M30232 - Database Systems Development
Case Study 23/24

Background

Stellar Tutors Inc. (STI), is a startup specializing in providing online teaching services for various subjects at different academic levels (L4 - L7). The startup has 4 major educational departments, Mathematics, Computing, Humanities, and Arts, each with a team ranging from 5 to 10 staff members. They aim to expand their offerings to include more academic departments if they observe growing demands. The business has for now two other departments as well (HR and Finance) but it might be possible to add more in the future if the business needs.

Each academic department is managed by a head teacher, who is responsible for coordinating all teaching activities within the department. Depending on the department size and subject demand, the head teacher might also provide teaching sessions in addition to their management duties. The other departments have their own head of department and staff members which are not involved in teaching activities.

At this point, the database should allow for a teacher to handle more than one subject, if necessary, and remember that each academic department has a head teacher who may or may not also serve as a teacher.

Currently, STI tracks information about their students, the courses they're enrolled in, their academic progress, and any future scheduled sessions. They keep a record of which teacher worked with which student, and this might involve one or more teachers, depending on the student's academic needs. They do not need information about the educational materials used, as they have a separate system that records this information. STI has decided to start from scratch with data collection and storage and does not need to worry about existing data.

Requirements

STI requires a database that will, as a minimum, store the following data:

- Departments
- Staff members
- Subjects
- Students
- Course details
- Completed and upcoming teaching sessions
- Teachers involved in each session

There will be additional data that needs to be stored, and the discretion lies with each student to decide what is necessary. These items are the minimum required by the client. Higher grades will be awarded to students who include more extensive and insightful data and details in their databases.