# CS355 Databases

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# Project Proposal

**University Management System**

*Arsalan Ahmed (aa03980)*

*Yousuf Moiz Ali (ya03482)*

*Muhammad Talha Shahab (ms03495)*

# *Submitted to*

Dr. Ayaz Khan

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Habib University, Karachi

**Introduction**

In this project, we will be constructing a database management system which will create, manage and perform activities related to the database of a given university. This system can be generic for many universities but we will be making it according to the requirements of Habib University. The database will consist of information regarding the students, faculty, academics, departments (student-life, wellness center, career services, admission office) and extra-curricular events in which faculty as well as students participate in one way or the other. This database will allow us to retrieve the information regarding the above aspects of the university easily, efficiently and accurately.

The main users of this system would be the students, faculty and staff working in different administrative departments. Students would get all the information about their courses like course instructor, grades, attendance, class schedule etc. while the faculty members will be able to view all of their courses, course timings, students enrolled, commitment in events etc. The faculty members will also be able to enter and change some information like grades, attendance etc. The staff will be able to add students and faculties in different events. Some general information will be made available to everyone for viewing.

**Modules of the System**

The following will be our main modules/functionalities that will be addressed for ERD development:

1. Anyone using the database should be able to search for any member (student, faculty and staff) associated with the university. This information will include the name, ID, email address, department and the position of the member.
2. Each student should be able to keep track of all the courses and events he/she is registered for. Additionally, the system should also store information regarding the grades, quizzes, assignments, exams, timings and schedule of a course in which a student is registered. Other than that, the system will also have the information about the participation of a student in an event and the role of the student in that event.
3. The faculty will have complete control over editing the attendance and grades for a course that he/she will be teaching. The faculty will be able to view all the information like the courses offered by them, their event participation (also in what capacity) and information of students enrolled in their course.
4. The student and faculty will be able to register for events launched by different departments. The position of the student or faculty in the event will be determined by the staff of the hosting department.
5. The courses will be added by the staff of the relevant department and students will be able to register themselves in those courses.
6. The system will keep the record of the past courses offered and events held at the university.

*This is just a tentative plan. More functionalities may be added later.*

**Front-end Development**

The front-end development will include all the interfaces for students, faculty and staff for interacting with the database. The following will be the major aspects for the front-end development of this project:

1. Login form for students, faculty and staff.
2. Registration forms for students and faculty for registration in different events.
3. Form for students to register for a course.
4. Form for staff to add an event or course in the database.
5. Interface for searching and viewing all the general information.
6. Interface for students to view and search from their academic information.

*More might be added later.*

**Tools & Technologies**

ERD: DB-Designer

Back-end: SQL Server

Front-end: C#