

Software Requirements Specification

For Student result management

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1. Introduction

1.1 Purpose

The Student Result Management System (SRMS) is a robust software solution tailored to meet the needs of an engineering college. This system aims to streamline and enhance the management of student academic results, simplifying processes, and promoting accuracy. By digitizing the result management workflow, SRMS seeks to improve efficiency, reduce errors, and provide a user-friendly experience for both administrative staff and students.

1.2 Glossary and References

- SRMS: Student Result Management System
- Engineering College: An educational institution offering engineering programs.
- Admin: Administrative personnel responsible for system management.
- Student: An individual enrolled in an engineering program.

1.3 Scope

The scope of the Student Result Management System (SRMS) project encompasses a comprehensive set of features and functionalities designed to revolutionize the way academic results are managed within the engineering college. The project aims to provide a user-friendly, efficient, and accurate platform for administrators and students to handle result-related tasks.

2. Overall Description

2.1 User Needs

The SRMS caters to the following user needs:

- Admin: The system should enable admins to easily manage student records, courses, semesters, and results. Generating comprehensive reports, such as class-specific outcomes and student transcripts, should also be seamless. Admins should be able to efficiently update result information and notify students of their academic performance.
- Students: Students require access to their personal academic records, the ability to view semester-wise results, and the option to download

transcripts. Notifications regarding result updates should be provided, and access to pertinent course information should be made available.

2.2 Assumptions and Dependencies

- The system assumes a stable network infrastructure to ensure uninterrupted access.
- Adequate training will be provided to administrative staff to ensure proficient system usage.
- The system's effectiveness is reliant on accurate data entry by administrative personnel.
- The system operates optimally with modern, standard web browsers.

3. Features and Requirements

3.1 Functional Requirements

User Authentication and Authorization:

- Secure login mechanism with role-based access for admins and students.

Student Information Management:

- Maintenance of student profiles encompassing personal details, contact information, and enrollment status.

Course and Semester Management:

- Ability to add, update, and remove course details and semesters.
- Allocation of courses to appropriate semesters.

Result Entry and Calculation:

- Data entry and update functionality for student result information across courses.
- Automated computation of GPA and CGPA based on predefined grading criteria.

Result Publication and Notifications:

- Secure publication of semester results.
- Implementation of result availability notifications through emails or system alerts.

Report Generation:

- Generation of assorted reports, including class-specific results and student transcripts.

- Compilation of statistical reports pertaining to student performance.

3.2 Nonfunctional Requirements

Security:

- Implementation of robust data encryption protocols to safeguard sensitive student data.
- Assurance of secure authentication and authorization mechanisms.

Performance:

- System responsiveness in handling concurrent user requests.
- Minimal response times for result retrieval and report generation.

Usability:

- Intuitive user interface design for ease of navigation.
- Compatibility with standard web browsers for broad user accessibility.

3.3 External Interface Requirements

User Interfaces:

- Admin Dashboard: A centralized hub for admin management of student records, courses, semesters, and results.
- Student Portal: An interface granting students access to personal academic records, course details, and results.

Hardware Interfaces:

- Compatibility with standard hardware components, including servers, computers, and network infrastructure.

Software Interfaces:

- Interaction with a designated database management system for data storage and retrieval.
- Integration with email services to facilitate result notifications.

Communication Interfaces:

- Accessibility via standard web browsers over the college's network.

In summary, the Student Result Management System (SRMS) is a sophisticated software solution engineered to enhance and expedite the result management process for an engineering college. By offering comprehensive result management capabilities, safeguarding data integrity, and ensuring user-friendly interfaces, SRMS seeks to elevate efficiency, accuracy, and user satisfaction in managing student academic results.