CSE 202 Project Synopsis
College Database

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Synopsis

We thought of developing "College Database Management System" to eliminate the problems that arise in manual management of database which is still being practiced at a lot of institutions. Using our Database, Colleges can manage their existing records effectively and without any hassle and manage their future records efficiently.

Our DBMS covers most of the functionalities that any college would require to computerize its day to day database management.

Overview: It keeps the record of all the instructors currently teaching and their associated departments. Instructor also offers various courses in that particular semester which a student can take to fulfill his credit requirement of that semester.

Student: In our Student table we have details of all the students that have ever studied in that college. Details include Name, Gender, Blood Group, Stream, CGPA, Batch, Phone (can be multiple), Email (can be multiple), Address and each student can be uniquely identified by their Roll Number.

These students enroll in various Course Offerings that are given by the college. In each course that they enroll, they are given a grade and the database contains the student's semester in which the course was done (so that transcript can be made accordingly, at a later stage)

Course: In Course table we have details of the available courses, ie Name, Credits and are differentiated by their Number.

Offering: Offering is a weak table which depends on the courses mentioned above and lists the semester and year when that course is offered to the students.

Every course offering must have exactly one instructor, while one instructor can head multiple course offerings.
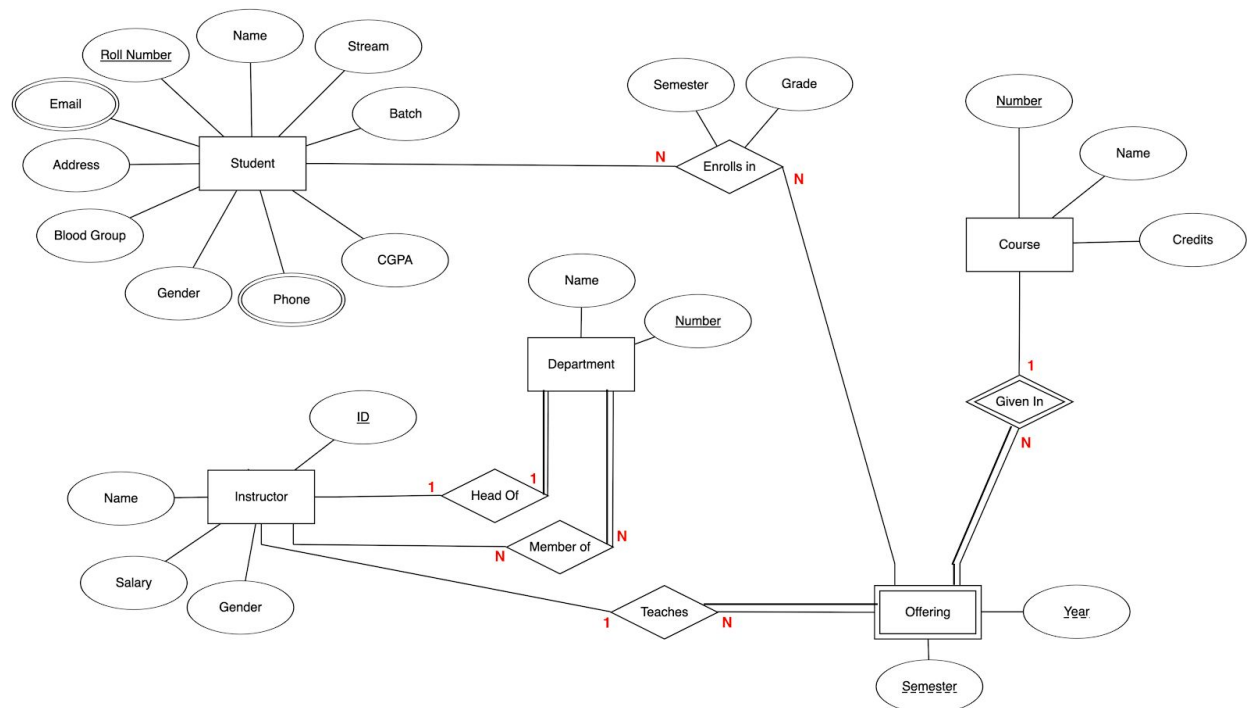
Instructor: The courses listed above are taught by Instructors, details of which are in the Instructor table. Which include Name, Gender, Department, Salary and have a unique ID associated with them.

Every department must have exactly one HoD, which is unique (that is, one instructor cannot head two departments).
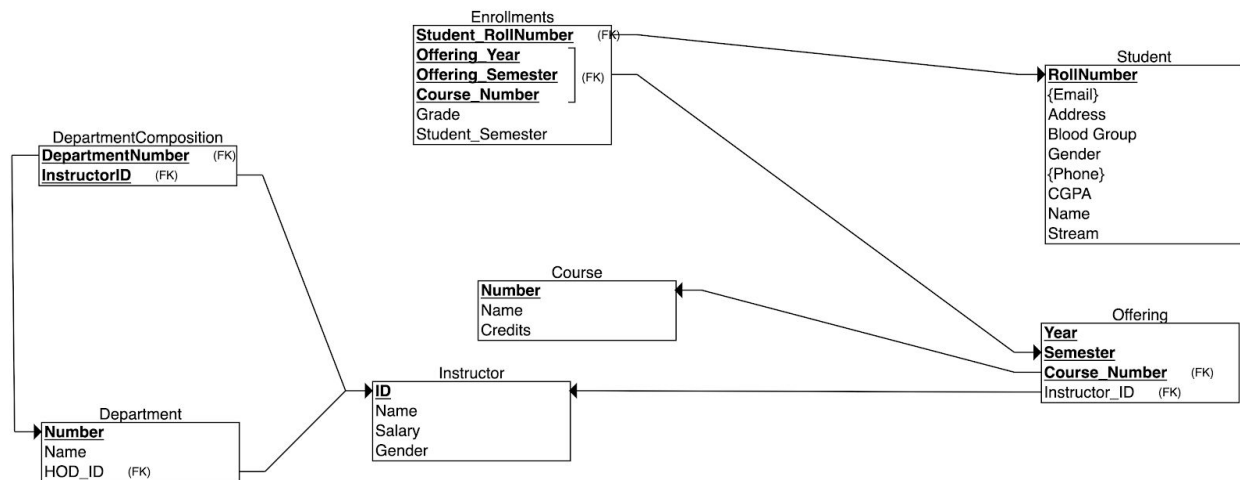
For a department to exist, it must have at least one member. Furthermore, it can have any number of members (instructors). Also, one instructor can be a part of multiple departments. Example: Vish Visweswaran is a member of both SSH and ECE departments.

Department: This table lists all the available departments that exists in the college of which instructors are part of, each department is given a Number and Name.

ER Diagram

Relational Schema

Implementation Platform Detail

Python, MySQL