

Database Management System

Title: Course Registration

Problem Statement

An Online Course Registration system for University is to be developed with a front-end web interface and a back-end database.

Any Database system can be chosen as the backend such as Oracle, My SQL....etc.

Description:

- Each student has unique ID and profile. The profile includes first and last name, Gender, DOB, Address, Branch, Program, Enrolled year, Username and may have a picture. Other necessary information can be added to it.
- Each instructor has a unique faculty ID and a profile. The profile must indicate the instructor's department(s). An instructor **may work at more than one** Department.
- A department has a unique department ID, Subject name and list of faculties.
- Each course has a course number, an instructor, given department, term, credits, classroom, periods, prerequisite courses, textbooks..etc.
- Maintain all the courses a student has registered. This is used to check course prerequisites when registration.
- Students may login (with username and password) to the system to register courses or retrieve all the courses they have already taken/registered.
- Instructors may login (with username and password) to the system to **add courses** or update the courses they have already given/added.
- A Student cannot register a course if
 - ✓ He/She doesn't meet the prerequisites.
 - ✓ The student registered in the course exceed the capacity of classroom
 - ✓ The course has a time conflict with other courses in the same term
- An Instructor cannot add a course if
 - ✓ The classroom has occupied by another course in the same period
 - ✓ He/She has another course in the same period
 - ✓ He/She is not affiliated to the department of this course
- Student may get all the courses given by the department, an Instructor
- There can be arbitrary no of Courses/Students/Instructor/Department/Classrooms etc...