

College Management System (CMS)

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Software Requirements Specification (SRS) for College Management System

1. Introduction

1.1 Purpose

The College Management System (CMS) is a web-based application designed to automate and streamline various academic and administrative processes within a college. The system aims to enhance efficiency, reduce manual work, and provide a user-friendly interface for students, faculty, and administrators.

1.2 Scope

The CMS will provide the following functionalities:

- Student admission and records management
- Faculty management
- Course and subject management
- Examination and grading system
- Timetable scheduling
- Fee management and online payments
- Notifications and announcements

1.3 Intended Audience and Reading Suggestions

- **College Administrators:** Understand system functionalities and operational requirements.
- **Faculty Members:** Utilize the platform for academic activities.
- **Students:** Access academic records and communicate with faculty.
- **Developers and Testers:** Understand functional and non-functional requirements.

1.4 Product Overview

- **Product Perspective:** The CMS will be a centralized web application accessible by students, faculty, and administrators.
- **Assumptions and Dependencies:**
 - The system requires an active internet connection.
 - User authentication will be role-based.
 - Integration with third-party payment gateways for fee payments.

2. Functional Requirements

2.1 User Roles

- **Administrator:** Manages system users, departments, and configurations.
- **Faculty:** Manages courses, student records, and attendance.
- **Students:** Access courses, grades, attendance, and notifications.

2.2 Key Features

2.2.1 Student Management

- Add, update, and delete student records.
- Maintain student academic history.

2.2.2 Faculty Management

- Assign courses and subjects to faculty members.
- Manage faculty attendance and performance records.

2.2.3 Course Management

- Create and manage courses.
- Assign students and faculty to courses.

2.2.4 Examination and Grading System

- Conduct online exams.
- Assign grades and generate report cards.

2.2.5 Fee Management

- Track student fee payments.
- Provide online payment options.

2.2.7 Notification System

- Send notifications regarding exams, events, and announcements.

3. Non-Functional Requirements

3.1 Performance Requirements

- The system should support at least 1000 concurrent users.
- The response time should be under 2 seconds for most transactions.

3.2 Security Requirements

- Role-based access control (RBAC) for user authentication.
- Data encryption for sensitive information.

3.3 Usability Requirements

- Intuitive UI/UX design.
- Mobile-responsive interface.

3.4 Availability Requirements

- System uptime should be 99.9%.
- Backup and recovery mechanisms should be implemented.

4. System Design Constraints

- The system will be developed using .NET Core and SQL Server.
- The web application must be compatible with Chrome, Firefox, and Edge.

5. Appendices

- External API integrations (Payment Gateway, SMS/Email notifications).
- User training manuals and FAQs.

6. Conclusion

The College Management System (CMS) will simplify and enhance college management by providing a comprehensive and efficient web-based platform for administrators, faculty, and students.