Requirement Analysis

1-) Courses json input: We need a json file which is composed of all the courses throughout eight semesters. These courses may also have prerequisite courses. Our program will read this json file to get course information.

2-) Student transcripts: Each student will have their own records file. Those files will have student information, course information (failed, passed, and currently taken classes), GPA and credits information of the student.

3-) Professors: Each course is taught by a professor, professors will have their basic information, such as the courses they teach etc. Some professors can be advisors so that they can control course registrations.

4-) Simulation: We will generate random students to simulate our program. Students can have different numbers of failed and passed classes. Our program will control course registrations that made by the students. It will reject or approve them based on transcript information of the students. For example, let's say there is a course which has a prerequisite course, and a random student failed this prerequisite course. If this student attempts to register to this course, then our program will not allow student to take the course.