Design problem Ex-1 – Programming school

The programming school for new up and coming software engineers/developers needs a new setup to follow all of its students, professors, and courses/classes. It wants to be able to keep a record of what courses are available to take, which professor is able to teach the course, and which student is enrolled in the class. It is also necessary to be able to track the grades of every single student across all courses. For every student that is enrolled in the programming school and for every professor that is employed by the school, the school will need to have their contact information, address, name/age.

Every course that is taught at the school has a max and min limit number of students that can be able to take the class. For example, if one course is not able to have the minimum number of students that is allowed for that specific course, then the course will have to be cancelled for the upcoming term. Every course at the school is taught by at least one professor, but it is also possible for the same course to be taught by other professors.

Professors at the programming school are given a salary while employed. With every professor that is employed the school needs to keep a record of how much money a teacher makes each year. If a professor at the programming school is teaching more than 5 courses in a semester, they will be given a bonus of $27,000.

When it comes to students, they can either be local students or international students. They can also be a full time or part time student. For a student to be considered part time they have to be enrolled in at least 1-2 courses during any semester they are attending. For each semester, the max number of classes a student can take is 6. From every course a student takes, they will receive a grade for that class at the end of the semester. Grades range from 0-100. If a student has a bad performance during a semester where the average grade they accumulated is lower than 60% will be placed on academic probation.

**NOTE: At the end of the semester the system will reset and go through a update.**