STUDENT INFORMATION SYSTEM

Submitted by

Name of the Students	University Roll No.
1. Pratyusha Chatterjee	22022002016013(55)
2. Twisha Talukder	22022002016003(53)
3. Debajyoti Mitra	22022002016015(51)

Under the supervision of
Name of the Guide
1. Prof. Subhadip Chandra
2. Prof. Subhajit Adhikari

Academic Year: 2021-2025

REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE MACHINE LEARNING) OF

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

(ARTIFICIAL INTELLIGENCE MACHINE LEARNING)

INSTITUTE OF ENGINEERING AND MANAGEMENT KOLKATA
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

(ARTIFICIAL INTELLIGENCE MACHINE LEARNING)

INSTITUTE OF ENGINEERING AND MANAGEMENT KOLKATA

CERTIFICATE OF RECOMMENDATION

We hereby recommend that the thesis prepared under our supervision by Pratyusha Chatterjee, Twisha Talukdar, Debajyoti Mitra entitled *STUDENT INFORMATION SYSTEM* be accepted in partial fulfillment of the requirements for the degree of BACHELOR OF TECHNOLOGY IN "COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE MACHINE LEARNING)".

_____

_____

Head, CSE(AIML and CSBS)Department ***Project Guide***
Institute of Engineering and Management, Kolkata

Instructor :	**Prof. Subhadip Chandra and Prof. Subhajit Adhikari**
Course :	**Computer Science & Engineering (AI&ML)**
Lab Section :	**A**
Date :	**17th November,2023**

CONTENTS.....II

REVISIONS.....II

1 INTRODUCTION.....1

1.1 Document Purpose.....1
1.2 Product Scope.....1
1.3 Intended Audience and Document Overview.....1
1.4 Definitions, Acronyms and Abbreviations.....3
1.5 Document Conventions.....3
1.6 References and Acknowledgments.....5

2 OVERALL DESCRIPTION.....6

2.1 Product Overview.....6
2.2 Product Functionality.....6
2.3 Design and Implementation Constraints.....7
2.4 Assumptions and Dependencies.....10

3 SPECIFIC REQUIREMENTS.....12

3.1 External Interface Requirements.....12
3.2 Functional Requirements.....12
3.3 Use Case Model.....17

4 OTHER NON-FUNCTIONAL REQUIREMENTS.....18

4.1 Performance Requirements.....18
4.2 Safety and Security Requirements.....19
4.3 Software Quality Attributes.....21

5 CONCLUSION……...……23

1 Introduction

1.1 Document Purpose

For educational institutions, the Student Information System (SIS) is an essential instrument that simplifies the administration of student data. The system effectively manages enrollment, attendance, and academic records, streamlining administrative duties like registration and admissions. The Student Information System (SIS) facilitates communication between educators and administrators, supports resource planning, and ensures compliance with educational requirements. It guarantees a coherent learning environment through system integration. Since sensitive information is protected by security measures, the SIS plays a crucial role in both student success and the general effectiveness of the school.

1.2 Product Scope

In educational institutions, the Student Information System (SIS) is responsible for managing student data, including personal information, academic records, admissions, and course registration. It facilitates resource planning and reporting, encourages communication, and promotes the assessment of academic success. The entire educational environment is improved by integration with finance systems and learning management systems (LMS). Strong security protocols protect confidential data, and components for user assistance and training guarantee that administrators, teachers, and other users can use the data effectively. Updates regularly take into account new technology and changing requirements.

1.3 Intended Audience

An educational institution's administrators, instructors, and students make up the main target audience for a Student Information System (SIS).

1. **ADMINISTRATOR:**

- Institution administrators are in charge of the overall management of the institution, which includes formulating policies, allocating resources, and conducting strategic planning.
- Administrators in charge of particular academic departments or programs are known as department heads.

2. **FACULTY:**

- Teachers and instructors are those who are in charge of overseeing classroom activities, assigning assignments, and administering courses.
- Academic advisors are experts who advise students on issues about their education and careers.

3. **STUDENTS:**

- Individual Students: Students who are currently enrolled in the school and who use the SIS to retrieve their grades, personal academic records, class schedules, and other pertinent data.

The Student Information System (SIS) functions as a central hub where administrators can make well-informed choices, teachers can oversee academic activities, and students can access and monitor their academic progress. It is essential to the effective operation of the educational institution since it fosters better collaboration and communication among these important stakeholders.

OVERVIEW:

A centralized, all-inclusive software solution called a Student Information System (SIS) is used by educational institutions to manage student data more efficiently. It is essential to the effective processing of many types of student data, such as demographic information, enrollment history, and personal information. The system facilitates the admissions process by handling applications, monitoring admission status, and streamlining student registration and course enrollment processes.

Academic performance tracking, which includes grade recording and computation, transcript generation, and accomplishment management, is one of its core roles. To maintain accurate and current records, the SIS's usefulness is expanded to include tracking students' attendance in classes and other academic activities. Through features like messaging services and parental access, the system also promotes better communication and teamwork among students, instructors, and administrators.

