Requirement Analysis Design

1. Description

Aim of this project is to basically design a university course registration system. Student registration system is a function in which students may enroll their courses virtually and courses are controlled by supervisors.

2. Developers

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3. Glossary

- **Student** : A person who applies with the system.
- **Course** : The things that students want to take.
- **Advisor** : A university staff that supervise the students
- **Main** : Test class of design
- **File Handler :** Writes the specific file.
- **Course Details :** Gives the information about the courses.
- **Lecturer :** Gives information about the lecturer of the courses.
- **Person :** Handles all the people in the university.
- **Java** : A programming language
- **Functional Requirement:** A feature that the system absolutely needs to have.

- **Non-Functional Requirement**: A condition that details the proper method the system should use.
- **JSON** : JSON is a text-based data format that is a simple replacement for XML, which is frequently used on the Web for data exchange.

4. Functional Requirements

• Students must be generated randomly by the system.

• The transcript file has to be read by the system.

• The system has to record anything in the transcript file.

• Transcript files must be created by the system.

• The names of the pupils must be generated randomly by the system.

• Prerequisites for courses should be under the authority of advisors.

5. Non - Functional Requirements

Usability

• The system must produce accurate and simple-to-understand outputs and logs.

Flexibility

- The system ought to have simple integration for new course additions.
- When new pupils are introduced, the system must be able to include them quickly.

Performance

- Quick course checks should be performed by the system to identify which courses students.

Reliability

- We'll test the project code to make sure it runs smoothly.

Data Integrity

- JSON files will be used to store all course and student data.

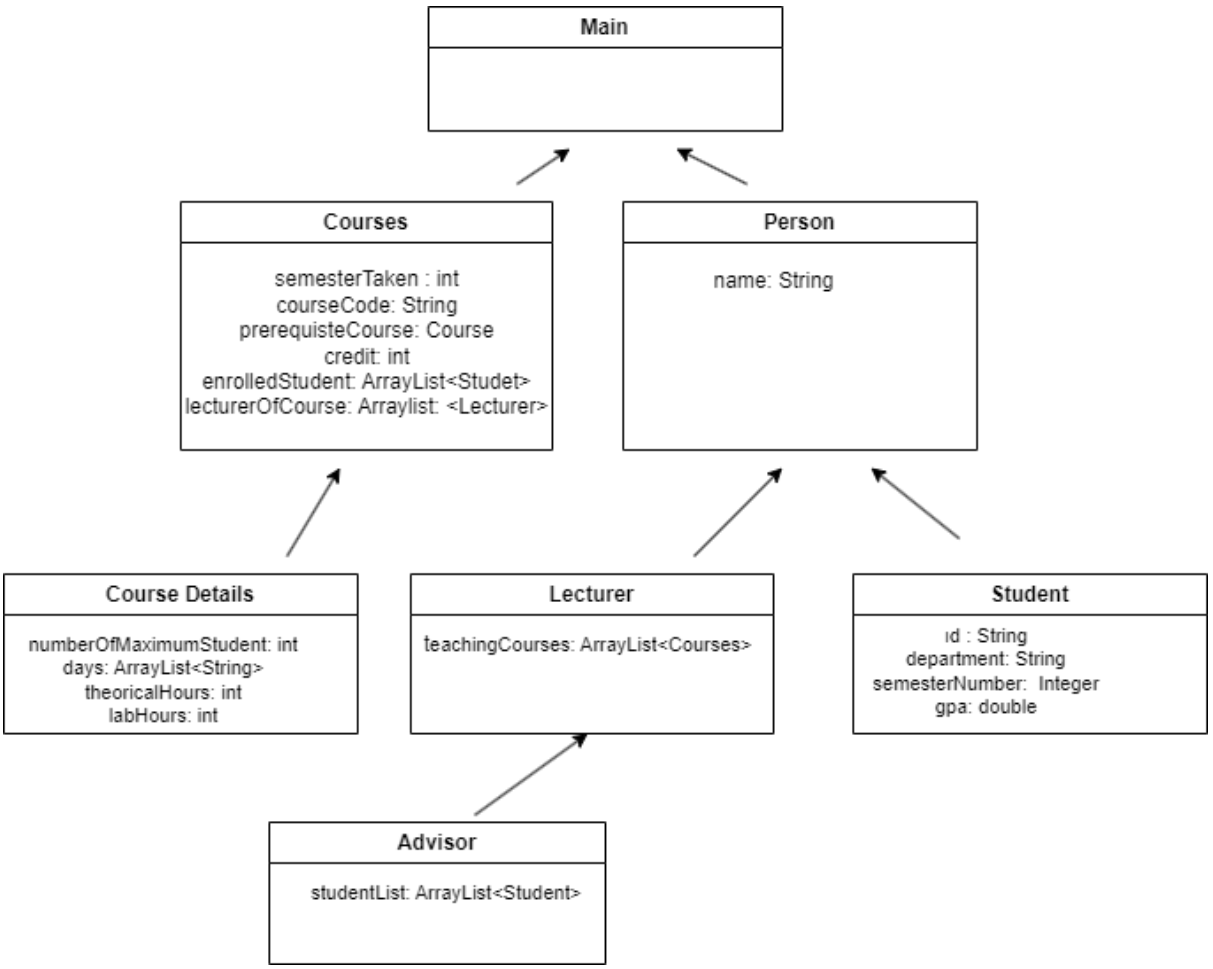
Security

- The student data that is stored in the system is private and shouldn't be disclosed. Consequently, the system cannot be accessed from the outside.

Maintainability

- The system determines any potential mistakes and logs them in the appropriate places if they happen. Log files allow for the observation of all mistakes and outputs.

6. Domain Model


Main
Courses
semesterTaken : int
courseCode: String
prerequisteCourse: Course
credit: int
enrolledStudent: ArrayList<Studet>
lecturerOfCourse: Arraylist: <Lecturer>
Person
name: String
Course Details
numberOfMaximumStudent: int
days: ArrayList<String>
theoricalHours: int
labHours: int
Lecturer
teachingCourses: ArrayList<Courses>
Student
id : String
department: String
semesterNumber: Integer
gpa: double
Advisor
studentList: ArrayList<Student>