Student Information (Main Structure)

1. Basic Information (Nested Structure-1, under Student Information)

1. Name (String)
2. ID (Integer)
3. Email (String)
4. Phone Number (Integer)
5. Address (String)
6. Date of Birth (String)

2. Previous Education Information (Nested Structure-2, under Student Information)

There will be only 2 records: SSC/ O-level and HSC/A-level

1. Institution (String)
2. Year (Integer)
3. Grade (Float)

3.My Information (Nested Structure-3, under Student Information)

1. Department (String)
2. Number of Semester Completed (Integer)
3. Previous CGPA (Float)
4. Semester(Nested Structure-3a, under My information)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a.Semester Name (String)  b.Number of Course (Integer){One student take at most 6 courses or 15 credits}  c.Course(Nested Structure-3a 1, under Semester)   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | a.Course Name (String)  b.Faculty Name (String)  c.Credit Number (Integer)  d.Total(Nested Structure-3a 2, under Course)  Total should have 100 marks. Then you have to convert that value based on below percentage.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | HW [20%](Average of 3 HW)   |  | | --- | | HW-1 (Integer) | | HW-2 (Integer) | | HW-3 (Integer) |   Presentation[30%](Average of 2 Presentation)   |  | | --- | | Presentation-1 (Integer) | | Presentation-2 (Integer) |   Attendence[20%]  Lab[30%] | | |

You have to do solve this problem. For that take some user inputs. You also have to store all the data in a text file (student\_info.txt) by writing those data using FILE.

Then, you have to write some in different text file as below-

|  |  |
| --- | --- |
| Student\_grade.txt | Name, ID, Course\_Name, Grade |
| Student\_cgpa.text | Name, ID, Course\_Name, New\_CGPA |

Here the Grade and New\_CGPA are new data. You have to calculate and evaluate these form all the data you have taken from the user input. I’ve attached the grading system.

Lastly, in a separate program file you write a code where a user will give an input of a course name and you have to show (Name, ID, Course\_Name, Grade) this which have only that particular course name. For example, if user input is ENG104, then you have to print (Name, ID, Course\_Name, Grade) that have course name ENG104. Of course, you have to read those data from Student\_grade.txt for printing .

Point to be noted:

1.For one student every data will in a single row when you write those data in the text file. Just there will be space between different data. Next student’s info will be in the next line.

2.There will be no white space in a string. If you have to use multiple words in a data, you have to use underscore (\_) between those words.

Grading system:

|  |  |  |
| --- | --- | --- |
| Scores | Grade | Points |
| 93+ | A Excellent | 4.0 |
| 90 - 92 | A- | 3.7 |
| 87 - 89 | B+ | 3.3 |
| 83 - 86 | B Good | 3.0 |
| 80 - 82 | B- | 2.7 |
| 77 - 79 | C+ | 2.3 |
| 73 - 76 | C Average | 2.0 |
| 70 - 72 | C- | 1.7 |
| 67 - 69 | D+ | 1.3 |
| 60 - 66 | D Poor | 1.0 |
| Below 60 | F\* Failure | 0.0 |