marks of five lab marks of Fundamentals Programming Lab(you must use array to store these marks). Take N students' information from file, where the range of N is [10,200]. Now solve the following problems:

- I. Print N students Info [1]
- II. Print student(s) info, who has the highest cgpa [1]
- III. Print the students' info, who has the highest and lowest average subject marks. [1]
- IV. Print the students' info, who has the highest and lowest marks in any of the five subject marks. [1]
- V. Take a student roll as an input from the console and print the student info with that roll. If you can not find any students with that roll then print "No Student Found" [1]
- VI. Take a student name str_name as an input from the console. Then print all the students info, where str_name is the substring of any students name. If you can not find any students with that str_name as substring then print "No Student Found". [1]

* In task(II-IV) If multiple students have the same criteria(i.e. highest cgpa or mark) then print all of the students' info.

* A sample Input file is given bellow:

student_info.txt
3
Anik
48
3.89
78 96 85 80 35
Tanvir
50
3.75
78 89 65 80 90
Sanjay
2
3.90
85 80 95 96 92

Task Two: Ghajni

Implement a VECTOR to store integer values. A VECTOR is an array that can automatically double(two times) its size whenever it is full.

You just need to take integer input from user(until user give -3339) and store the value in the VECTOR, however, if the VECTOR does not have any space to store a new value then you have to double the size of VECTOR and store the new value.

Task Three: Grace

Suppose the lab marks of your section is so poor that your teacher decides to give 10 marks grace!!. Your teacher is so busy to check your incourse exam scripts. Hence, your teacher wants your help to write a program, which will grace all the students' lab marks by 10. Suppose you have a file which contains the information of a list of students like the **task one**. Now you need to take the students information as an input from a file(say student_info.txt) and give grace to all students marks by 10(max total marks will be 100). After that write the updated students' information in the same file.

Task Four: Save Ghajini Again

Suppose you have a file contains a list of students data[ID, name, marks] of Fundamentals Programming Laboratory. After two weeks new students enrolled in this section, so you have to add these new students information to the existing file. In this task, you just need to input the new student information from the console until you type "END". Add the information to the existing file.