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# Student Information System (SIS)

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**ABSTRACT :** Students Information System (SIS): Nowadays, maintaining or storing data is the biggest problem. To overcome this challenge, create a Student Information System (SIS). In this system, students fill out a form, which is in the form of software android application. This application processes the data provided by the students and generates a QR code for it. This QR code can be scanned anywhere, allowing easy access to all the information. This streamlines the process, saving time and effort. Our SIS project consists of three modules designed to facilitate access for students, teachers, and parents, allowing them to track student information efficiently.

Considering the aforementioned challenges and needs, we believe that our SIS project is not merely a project but a necessity for students, teachers, and parents alike. Data management poses a significant challenge, and our solution aims to address this by providing a streamlined information system accessible through user-friendly applications. By combining innovative concepts with the needs of the people, we aim to create tools that will not only benefit individuals but also prove valuable for the government in the future.

The main purpose of this Student Information System (SIS). is a management information system for education establishments to manage student data. In the current system all the activities are done manually. It is very time consuming and costly. Our Student information system deals with the various activities related to the students. In order to provide this service we designed simple follow of the Students Information System enter project which has various of modules which is helpful for the student administration to efficiently faculty manages them student's details. When developing these applications, we have carefully considered the project's objectives, problem definition, format, and the languages best suited for implementation.

This project is aimed at developing a Student Information System that is of importance to either an educational institution or a Student. The system is an Intranet based application that can be accessed throughout the institution or a specified department. This system can be used as an attendance monitoring system for the Student. Students logging it may also access any information. Attendance will also mark in this And in this students can also give feedback to their teachers.

## I. NTRODUCTION

Student Information System is a management information system for education sector establishments used to manage student data. It integrates students, parents, teachers and the administration. The Student Management System can handle all the details about a Student. The details include College details, Course details, Students personal details, Academic details etc., The Student Management System is an automated version of manual Student Management System. If we talk about Student Information System, the first application is Students Application. Actually, there are three Android applications inside the student information system: student, teacher and parents. Students Application should be explained that students first do their registration and after logging in, whatever information is available in it, they can see it whenever they want. And there is a second application which is in the Teachers Application, whatever work the teachers have, they can allocate it to the students and there is also a QR code scanner which helps in retrieving the information of the students. The benefits of a Student Information System (SIS) with an intuitive user interface and pioneering features are manifold. It maximizes school management and enhances parent communication, making it more effective. The smart management of student and staff data transforms chaotic schedules into stress-free, easily manageable ones. It also entuses student performance, streamlining and simplifying everyday administrative tasks.

By utilizing the Student Information System, student data is stored efficiently within the application's database. This system not only facilitates professional work by students but also ensures that their time is not wasted. This Student Information System efficiently handles every aspect of student data, ranging from admissions to class schedules, subjects enrolled by students, overall performance, and personal information. All these critical elements are seamlessly



integrated into a single database, allowing easy access and tracking with just a click of a mouse! Embracing new technologies and trends is imperative. In our country, such systems should be adopted widely. This involves utilizing various programming languages and developing applications tailored for different user groups, such as students, teachers, and parents. Each group benefits from its own dedicated application, thereby enhancing overall efficiency and effectiveness.

The third application is the Parents Application in which parents can predict the academic growth of their children. Meaning like the child's attendance at his college/school events or parents' meet like this. In this, whatever tension the parents have towards their children is reduced because there is neither tension of attendance nor tension of any homework. And you can concentrate on your child while sitting at home.

## II. LITERATURE REVIEW

### **Paper 1:** "A Student Information System"

**Authors :** Prabhu T. Kannan & Srividya K. Bansal

**Date:** 2013

STUDENT Information System (SIS) is a software application to manage the administrative processes of an educational institution like admissions, attendance and housing.

Student information is made available to administrators across the institution, which facilitates planning and co-ordination. Learning Management System (LMS) is a software application to share course content and track the progress of individual students.

It can be used as a tool to enhance classroom teaching by engaging students in discussions and learning activities. Learning management systems can augment course material with rich multimedia content. Learning Management Systems help personalize the learning process.

Teachers get a richer picture of how students are faring in quizzes and tests and can find out which concepts students are struggling with. They can also be used as a system to deliver and administer distant learning courses.

### **Paper 2:** "Important Factors Affecting Student Information System Quality and Satisfaction"

**Authors:** Cannur Gurkut & Muesser Nat

**Date:** 2017

This study considers the development of HEI with the SIS to assist academic and administrative staff in generating reports. Faculty coordinators generate reports on the number of students in each department and determine the number of sections (groups) for each course, the Rector's office uses these reports to determine the number of students from each faculty/department in order to see the increase or decrease in the number of students.

This information is then used to decide on whether to consider closing the program or improving the department's needs. Faculties use statistical information for accreditation issues. Course advisors use the SIS to decide courses that the students will get based on their performance. And finally, students use SIS to make online course registration, to check their time table, exam schedules, exam results and transcript.

### Step 1: Prerequisites for Building a Student Information System

In this Student Information System (SIS) Application have maintained students data based on MySQL. Any entry will be stored directly in MySQL database which is available on XAMPP server.

