

# Requirements Document *for* **University Result Portal**

**Clients**

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## Problem Statement

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Create an application to display the student exam result of each semester. The result must contain the details like subject name, credits, grade obtained, grade point, CGPA and SGPA of the particular student. The application should be able to display the basic details of the student including his CGPA.

## Console Based Application Requirements

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1. To build a console-based menu driven application which allows a student to login using their university ID number and password to check their result.
2. The application has an admin login, the admin is responsible for inserting the details and maintaining the database.
3. The details are provided in a text file and must be validated before inserting the records.
4. Students can check the result, either semester wise or complete result as a whole.
5. The complete result would show the aggregate of only the released results.
6. According to the semester number selected, the semester result must be displayed with fields like course code, subject name, credits, marks, grade and SGPA.

### Result Calculation Formulae:

**SGPA: (Grade points \* credits)/Sum of all credits**

**CGPA: (Sum of SGPA)/ Number of semesters**

Grade	Grade Points	Range
O	10	85-100
A+	9	80-84
A	8	65-79
B+	7	60-64
B	6	50-59
C	5	45-49
P	4	40-44
F	0	<40
Ab	0	-

## Database Requirements

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1. The application is to be made for a single university with engineering as their sole course.
2. The total number of semesters are 8 and the number of branches is 3, each having various subjects.
3. Student will have unique ID number, name, phone number, parent number and blood group.
4. University offers different subjects for each semester which have unique course code, course name, credits and semester number in which it's offered.
5. Students get enrolled to respective subjects in each semester.