The SIS helps administrators allocate resources, provide meaningful reports, and use analytics to make well-informed decisions. The system's capacity to integrate with various platforms—including financial and learning management systems (LMS)—helps to forge a coherent learning environment. Sophisticated security protocols are in place to safeguard private student data and guarantee adherence to data privacy laws.

Apart from its features, the SIS places a high priority on user assistance and education. Administrators, teachers, and students are given extensive documentation and training programs that improve their capacity to use the system efficiently.

1.4 Definitions, Acronyms and Abbreviations

- SIS: Student Information System
- LMS: Learning Management Systems

1.5 Document Conventions

IEEE does offer guidelines for writing and formatting technical documents that can be applied to the creation of an SRS document. Below, an SRS document following IEEE-style conventions:

Title Page: Include a title page with the title of the document, the project or system name, the document version, date of publication, and the names and affiliations of the authors.

Table of Contents: Include a table of contents that lists all sections, subsections, and their respective page numbers.

Abstract: Begin with an abstract that provides a concise summary of the SRS document, highlighting the project's purpose, scope, and key objectives.

Introduction: Start with an introduction section that provides an overview of the software project, its context, and the purpose of the SRS document.

Scope: Clearly define the scope of the software project, including its objectives, features, and any constraints or limitations.

Functional Requirements: Organize the functional requirements section by specifying each feature or functionality of the software.
Use a consistent format for each requirement, including a unique identifier, a description, and any relevant acceptance criteria.

Non-Functional Requirements: Include non-functional requirements such as performance, security, usability, and scalability.
Specify any quality attributes, standards, or regulations that the software must adhere to.

System Architecture: Provide a high-level overview of the system's architecture, including components, modules, and their interactions.
Use diagrams, such as block diagrams or flowcharts, to illustrate the architecture.

Use Cases or User Stories: If applicable, include detailed use cases or user stories to describe how users interact with the system.

Data Requirements: Describe the data requirements, including data sources, data formats, and data storage considerations.

Dependencies: List any external dependencies or third-party components that the software relies on.

Constraints: Identify any constraints or limitations that may affect the development or operation of the software.

Assumptions and Risks: Document any assumptions made during the requirements gathering process and potential risks associated with the project.

Glossary: Include a glossary of key terms and acronyms used throughout the document.

Appendices: Attach any supplementary information, such as detailed diagrams, mockups, or additional documentation.

References: If applicable, include references to external documents, standards, or sources of information that were used during the requirements elicitation process.

Document Formatting: Follow IEEE formatting conventions for fonts, headings, page numbering, and margins.

Review and Approval: Include a section for documenting the review and approval process, indicating who reviewed the document and when it was approved.

Change History: Maintain a change history log that records revisions made to the document, including the date of each change and a brief description of the modification.

While IEEE does not offer a specific SRS template, these conventions, along with your organization's specific requirements, can serve as a foundation for creating a well-structured and IEEE-compliant Software Requirements Specification document. It's crucial to adapt these conventions to the specific needs of your project and maintain consistency throughout the document.

1.6 References

1. **Bharamagoudar, S. R., R. B. Geeta, and S. G. Totad. "Web based student information management system." *International Journal of Advanced Research in Computer and Communication Engineering* 2, no. 6 (2013): 2342-2348.**
2. **Tang, Yu-Fang, and Yong-Sheng Zhang. "Design and implementation of college student information management system based on web Services." In *2009 IEEE International Symposium on IT in Medicine & Education*, vol. 1, pp. 1044-1048. IEEE, 2009.**
3. **Obasi, Nmaju, E. O. Nwachukwu, and C. Ugwu. "A Novel Web-Based Student Academic Records Information System." *West African Journal of Industrial and Academic Research* 7, no. 1 (2013): 31-47.**

Acknowledgments

We are very grateful and thankful to our project guide Prof. Subhadip Chandra Sir and Prof. Subhajit Adhikari sir who give us a good guidance and give suggestions about each and every topic which we study and research regarding our project STUDENT INFORMATIONSYSTEM . We also are taking this opportunity to express our gratefulness to all the professors of Computer Science and Engineering (Artificial Intelligence and Machine Learning)department of Institute of Engineering and Management,Kolkata for their kind co-operation and encouragement regarding this project. Thank you to all person involved in this STUDENT INFORMATION SYSTEM project.

2 Overall Description

2.1 Product Overview

For educational institutions, a central software system that simplifies student data management is called a Student Information System (SIS). Admissions, course registration, and academic performance tracking, including grading and transcript generation, are all handled effectively by it. The SIS keeps track of attendance, enables message systems for communication, and provides reporting and analytics capabilities to administrators to help with resource allocation. Through encryption and access controls, it emphasizes security and interacts with other systems with ease. Priorities include user assistance and training to guarantee that administrators, instructors, and students make efficient use of the system. All things considered, the SIS is an essential tool for smooth academic operations, and improving decision-making and communication inside educational establishments.

