**Software Requirements Specification (SRS) for College Data Management System**

**(Roll no 13 to 16)**

**1. Introduction**

The College Data Management System is a comprehensive database management system aimed at efficiently managing the organizational structure of a college. This system will store information about colleges, departments, courses, instructors, students, and course enrolments. This document outlines the requirements for the development of the College Data Management System.

**1.1 Purpose**

The purpose of this system is to streamline the management of college data, including details about colleges, their departments, courses offered, instructors, and student enrolments. This system will provide a central platform for managing, accessing, and updating this information, improving overall efficiency and data accuracy.

**1.2 Intended Audience**

This system is meant to be used by Database administrators in a college to streamline college data and arrange it into a meaningful repository.

**1.3 Scope**

The College Data Management System will encompass the following key components:

* Department Information: Information about the departments within colleges, including department heads (HODs), instructors, and courses offered by each department.
* Course Information: Data about individual courses, including course names, course codes, and the instructors responsible for each course.
* Instructor Information: Information about instructors, including their names, contact information, and the departments they are affiliated with.
* Student Information: Data related to students, including their names, contact information, and course enrollments.
* Course Enrollment Information: Records of student enrollments in specific courses, including enrollment dates and course outcomes.

**1.4 Definitions, Acronyms, and Abbreviations**

* HOD: Head of Department
* SRS: Software Requirements Specification

**2. Overall description**

**2.1 User Needs**

The primary user of the database is the database administrator who can add, update and manage all information about departments, course, instructors and students.

Second, instructors need to be able to update information related to their courses. They must have access to relevant data for students enrolled in their course. They may require to communicate with students.

Moreover, students need to be able to register for courses and get information relevant to it.

**2.2 Dependencies and Assumptions**

The primary user of the database is the database administrator who can add, update and manage all information

**Technology Stack:** MYSQL, HTML, CSS, JS, NodeJS

**Security Assumptions:** The network is assumed to be encrypted and enabled with enough security

**3. Functional Requirements**

**3.1 Department Information**

* **Add Department:** The system shall allow administrators to add a department within a college, specifying the department's name and HOD.
* **Update Department Details:** Administrators shall be able to update department information, including the HOD.
* **View Department Information:** Users shall be able to view department information, including the list of instructors and courses offered by each department.

**3.2 Course Information**

* **Add Course:** The system shall allow administrators to add a new course, specifying the course name, course code, and instructor.
* **Update Course Details:** Administrators shall be able to update course details, including the instructor assigned to the course.
* **View Course Information:** Users shall be able to view information about courses in the database.

**3.3 Instructor Information**

* **Add Instructor:** The system shall allow administrators to add an instructor with details such as name, contact information, and the department they are affiliated with.
* **Update Instructor Details:** Administrators shall be able to update instructor information, including contact information and department affiliation.
* **View Instructor Information:** Users shall be able to view information about instructors in the database.

**3.4 Student Information**

* **Add Student:** The system shall allow administrators to add a student with details such as name, contact information, and course enrollments.
* **Update Student Details:** Administrators shall be able to update student information, including contact information and course enrollments.
* **View Student Information:** Users shall be able to view information about students in the database.

**3.5 Course Enrollment Information**

* **Enroll Student in Course:** The system shall allow administrators to enroll students in specific courses, recording the enrollment date.
* **View Enrollment Records:** Users shall be able to view course enrollment information, including enrollment dates and course outcomes.

**4. Non-Functional Requirements**

* **Performance:** The system shall provide efficient and responsive performance, allowing multiple users to access and update data simultaneously without significant delays.
* **Security:** Access to the system shall be role-based, with different levels of access for administrators, instructors, and students. User authentication and authorization mechanisms shall be in place to secure the system.
* **Reliability:** The system shall provide data integrity and reliability, ensuring that data is accurately stored and retrieved.
* **Scalability:** The system shall be designed to handle a growing amount of data as more colleges, departments, courses, instructors, and students are added.