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STUDENT RECORD'S MANAGER

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ABSTRACT

In various institutes, data is stored physically through the manual work of students, teachers, and administration which has several disadvantages that we discuss later. So, we provide a type of Management system or information system, basically software, that provides some help to teachers and students both at the same time by managing their data in a sorted manner. Does not matter whether it is applied in college, school, or other types of educational organizations or institutes it will provide the same result if there is any type of teacher-student relationship.

1. INTRODUCTION

Student Record's Manager is an information system developed with a simple and easy interface to manage, store, and perform various functions by maintaining the information of students. It will be used by educational institutes like colleges, schools, etc. The data produced, created, and managed accurately, with updated information throughout the academic career of a student is essential for himself, the university, and for college as well as maybe in the future also.

In this system we can add data, manage data and modify data also of students in a college or school according to their needs we can create a student's record add him/her, modify or update their records, check the existence of student in the institute or not, and many more operations. All the tasks are first thoroughly researched and then separated skillfully and effectively to make the code more readable and easier to understand the working and concepts for the users.

2. WORKFLOW

The workflow of this system is decided after analyzing the needs and requirements of both students and teachers comprehensively. The idea is to store every data in the academic career digitally to ensure long-term storage and retrieve the academic history in a few clicks on the system. The system is designed to provide you with an accurate report to students to help them analyze their position in a particular subject. The privacy of students and teachers is also considered while implementing the system.

The database is the main component for storing and managing all the data involving students and teachers. A teacher can upload marks, attendance, and notes, create subjects and also manage other things related to the student. In turn, students can view notes, attendance, and marks as reports generated through the help of the system. If there are any errors like marking a student absent when he is present or uploading incorrect marks.

3. PROPOSED SYSTEM

The system is to be designed in a way that allows students to sign up and create their data for themselves by joining subjects that will be managed by the teacher. The teacher can also approve students to join their class and also manage students' attendance, marks, etc. This will help respected authorities of schools and colleges to cut the overheads and remove the manual paperwork they do on a daily basis. Data can also be deleted when found that it is not necessary. We are aiming to provide users with an easy and simple interface, quick access to the data stored in the database, eliminate all the errors, search features with just by few clicks, and more storing capacity, etc.

4. ANALYSIS

The analysis here is done by studying several functions and operations taking place in our system and maintaining a correlation between the system and the respected organization like colleges, schools, etc. First, we analyze the problems existing in our system then we develop the best alternatives as a solution to the problem and then check if it met the users' requirements and needs.

Defining functions on the basis of users for a student records manager:

A) Teacher: A teacher can perform various functions and simultaneously produce data in his/her daily teaching job like marking attendance, scheduling tests, preparing and providing notes, teaching several subjects to several students or students of different classes, updating marks from tests, generate mark reports for each test or exam, generating annual report card, and many other functions, etc.

B) Student: A student also creates data on a daily basis by merely just going to college and participating in activities like taking admission in it, attending lectures, appearing for tests and exams, indulging in any sports activities, paying fees, and further checking up their attendance, marks, and notes provided by the teacher, and many more other activities.

The analysis phase helped us to know the creation, management, and deletion of data. With the help of this collected information, we can easily know the checkpoints where trouble can occur and also allowed us to identify several problems that users go through when they are maintaining and storing data physically. Now, the system can only be successful if the problems are accurately researched and the digital solution is developed precisely by considering all of these problems.

Areas of work that are responsible for the use and implementation of student records manager in an educational institute are:

- Adding academic programs.
- Management of teacher resources and student resources.
- Fees management of each student.
- Monitoring of students' academic progress.
- Recording of data physically.
- Maintaining and storing the students' and as well as teachers' data.
- A lot of paperwork.
- Complex structure of the organization may lead to troubles.
- Unnecessary overheads.

After evaluating everything and developing alternatives we created a system that can help any educational institute to create and maintain student and teacher-related and correlated works and activities digitally and store them as long as users want in addition also manage some administrative functions like fees management, etc.

Some key features that we offer in our student records manager system are:

- **Generating report:** The system can generate reports of both the teacher and student. Reports are accurately generated with the help of a system and calculating functions according to the data provided or inputted by teachers and students. Reports like attendance on a daily basis and throughout the respective duration of the course, marks allotted by a teacher to students, and the report card for students to check whether they are progressing or regressing in their academic careers.
- **Adaptive Interface:** The interface is always designed for its users with the aim of making it simple, easy, convenient, and adaptive to get used to it in no time. Following the standards of designing the interface, we also divided it into components that gave it a hierarchical structure, highlighted the important links and sub-components like students have different components to use and teachers have different ones.
- **Access based on Role:** It means that the access to the system properties is role-based like what type of user it is whether it is the admin, teacher, or student. Students could only see and have access to that part only which is built for them like view marks, attendance, notes, etc. and teacher can only have access to their respective parts like uploading attendance, marks, notes, and view report of a student. No other user can use and access the other functions.
- **Security:** The security of data is the most important part of any system that has been ever developed. For security purposes, the concept of authentication and authorization is implemented in the system. This will remove unauthorized access to data and only a particular verified user can access the system.
- **Large storage:** All of the data is stored in Database. If a Teacher searches for a student's data the system will fetch it from the Database and present it to the teacher. The database can store a large amount of data very easily because it is all digital data that are in bytes. If a large amount of data is stored physically it will require both some space and money but the database service helps to store it easily for a very low cost and store it as long as the user wants to.
- **Eliminating cost:** Unnecessary overheads that incur during the creation of data, maintaining of data, and storing of data all are done through paperwork and other stationary materials, and even Xerox notes provided to students also require some cost. So, Teachers can upload and store data digitally, as long as they want, like notes, and students can just view or download them and all this can be done through this single system.

5. CONCLUSION

There are more opportunities for interaction between students, administrators, and educators as a result of the market for student management system software changing quickly. The ever-evolving technology of student management systems allows schools to give students better access to their data and contribute to the development of a more individualized learning environment.

The trends and forecasts covered in this blog post show that technology is playing a leading role in the implementation of these solutions. We have only begun to scrape the surface of what cutting-edge student management systems can provide.

The next ten years will provide challenges for academic institutions, therefore now is the time to set up their systems to meet those challenges. To guarantee success and more effectively streamline operational operations, we offer our system to use.

6. FUTURE WORK

The student records manager is expected to observe and explore different work areas which will also force us to bring up some enhancements and innovations in the software. Here are a few potential developments proposed for the future:

Quick processing: The system is built on CRUD operations that are Create, Read, Update, and Delete. These operations are performed on data so processing data from further layers of processes may slow down its processing so by keeping ourselves updated about the technology we aim to implement all the necessary requirements in software to make all of the processing faster and more reliable.

Understanding risks: Faculty and staff can be assured that they receive the appropriate information at the appropriate time by using a thorough student management system. Educators are better able to correctly identify each student's risk factors and take the appropriate precautions to avoid any unfavorable outcomes as a result of increased data accessibility.

Improved Operations: The education industry is incredibly complicated and rife with unpredictability. These doubts can be reduced with the use of student information systems by giving prompt and precise answers to inquiries. The system becomes more transparent as a result, enabling more insightful data flows amongst all stakeholders.

Learning adaptively for individualized instruction: A student management system with adaptive learning is being applied in the educational system of today to generate personalized learning experiences that meet the needs of every student. This allows academic staff members to employ data-driven strategies to improve learning outcomes through strategic evaluation and maximize knowledge retention.

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