2.2 Product Functionality

Numerous functions that are essential for educational institutions are provided by a Student Information System (SIS). Enrollment, admissions, and student records are all managed effectively. Academic management is streamlined via communication tools, attendance tracking, and academic performance tracking. The SIS helps with scheduling classes, managing assignments, and streamlining administrative work through analytics and reporting. Effective utilization is ensured by user support, strong security measures, and integration with other systems. It provides thorough insights and supports financial management, grading, regulatory compliance, and learning analytics. The SIS is a vital instrument for centralizing and automating important operations in educational institutions since mobile accessibility increases convenience.

Major Functions of University Attendance Monitoring System:

One of a Student Information System's (SIS) primary purposes in an educational setting are to manage and organize student-related data effectively. The principal roles consist of:

- **Student Records Administration:**

Maintain complete student records, including contact information, enrollment history, demographic information, and personal information.

- **Enrollment and Admissions:**

Manage applications, monitor admission status, and assist in smooth course enrollment to streamline the admissions process.

- **Monitoring Academic Performance:**

Keep track of, compute, and oversee student grades. Produce transcripts and give a thorough rundown of all the academic accomplishments.

- **Keep an eye on attendance:**

Maintain a record of student attendance for classes and other school-related events.

- **Interaction & Cooperation:**

Establish lines of communication between educators, administrators, and students. Enable teamwork by utilizing chat platforms and parental access controls.

- **Management of Courses:**

Simplify procedures linked to the course, such as registration, scheduling, and assignment administration.

- **Functions of Administration:**

Help administrators with resource planning, which includes faculty scheduling and classroom assignments. Give decision-makers access to analytics and reporting tools.

- **Integrity-related Skills:**

For a coherent learning environment, integrate with other systems, such as learning management systems (LMS).

- **Safety precautions:**

Put strong security measures in place, such as encryption and access limits, to safeguard private student data.

- **Training and Support for Users:**

Provide thorough documentation and training courses to make sure administrators, instructors, and students are using them effectively.

2.3 Design and Implementation Constraints

A Student Information System's (SIS) development and operation may be impacted byseveral limitations that affect the system's design and implementation. The following are some typical limitations for design and implementation:

Financial Restraints:

The creation and implementation of a SIS may be hampered by a lack of funding, which could have an impact on the choice of features, technology, and system scope.

Timetable Limitations:

There may not be as much time available for careful design, testing, and refining due to strict deadlines, such as the requirement for quick deployment or compliance with academic calendars.

Technological Harmony:

The educational institution's technological limitations and current infrastructure may restrict the available technologies or make system integration more difficult.

Data Migration Difficulties:

Data accuracy, consistency, and loss risks can all arise throughout the complicated process of migrating data from old systems to the new SIS.

User Education and Adoption:
User acceptability and efficient training are essential for the successful deployment of a SIS. The adoption of the system may be hampered by user uninstructedness or resistance to change.

Respect for Regulations:

Regulations about data protection, privacy, and other pertinent standards must be followed by educational institutions, and the SIS itself must be built to meet these requirements.

Scalability and Prospective Growth:

The architecture of the system must allow for future functional expansion as well as student population increase, guaranteeing scalability and flexibility.

Privacy and Security Issues:

Strong security measures are necessary due to the sensitive nature of student information. It is crucial to secure data privacy and prevent unauthorized access or potential cyber dangers.

Mutual Compatibility:

Integration of the SIS with external databases, financial software, and learning management systems (LMS) may be necessary. Ensuring seamless interoperability may pose a challenge.

Designing User Interfaces:

It can be difficult to design an intuitive and user-friendly interface that satisfies the various demands of instructors, administrators, and students, particularly when there are differences in the users' technical skills.

Organizational and Cultural Restraints:

The acceptability and application of the SIS may be impacted by the organizational structure and institutional culture. Constraints may include bureaucratic procedures or resistance to change.

2.4 Assumptions and Dependencies

Dependencies among administrators, instructors, and students are relationships that are interconnected within a Student Information System (SIS). The following dependencies are essential to the system's efficient operation:

Authorization and Authentication of Users:

Strong user authentication and authorization systems are essential for all users, including administrators, teachers, and students. Ensuring that personnel can only access information pertinent to their roles requires the implementation of secure access controls.

Supervisory Requirements:

Administrators are responsible for setting up and configuring the system, maintaining user accounts, and guaranteeing overall system stability for both faculty and students. When it comes to fixing technological problems and keeping the system maintained, administrators are essential.

Academic Reliances:

Educators rely on precise and current student data to efficiently organize and lead lessons. For access to student profiles, academic records, and attendance information, they depend on the SIS. Furthermore, faculty members might rely on the system to communicate with administrators and students.

Dependencies of Students:

To examine class schedules, register for courses, and access personal academic records, students rely on the Student Information System (SIS). For students to remain up to date on their grades, academic obligations, and any communications from teachers or administration, the system is essential.

Ways of Communication:

To effectively communicate with professors and students, administrators must have efficient channels of communication within the SIS. To interact with students about assignments, grades, and other academic issues, faculty members rely on these channels.

Data Consistency and Accuracy:

Administrators are responsible for maintaining consistency and accuracy of data in the SIS, which benefits both teachers and students. Accurately tracking grades, attendance, and other academic data is part of this.

