University Database Management System

Business Requirements

- ***Team Members:***

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- ***Project Scope:***

The project aims to design and implement a comprehensive university database management system that discusses academic operations and enhances administrative efficiency. The database will manage available courses, student registrations, faculty, and department organization across the university.

- ***Target audience:***

Administrative Staff: for managing institutional data and operations.

Students: for accessing course information and registrations.

Teaching Assistants: for managing section information and personal details.

Professors/Instructors: for accessing course and department information.

➢ *Business Requirements:*

1. Department & Courses:

Each department offers multiple courses, and each course belongs to only one department and the cardinality between the department and courses is one to many. Each department has **(a unique department name and location).** Each course has **(a unique course number, course name, prerequisite number, and duration).**

2. Courses & Students:

One course is enrolled by multiple students, and one student can register for multiple courses using **(a unique registration id and registration type)**. So, the cardinality is many to many. Each student has **(a unique student id, student name & e-mail, date of birth, and can have multiple phone numbers)**

3. Department & Instructors:

One department has multiple instructors, and one instructor belongs to one and only one department. So, the cardinality relationship is one to many. Each instructor has **(a unique instructor id, instructor name, e-mail, room, and multiple phone numbers)**

- Each department has one “managed by” and one instructor that only manages one department. So, their cardinality relationship is one to one.

4. Course & Instructor:

One course is taught by only one instructor, but one instructor teaches many courses. So, the cardinality relationship is many to one.

5. Sections & Courses:

One course has many sections, but a section belongs to only one course. So, the cardinality relationship is many to one. Each section has **(a unique section id, building, room, and capacity).** Each section has a TA, and each TA has **(a unique TA id, TA name, TA e-mail, and multiple TA phone numbers)**

6. Instructor & Student:

Each instructor advice one student, and each student is advised by one instructor. So, their cardinality relationship is one to one.