**Student Management System (SMS): Problem Statement**

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Thursday, 3 October 2024

Western Connecticut State University

CS350 - Object Oriented Software Engineering

1. PROBLEM DOMAIN

Educational institutions often struggle with outdated or manual systems for managing student information, making tasks like finding student records, tracking attendance, or retrieving grades slow and prone to errors. Current systems lack advanced search features, forcing users to spend excessive time scrolling through long lists, which increases the risk of mistakes. Our **Student Management System (SMS)** is designed to solve these issues by assigning unique roll numbers to each student, allowing for quick access to records and offering advanced search tools. This system will improve the speed and accuracy of retrieving information, especially in institutions with large numbers of students. SMS will simplify data management, reduce errors, and help schools operate more efficiently by allowing administrators and faculty to easily find, manage, and update student information.

1. CUSTOMER PERSPECTIVE

Administrators and faculty need a system that is easy to use, accurate, and allows for quick management of student records. They need features such as:

* Assigning students unique numbers for easy identification
* Quick and easy access to student records.
* Ability to track student performance (GPA) and view declared majors
* Ability to efficiently update records without handling redundant data.

The system should make managing student information fast, reliable, and error-free, ensuring smooth operations for the institution.

1. DEVELOPER PERSPECTIVE

The development team will create a simple, user-friendly **Student Management System (SMS)** that:

* Adds new student records with unique identification numbers.
* Searches for students by ID number or first name.
* Retrieves a list of students registered for a specific course.
* Keep track of the total number of students in the system.
* Deletes student records by ID number.
* Updates specific fields in a student’s record (e.g., major, GPA, etc).

The system must ensure data accuracy by avoiding duplicate student identification numbers and allow fast, efficient searches. It should also be scalable to handle growing numbers of student records.

1. CONCLUSION

SMS will provide an effective solution for managing student data in educational institutions. It will outline clear functions and expected outcomes for both developers and users, aiming to make student information management faster, easier, and more reliable.