Education and Assistance:

Administrators are responsible for ensuring that faculty and students receive sufficient training on how to use the SIS efficiently. To resolve any problems and guarantee that users can use the system without difficulty, ongoing user support is essential.

Executive Duties:

Instructors and students rely on administrators to handle a variety of administrative responsibilities inside the Student Information System (SIS), including scheduling courses, processing admissions, and resolving any procedural or technical issues.

Safety precautions:

To safeguard sensitive data, all users—faculty, students, and administrators—rely on the SIS's strong security features. This covers encryption techniques, safe login information, and access restrictions.

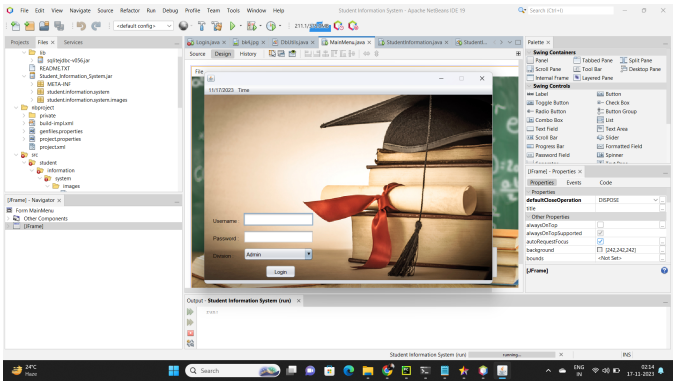
Updating and maintaining the system:

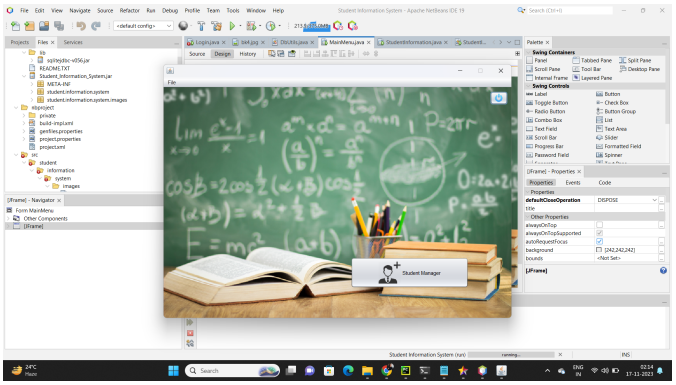
Administrators are responsible for performing routine SIS maintenance and upgrades for all stakeholders. This guarantees that the system will always be safe, effective, and compatible with the changing requirements of the university.

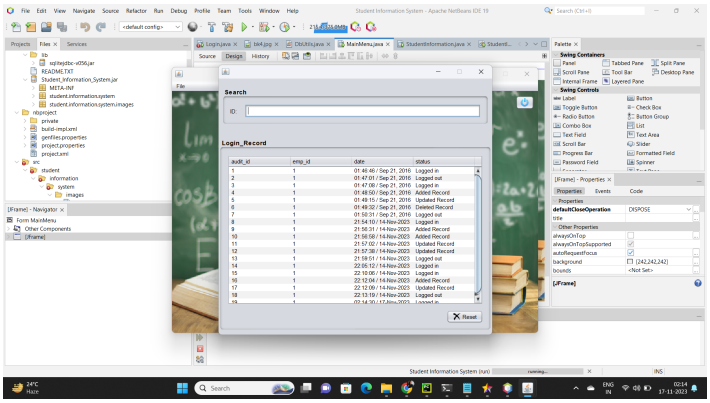
3 Specific Requirements

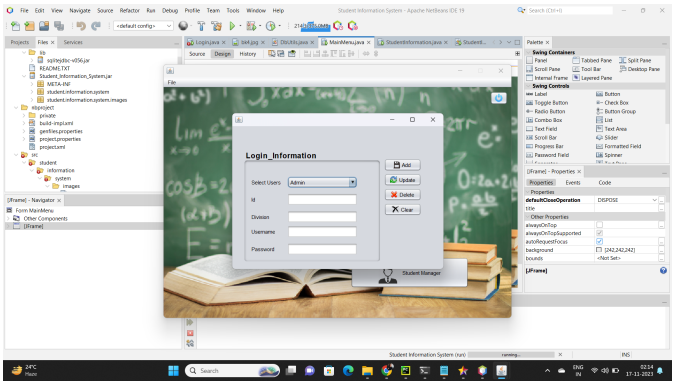
3.1 External Interface Requirements

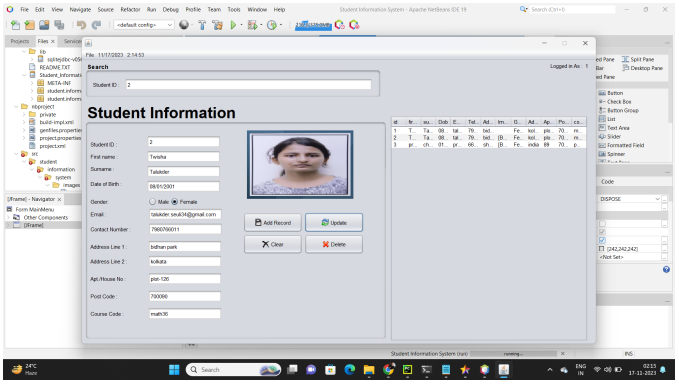
3.1.1 User Interfaces











3.2 Functional Requirements

The features and capabilities that a Student Information System (SIS) has to have in order to fulfil the demands of the educational institution are outlined in its functional requirements. The following are the main functional specifications usually connected to a SIS:

Student Records Administration:

Maintain complete student records, including contact information, enrollment history, demographic information, and personal information.

