1)subject name must contain Alphabetic characters and spaces(not start with space)

2)subject code:6-7(3characters+3numeric and the sevens bit is s if exist) as follows(cse123)or(cse123s)

3)Full mark is 100

4)student name: must contain characters and space (not start with space)

5)student ID: (8 numeric characters) or (7 numeric characters +1 alphabetic char)(12345678 or 1234567D)

6) Student Activities mark: It is an integer of a value from 0 up to 10 of the full mark(100) as(7/10)

7)Oral/Practical mark: It is an integer of a value from 0 up to 10 of the full mark(100) as(8/10)

8) Midterm exam mark: It is an integer of a value from 0 up to 20 of the full mark (100) as(15/20)

9) Final exam mark: It is an integer of a value from 0 up to 60 of the full mark(100) as(54/60)

And the total will be (84/100)

10) the application has input file first line of each page of the file contain the subject name, subject-code and the full mark of that subject where each of their fields are separated by comma “,”(Software Testing,cse123,10,10,20,60)

11) then all lines stating from second line of each page of the file contains the following items Student name, Student number, Student Activities mark, Oral/Practical mark, Midterm exam mark and Final exam mark

(Ahmed Ali,1234567s,8,9,18,52)

12)the output file of the application should contain in first line of each page : “Subject Name:” subject-name “Max Mark:” full mark then

13)The line after contains a head of the table which is: Student name Student number GPA Grade Each of the following lines contains the Student name, Student number, his GPA and Grade separated by spaces.

14)calculate GPA according to this table

A picture containing text, screenshot, number, font

Description automatically generated

15) Build the described application using JAVA. Make sure to validate that each of the input is fulfilling the requirement before any processing.

16) You need to test each unit of your application separately.

17) White box, data flow and black box testing are required

18) Integration testing is required as well