This is a mobile application and to run its code, we must have Android Studio installed on our device. And it is necessary to have some knowledge of it also.

Also, make sure to have the following Frontend language, Backend language, Web service language, and Database language.

### Step 2: Hardware and Software Required for SIS



#### Software Requirements:-

- Operating System:- Windows 7,10 and above 64 bit os.
- Front End Language:- XML
- Backend Language:- C,C++,Java, JSON
- Web Service Language:- Php
- Database Language:- Mysql

#### Hardware Requirements:-

- System:- Windows 7 and above 64 bit Hard Disk:- Minimum 256 SSD or HDD Processing speed 3.4 GHZ and above processor i3 10th,11th,12th generation,i5 10th,11th,12th generation
  - RAM : Minimum 8 GB RAM Monitor: HDMI or VGA
  - Input Devices:- Laptop, keyboard, mouse.
  - Software Hardware Requirements:- System:- Windows 7 and above 64 bit Hard Disk:- Minimum 256 SSD or HDDRAM : Minimum 4 GB RAM
  - Monitor: HDMI or VGAINput Devices:- keyboard, mouse, stable internet connection.
1. Student Information System or Child App
  2. Parents App
  3. Classroom or Teacher App

#### Step 3: Student Information System Module

In SIS student application opens and then the login page comes in front of him and students can also do registration in it. In registration you have to fill up a lot of data and after submitting it, a QR Code will be generated for students. Student must have to know about the above information id, name, parent full name, parent contact no, contact details, rollno to register on the application. In data frame of application created, for only kept rows with the most recent date for each students. No need to rank every students based on what time they last bought something and to them.

This entire information is related to the academic of the students, which means can be maintain the complete academic record. The next entire information college fees, email, date of birth, gender and at all.

#### Step 4: Building a Teacher or Classroom Module

As per requirements in Students Information System will be the combination of 3 module in the first module which is SIS successfully made. And now created teacher module or it called as classroom module also.

Thought that what happens whenever a college or teacher needs information about students, at that time they have to work hard to collect data from students or sometimes they have to inform students about some event. They can also tell and the teacher can also mark their attendance. Keeping this problem in mind, created a Student Information System second module i.e. Teacher App.

#### Step5: Building a Parent Application

Created Parent Application because along with this application, also wanted to create a safety point of view for many parents, that is why to created this. In which same technologies are used as per aboved mentioned. Then after that created its login page and created the splash screen for the starting of application. In which also their login and sign in options in that during sign in, parents are asked to enter their name, their child's roll number, email, contact number, username, and password. As per above created a well known user friendly application for the parents also. It has observed that parents are worried about their children's well-being, whether they will regularly leave home to go to school or college, whether they will have to do homework on time, or whether they will be able to do their homework

just by making an application. It is clear from the mind that everything has been mentioned in it. This App collects all types of data of students and helps their parents to ensure that they do not worry too much about their children. This is a mobile application which is very simple to install and anyone can do it.

#### Step6: Segmentation Model Interpretation and Visualization

To better understanding about SIS created use case diagrams of our three models so that everyone can understand because there is no better way to understand this than a use case diagram.

Do the segmentation of three models so that all are protected from each other, then everyone gets privacy and at the same time also save space because it takes more space if three modules are created as one.

In the above three application methodology properly understand the three application in details because of use case digram and at all. Our SIS system can be protected form the other user of SIS system all three application can tested properly by using Postman and managed the data with our way how handle all the datasheet of SIS system they can give you brief knowledge about it properly.

In the above diagram see that all three modules data how to handle in XAMPP (MySQL database), Apache Netbeance 17 are used in this to run the whole database activities and to manage it. MySQL is an open-source relational database management system. MySQL, which comes with XAMPP, provides you with the means for database management. You can store and retrieve data by creating a database. PHP: PHP is a server-side scripting language that helps in creating dynamic web applications. If you've ever wondered how web development is done, you've probably heard about XAMPP. XAMPP is an Open Source Software that helps you to start web development easily. In this blog post, talk about XAMPP in detail, and learn what it is, how it works, and how can use it to develop user website or user web application. is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server XAMPP stack of software is an open-source localhost server providing a number of functionalities through the package of software it contains. Just by looking at the charts above, can identify the following attributes of students in each segment.

### III. CONCLUSION

The Student Infromation System (SIS) serves as a crucial tool for colleges to efficiently maintain student records, ensuring accuracy and accessibility. It facilitates remote monitoring and control, storing all gathered information in a centralized database for easy retrieval. This system streamlines various processes, from student registration to fee payments and personal details, contributing to the establishment of high-quality student data.

The development of such applications was deemed essential, prompting our team to create one that believe will prove valuable to many users. Recognizing the significance of data management, meticulously crafted this application to meet our requirements. Offering users the option to select data entry fields enhances efficiency, especially for tasks like entering degree programs, minimizing time and effort.

Throughout the development process, encountered challenges related to data management, prompting us to leverage Java for frontend and backend development. By addressing these challenges, we've ensured the system's ability to generate comprehensive student reports and effectively manage data from enrollment to graduation. hence the interaction of parents with teachers will also be good and discipline will be maintained in the educational institutions.

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