Enrollment and Admissions:

Manage applications, monitor admission status, and assist smooth course enrollment to streamline the admissions process.

Monitoring Academic Performance:

Keep track of, compute, and oversee student grades.
Produce transcripts and give a thorough rundown of all the academic accomplishments.

Keep an eye on attendance:

Maintain a record of student attendance for classes and other school-related events.

Interaction & Cooperation:

Establish lines of communication between educators, administrators, and students.

Enable teamwork by utilising chat platforms and parental access controls.

Management of Courses:

Simplify procedures linked to the course, such as registration, scheduling, and assignment administration.

Functions of Administration:

Help administrators with resource planning, which includes faculty scheduling and classroom assignments. Give decision-makers access to analytics and reporting tools.

Integrity-related Skills:

Establish system integration, including with Learning Management Systems (LMS), to establish a unified learning environment.

Safety precautions:

Put strong security measures in place, such as encryption and access limits, to safeguard private student data.

Training and Support for Users:

Provide thorough documentation and training courses to make sure administrators, instructors, and students are using them effectively.

Management of Finances:

Integrate with financial systems to support financial operations, such as managing tuition and fees.

Evaluation and Scoring:

Assist in the preparation, distribution, and marking of tests, assignments, and other evaluations.

Respect for Regulations:

Make sure that all rules pertaining to education are followed, and include tools for reporting and auditing.

Analytics for Learning:

Use analytics to learn more about engagement, performance, and other pertinent indicators for students.

Roles and Permissions of Users:

Establish and oversee various user roles (teachers, students, administrators) with varying levels of access and modification rights to pertinent data.

Management of Documents:

Make it easier to store and retrieve vital documents, such diplomas and transcripts from institution.

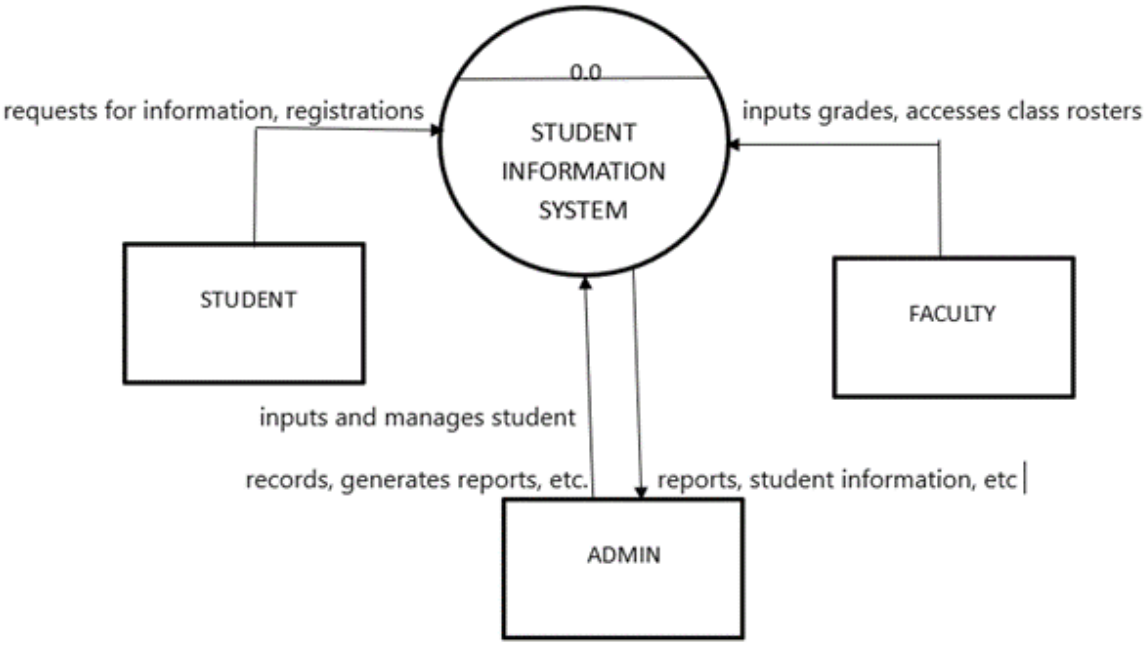
Alumni Relations:

Organise alumni data, keeping tabs on their post-graduation pursuits and upholding an alumni engagement network.

