Project Description

Miss Anita Kakar wants me to design and come up with three aspects of a project. With Year 7-10, getting their average of four main subjects: Hass, Math's, English and Science and also the program will have to determine whether they belong in AP or in mainstream, for Year 11-12 General calculate their GPA, for their at least three subjects and the number of C’s that they have, and for the most complicated phase of this program, Year 11-12 Atar, calculating their Atar of at least four subjects, show the raw score and then the scaling of each subject, after the scaling their calculated C’s if its less than 8 in year 11 or less than 6 in year 12 highlight that for both general and Atar and recommend to call that individuals parents because he/she will not be able to graduate.

The number of C’s are calculated with each of their subjects giving two C’s only if they achieve 50% or more in that subject throughout the year and they must get the minimum to graduate. For year 7-10, the program should differentiate between the AP form the mainstream with the top 25 achievers going into AP for each of the four subjects. Miss Anita wants this program to professionally carry out its calculations without any errors and stand out the individuals in year 7-10 that don't pass any of their four main subjects and for year 11-12 the individuals who get below 8 C’s in 11 and 6 C’s in year 12 after the first semester so she can invite their parents to have a chat and advise them about their son/daughters future and get them to study harder!

In this program the only complexity is to calculate the year 11-12's C’s, especially the general students who do VET Courses with general courses get four C’s instead of two,

Requirement List

For Year’s 7-10

|  |  |  |
| --- | --- | --- |
| Features | Priority | Tasks |
| Calculate the average of the four Subjects | Must have | It will take the four subjects and divide them four |
| Differentiate between AP and mainstream | Must have | Take the top 25 students and show that |
| Show if they made it to AP or not | Should have | It would show the top 25 achievers if they had made it to AP |
| Show the previous terms/semesters marks and gpa | Must have | Shows the previous terms gpa and marks unless it's the first term |
|  |  |  |
|  |  |  |
|  |  |  |

For Year’s 11-12 General

|  |  |  |
| --- | --- | --- |
| Features | Priority | Tasks |
| Calculate their C’s | Must have | Takes all the subject, if they passed it, they would two C’s unless for the VET course where they would get four |
| Calculate their GPA | Must have | Take the six subjects add all of them and divide by six |
| Show if they are passing their subjects | Should have | If they got 50% or more, they would see that in the result |
| Show the previous terms/semesters marks and gpa | Must have | Shows the previous terms gpa and marks unless it's the first term |
|  |  |  |
|  |  |  |
|  |  |  |

For Year’s 11-12 Atar

|  |  |  |
| --- | --- | --- |
| Features | Priority | Tasks |
| Calculate their C’s | Must have | Take all the subjects, if they passed it, they would get two C’s. |
| Scaling their top 4 Atar’s | Must have | Takes the top four Atar subjects and uses a set calculator to calculate. |
| Calculate their TEA | Must have | Use a TEA calculator to show their score |
| Show the Raw marks | Must have | Just show what they got in a certain subject prior to scaling |
| Show the scaling | Must have | Shows the percentage that adds or subtracts their marks and scales |
| Show the marks after scaling | Must have | After scaling their marks |
| Show if they did or didn't pass Applied Islam | Must have | Just show if they passed(achieved) or failed (not achieved) |

Show the previous terms/ Must have Shows the previous terms gpa and marks unless it's the first term Semesters marks and gpa

Planning Document

Task list:

Start date: 18/11/24

Week 1 (18-24)

Documenting the requirements (18-19)

Outlining the functionals and the must have’s (20)

Planning a Gannt chart and making the list to put in it (20-21)

Writing an algorithm in structed English, outlining the approach (21)

Handing in the first sprint (22)

Implementing the core functionality-based on the initial requirements (23-30)

Week 2 (24-2)

Implementing the core functionality-based on the initial requirements (23-30)

Fully started to be implementing the final client’s specifications (25-3)

Start to document (26)

Going over and implementing good programing practices (25-28)

Doing the methods and the data processing (29)

Client feedback session (whenever possible)

Fully started to be implementing the final client’s specifications, the final program (27-3)

Week 3 (2-9)

Fully started to be implementing the final client’s specifications, the final program (27-3)

Document any security concerns (2)

Do the online comments, user manual and a developers guide (3-4)

Present the program and submit a reflection and overview of this project (6-9/10)

Algorithm/Structured English overall logic of this program

For Year 7-10 students:

The program asks for an input of a file that will consist of student's name, id, year, and subject marks and stores them in an array of variable(s).

The program uses the data to calculate one student at a time

The program then takes those students all four subject marks, adds them all first and divides them by 4 to get their GPA.

The program prints/shows their four marks, then their calculated GPA.

The program will then show the previous term marks and gpa before this current term.

The program then Carrys a function where it takes the entire (Boys or Girls at once) cohorts GPA’s and give the client who uses it the top 25 in the cohort for the AP’s.

At the end of the year if will take the averages of the subjects from semester one and two and show that at the end of the years result

For Year 11-12 General students:

The program asks for an input of a file that will consist of student's name, id, year, and subject marks and stores them in an array of variable(s).

The program uses the data to calculate one student at a time

The program first calculates their GPA using all their subject marks including the VET courses and divides them by six

The program shows if they are /or not passing in a certain subject

The program will then show the previous term marks and gpa before this current term.

At the end of the year if will take the averages of the subjects from semester one and two and show that at the end of the years result

For Year 11-12 Atar students:

The program asks for an input of a file that will consist of student's name, id, year, and subject marks and stores them in an array of variable(s).

Then the program asks for a file that has all the subject's scaling's.

The program uses the data to calculate one student at a time

The program calculates the raw marks and subtracts/adds/ or show the same marks

The program shows if they passed or failed based on the calculated marks after the calculation.

The program will just show if they achieved, meaning passed and got the two C’s or not achieved meaning failed and got no C’s

The program will then show the previous term marks and gpa before this current term.

`