

CSE 3063 OOSD - FALL 2022

JAVA PROJECT

REQUIREMENT ANALYSIS DOCUMENT

STUDENT MANAGEMENT SYSTEM

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1. Vision:

The Student Management System coordinates the timing and communication between faculty members regarding students. This system is a simulation prepared upon the course registration of the students and the advisors' approval of this registration process after certain checks. In addition, courses and curriculum are determined, students can see their grades, and include student, instructor information.

2. Problem Description:

The problem is the software implementation of course registration and course passing processes during the undergraduate programs of the students. Solving problems such as course conflicts, taking courses from previous or next semesters, credit problems, course pass status checks encountered during the course registration process.

3. Requirements:

3.1 *Functional Requirements:*

- Registers new students.
- Register lessons and labs for a particular semester.
- Records the course details and subject information.
- Records the number of students attending to courses.
- According to syllabus, sets the course limit for students.
- Assigns an advisor to each student.
- Advisors arrange schedule of the students according to rules stated.

- Considers only solid lines in prerequisite tree.
- Records the grades of students.
- Considers final grade and total course grade
- Advisor allows course selection based on the curriculum and student's total credit
- Calculates the grade point average of the students for each course and determines the letter grade.
- Calculates the pass grade for each course.
- Determines the pass or fail status according to the student's grade.
- Simulates the registration process for all students.
- Enrolls each student randomly for a course for her semester.

3.2 Non-Functional Requirements:

- Performance:

The performance of the functions and every module should be well.

- Scalability:

The system should be able to handle inputs of varying sizes.

- Compability:

The system must be platform independent.

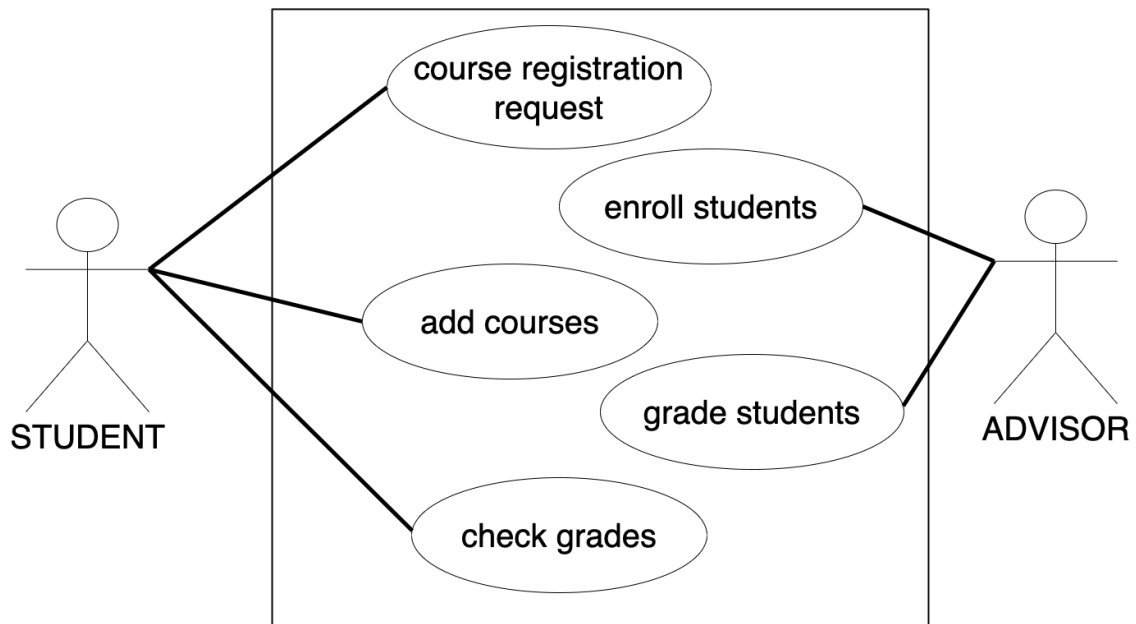
- Reliability:

Output given by system should not be too different.

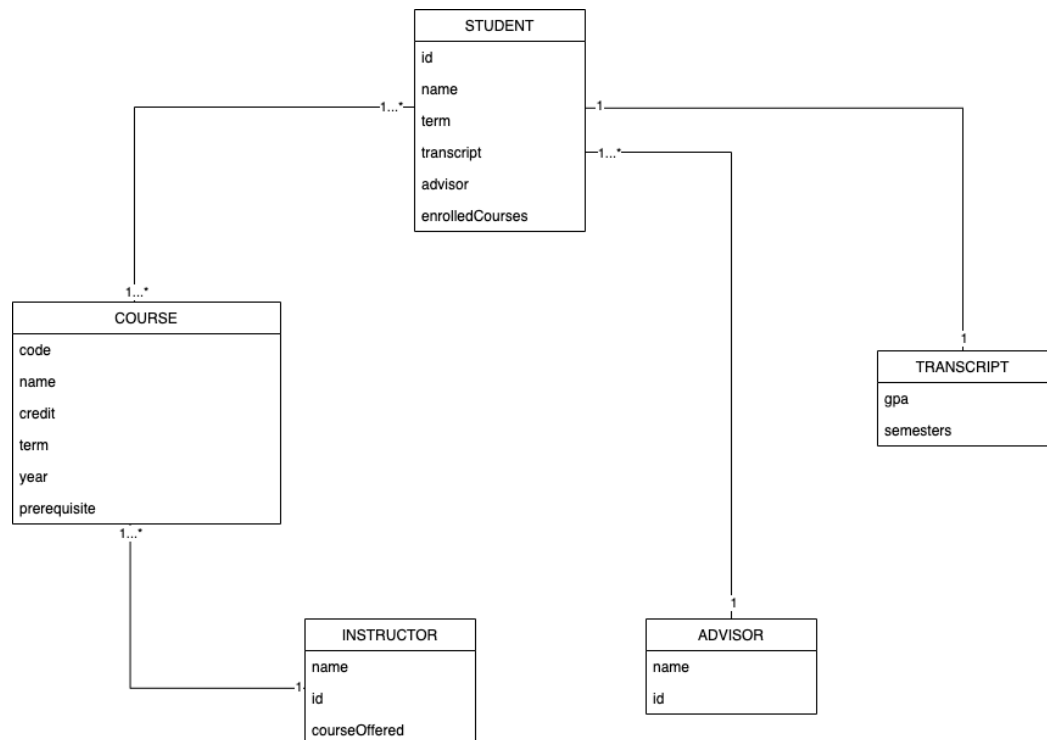
- Maintainability:

The system is sustainable.

4. Use Cases:



5. Domain Model:



6. Glossary:

-Advisor:

Arrange schedule of the students.

-Student:

Chooses the course.

-Student Semester:

Shows the grades of the student's current period.

-Pass Grade:

The minimum score a student must achieve to pass this course.

-Curriculum:

It holds the courses that must be taken for all semesters.

-Transcript:

It shows the grades for all semesters passed by the student and calculates the grade point average.

-Generator:

Generate students randomly.

-Enroll:

Enrolls students in courses.

-Elective Course:

A course that its population is formed by students who chose to take the course.