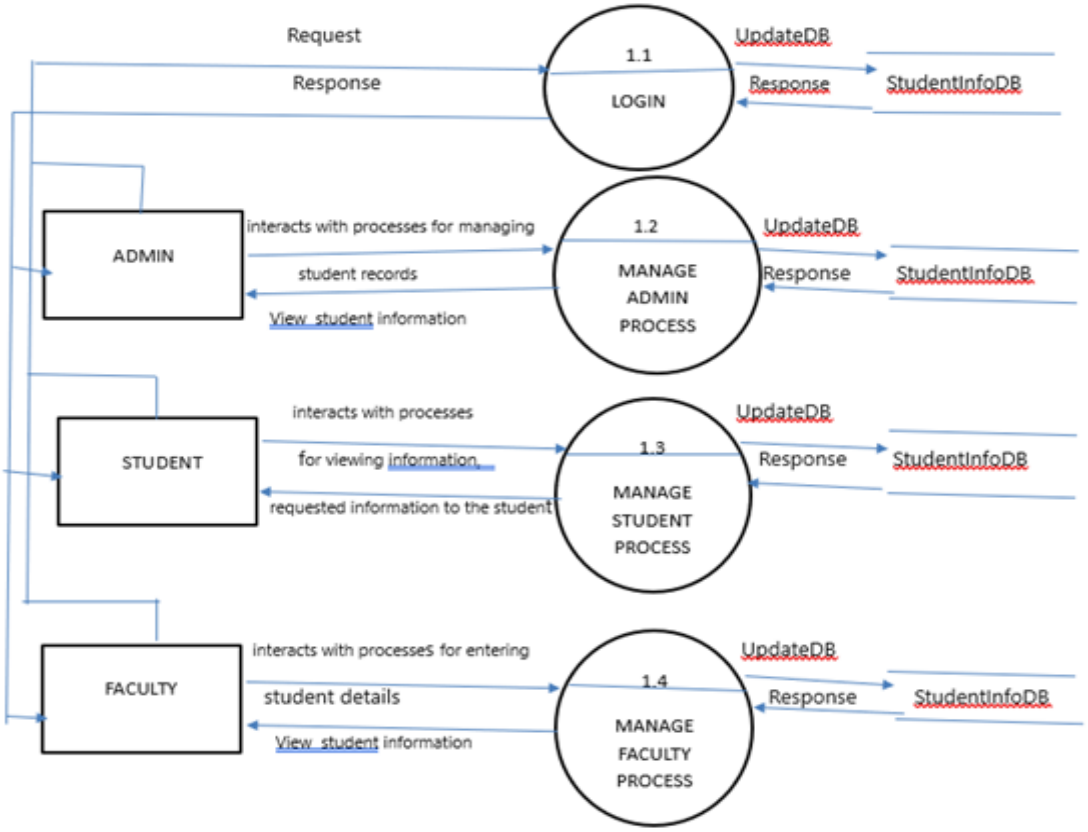
Together, these functional criteria help to improve the efficacy, efficiency, and transparency of educational operations by centralising and automating important procedures pertaining to student data and academic administration inside the institution.

Data Flow Diagram of Student Information System

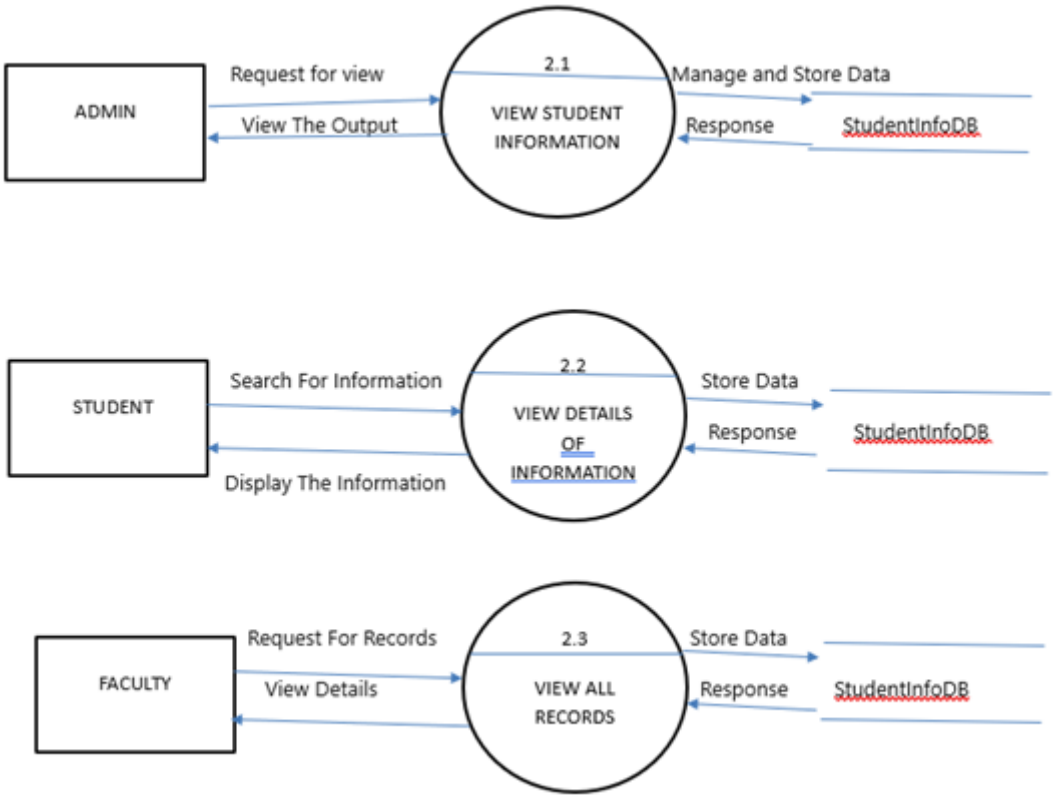
DFD Level 0:


