

**CAPSTONE PROJECT**

**TITLE: STUDENT INFORMATION SYSTEM**

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**DATE: 28/02/2024**

**EXECUTIVE SUMMARY**

**Case Study:** Exploring how a particular educational institution implemented an SIS to streamline administrative tasks, enhance communication between stakeholders, and improve student outcomes.

**Background:** A SIS serves as a comprehensive solution to meet these demands, integrating diverse functionalities such as student enrollment, attendance tracking, grading systems, and communication channels.

**Objective:** The objective of a student information system is to efficiently manage and organize student data, including enrollment, grades, attendance, and other relevant information, to streamline and enhance communication between students, faculty, and administrators.

**Methods:** SIS development encompasses strategic planning, stakeholder engagement, iterative design, rigorous testing, and ongoing support, ensuring the successful implementation of a system tailored to the unique requirements of the educational institution.

**Findings:** The user-friendly interface of the SIS has improved accessibility for administrators, faculty, and support staff. Users can easily navigate through the system, retrieve information, and perform tasks without extensive training.

**Conclusion:** A student information system (SIS) could highlight its pivotal role in modern education, emphasizing its ability to tasks, enhance communication between stakeholders, and provide valuable data-driven insights for decision-making.

**INTRODUCTION**

In the ever-evolving landscape of education, Student Information Systems (SIS) stand as a cornerstone, facilitating the management of student data with efficiency and precision. Born out of the necessity to streamline administrative tasks and enhance academic processes, SIS have become indispensable tools for educational institutions worldwide.

**Background Information:**

Traditionally, educational institutions grappled with cumbersome manual methods of record-keeping, leading to inefficiencies, errors, and delays. Recognizing the need for a more systematic approach, SIS emerged to digitize and centralize student data, revolutionizing administrative operations. Initially conceived as basic databases, modern SIS now encompass a comprehensive suite of features, integrating various functionalities such as enrollment management, attendance tracking, grade reporting, and communication channels.

**Objectives and Goals:**

The primary objective of SIS is to empower educational institutions with the tools necessary to efficiently manage student information throughout their academic journey. By digitizing records and automating administrative tasks, SIS aim to: Enhance Administrative Efficiency ,Improve Data Accessibility, Support Informed Decision-Making ,Foster Communication and Collaboration, Enhance Student Experience.

In essence, SIS serve as the backbone of modern educational institutions, aligning administrative processes with the demands of the digital age while fostering a conducive environment for academic excellence and student success.

**CASE DESCRIPTION**

University X, a renowned institution of higher education, faces operational challenges rooted in outdated manual processes and fragmented data systems. The university's reliance on manual procedures for tasks such as enrollment, registration, and grading has led to inefficiencies and errors, impeding its ability to operate smoothly. Moreover, disparate data systems scattered across multiple platforms hinder data integration and reporting efforts, hampering informed decision-making.

Limited accessibility to critical information further exacerbates these challenges, hindering collaboration and engagement within the university community. Recognizing the need for transformation, University X has embarked on a mission to implement a comprehensive SIS to streamline administrative processes, centralize data management, and enhance accessibility. By selecting a robust SIS solution and customizing it to align with the university's unique needs, University X aims to empower stakeholders with timely access to accurate data, enabling informed decision-making and ultimately improving the overall student experience.

Through careful planning, rigorous training, and ongoing evaluation, University X is committed to maximizing the effectiveness and impact of the new SIS, ushering in a new era of efficiency and innovation in administrative operations.

**METHODS**

* We have created logins for users and the students and the faculties.
* In this project, the user can add student details, edit student and can search student
* In this project, we can see all the information of the student.

**MODULES OF SIS**

* Add no of students
* Add student
* Edit student
* Search student
* Exit

The above listed modules are present in our code and perform various functions related to the student

**PSEUDOCODE**

students = []

FOR i = 1 TO n (where n is the number of students to be entered)

student = {}

student["name"] = INPUT "Enter student name:"

student["age"] = INPUT "Enter student age:"

student["grade"] = INPUT "Enter student grade:"

student["roll"] = INPUT "Enter student roll number:"

students.append(student)

PRINT "Student ", i, "details:"

PRINT "Name: ", student["name"]

PRINT "Age: ", student["age"]

PRINT "Grade: ", student["grade"]

PRINT "Roll number: ", student["roll"]

PRINT ""

END

**EXPLANATION**

Data collection relied on user interactions via a console based info interface, with file handling techniques employed to manage and store student related data efficiency.

Overall, these research methods supported the development of a functional student information system in c++, addressing project requirements while considering its constraints and objectives.

**RESULTS**

The output displays the menu of students , edit student, search student and exit. If your choice is 1 you can add the student details. If your choice is 2 you can edit the student.In choice 3 you can search the student.

**DISCUSSIONS**

Designing a student information system in C++ entails discussing its functionalities like adding, updating, and displaying student details, deliberating on appropriate data structures for efficient storage, considering user interface options, implementing data validation and security measures, addressing persistence and scalability concerns, emphasizing modularity and reusability through class organization, ensuring robust error handling, and planning comprehensive testing strategies to guarantee system reliability and correctness.

**CONCLUSION**

In conclusion, the development of the student information system using c++ has yielded a robust