0.0
requests for information, registrations
STUDENT
INFORMATION
SYSTEM
inputs grades, accesses class rosters
STUDENT
FACULTY
inputs and manages student
records, generates reports, etc.
reports, student information, etc
ADMIN

DFD Level 1:

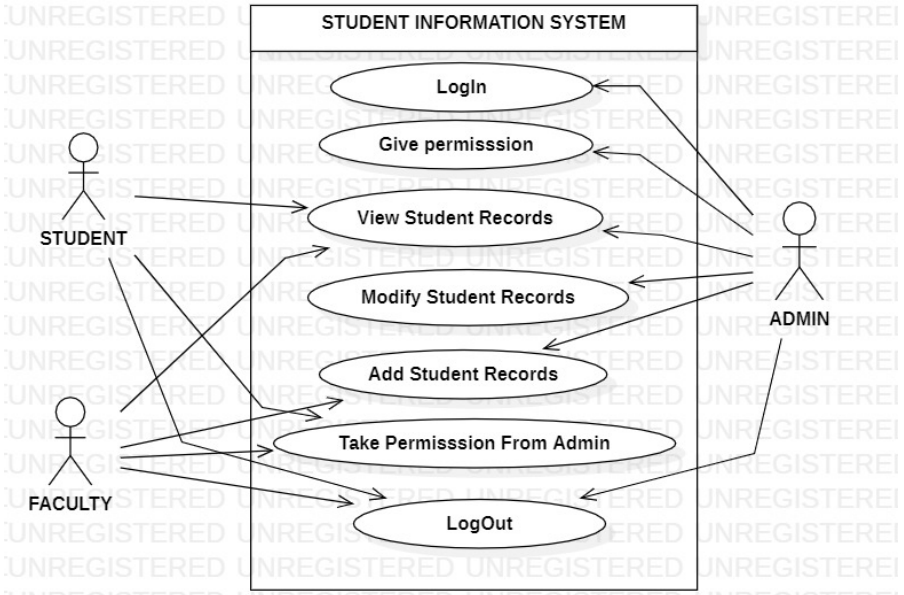

Request
Response
1.1
LOGIN
UpdateDB
Response
StudentInfoDB
ADMIN
interacts with processes for managing
student records
View student information
1.2
MANAGE ADMIN PROCESS
UpdateDB
Response
StudentInfoDB
STUDENT
interacts with processes
for viewing information
requested information to the student
1.3
MANAGE STUDENT PROCESS
UpdateDB
Response
StudentInfoDB
FACULTY
interacts with processes for entering
student details
View student information
1.4
MANAGE FACULTY PROCESS
UpdateDB
Response
StudentInfoDB

DFD Level 2:



3.3 USE CASE MODEL

Use Case of Student Information System



4 Other Non-functional Requirements

4.1 Performance Requirements

For a Student Information System (SIS) to function effectively, and responsively, and to satisfy user needs, performance criteria are essential. The following are essential SIS performance requirements:

Reaction Time: To guarantee prompt access to student records, grades, and other information, the system should respond quickly to user interactions.

Parallel User Assistance: A certain amount of concurrent users must be supported by the system without performance degradation. This is especially crucial during peak usage periods, such as when registering for classes.

Scalability: Increases in student enrollment and data volume should not negatively affect performance because the SIS should be scalable. The system can adjust to the expanding needs of the educational institution because of its scalability.

Accessible and Reliable: Low downtime should be minimized by a high level of system availability. Ensuring that users have access to the SIS at all times is imperative, particularly during pivotal moments such as the announcement of test results.

Dependability: There should be few mistakes or system malfunctions in the SIS. Ensuring consistent access to information and preserving the integrity of student data is imperative.

Speed of Data Retrieval: Users should be able to obtain and display student information without any discernible delays by having the system fetch data promptly.

Network Efficiency: Changes in network conditions shouldn't have a major effect on the SIS's performance. Even in situations when internet speeds fluctuate, it ought to function effectively.

Load Distribution: Load balancing techniques should be in place if the SIS runs on several servers to evenly divide incoming traffic and keep any one server from becoming a performance bottleneck.

Performance Logging and Auditing: Logging and auditing procedures should be optimized if the system has them to reduce their negative effects on system performance as a whole.

Performance of Backup and Recoveries: To ensure prompt recovery in the event of data loss, backup and recovery procedures should be optimized to reduce the amount of time needed for data backup and restoration.

Speed of User Authentication: To guarantee that users may access resources quickly and securely, authentication processes—including login procedures—should be streamlined for efficiency and speed.

4.2 Safety and Security Requirements

When creating and executing a Student Information System (SIS), safety and security are critical factors to consider to safeguard confidential student data and guarantee the accuracy of academic records. The following are essential SIS safety and security requirements:

Data Security: Secure sensitive student data by implementing strong encryption mechanisms to secure data during transmission and storage.

Access Limitations: To guarantee that users, including administrators, teachers, and students, can only access information pertinent to their responsibilities, define and enforce role-based access rules.

Mechanisms of Authentication: To confirm users' identities and stop unwanted access, utilize robust authentication techniques like multi-factor authentication.

Permission Guidelines: To avoid unwanted changes or deletions, clearly define the actions that users are allowed to take within the system by defining authorization policies.

Safe Integrations and APIs: Reduce data interchange vulnerabilities by implementing secure application programming interfaces (APIs) and making sure secure system integrations.

Audit Records: To ensure accountability and facilitate forensic investigation in the event of a security issue, keep thorough audit trails that document user activity and modifications made to student information.

Firewall Defence: Install firewalls to establish a barrier between the SIS and outside networks and safeguard against illegal access and potential cyberattacks.

Frequent audits of security: Perform frequent vulnerability assessments and security audits to find and fix any possible gaps in the system's defenses.

Data Replication and Backup: To guarantee data integrity and expedite recovery in the event of data loss or system failures, establish regular and secure backup methods.

Event Reaction Strategy: To minimize the impact on student data and system operations, quickly address security breaches by developing and implementing a thorough incident response plan.

Instruction of Users on Security Best Practices: Give users thorough instructions on security best practices, such as managing passwords and identifying potential security risks like phishing.

Respect for Privacy: Maintain adherence to privacy and data protection laws to secure student information and stop unauthorized dissemination.

Measures for Physical Security: Protect the physical infrastructure housing the SIS by putting in place physical security measures, such as restricted access to server rooms.

Patch Management for Security: To fix vulnerabilities and keep the environment safe, update and patch the SIS software and underlying systems regularly.

Policies for Secure Passwords: To improve user authentication, implement secure password restrictions, such as minimum complexity requirements and frequent password changes.

Emergency Shutdown of Data: Install emergency data lockdown procedures so that, in the event of a security breach, administrators can promptly limit access to critical data.

End-to-end Communication Encryption: For communication channels inside the SIS, use end-to-end encryption to safeguard data while it's in transit.

4.3 Software Quality Attributes

A Student Information System's (SIS) software quality qualities include features that characterize the overall performance and quality of the system. Key features of high-quality software for a SIS are as follows:

Dependability: Reliable information and functionality should be consistently and accurately provided by the SIS, reducing errors and system failures.

Utilization: Make sure the interface is simple to use and intuitive for teachers, administrators, and students to encourage efficient navigation.

Efficiency of Performance: Optimise system response times, performance, and resource use to accommodate multiple users' demands and different workloads.

Scalability Build the system to be scalable, able to accommodate growing user counts and data quantities without sacrificing system performance.

Reliability: Make maintenance and updates simple so that administrators can apply modifications, resolve problems, and put improvements into practice quickly.

Mobility: Make sure the SIS is compatible with a range of contexts and platforms so consumers may access it from a variety of gadgets and operating systems.

Protection: Put strong security measures in place to safeguard private student data, guaranteeing data availability, confidentiality, and integrity.

Mutual Compatibility: To establish a unified learning environment, and facilitate smooth integration with other systems, including Learning Management Systems (LMS) and other databases.

Flexibility: Permit the SIS to adjust to modifications in laws, rules, and technology developments without causing major problems.

Accessibility: Make sure the system has high availability, reduces downtime, and allows users to access it continuously, especially during important times.

Verifiability: Create an SIS that is simple to test so that system functionalities can be efficiently tested and validated, guaranteeing accuracy and dependability.

Availability: Make sure the SIS satisfies online accessibility standards, can be accessed by users with a range of skills, and can accommodate users with disabilities.

Observance: Make sure that student information systems are operating by applicable standards, data protection laws, and educational rules.

Record-keeping: Give administrators, teachers, and students thorough documentation to help them understand and use the SIS effectively.

Data Accuracy: Put in place safeguards to protect student data integrity, avoiding errors or discrepancies in academic records.

Accountability: For accountability and auditing, provide thorough audit trails and logging systems to monitor user actions and modifications made to student records.

5 Conclusion

In summary, a critical instrument that streamlines administrative procedures, encourages effective communication, and strengthens decision-making in educational settings is the Student Information System (SIS). Institutional growth is facilitated by its integrative skills, scalability, and adaptability. Security protocols guarantee the preservation of student information while adhering to legal requirements. The SIS is an essential component of contemporary school management that supports academic success and adapts to changing demands. To guarantee its continuous relevance in the ever-changing educational scene, ongoing development is essential.