Student Management System

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Abstract—Student Mobile System Application is essential for an institution or to a college or to a university, which utilizes computer, also which reduces manpower. Student Mobile Application is a internet based Student Management System that manages several student details like student attendance, internal assessment marks, student basic details. It also manages sharing of news and notice sharing, notice, notes. Attendance of the students as well as marks of students will be updated by staff. This application is being developed for an engineering college to maintain and facilitate easy access to information. For this the users must be registered with this application after which they can access as well as modify data as per the permission given to them. Student Mobile Application is an internet based application that aims at providing information to all different types of management with an organization. For a given faculty/student can access the system to either upload or retrieve information from database. Student's and faculty’s details uploaded by the admin. He will give username and passwords to the respective. Faculty will update the student status by putting present or absent. Finally student can only view his details, he can take the report. Student Mobile Application has several modules. Initially admin will login, login module. Later he is going to upload the details of student, called student data module which has the functionalities like searching, inserting, updating and deleting the student data. It has attendance module. The goal of evolving this application is to induce the report regarding attendance at the completion of the conclave or at the middle of the conclave.

Keywords- College Management System, Student Management System, Student Mobile Application, ERP system

I. INTRODUCTION

As colleges got expanded the number of students also gets increased and also the student related contents increases. Student Management System (SMA) is Information sharing application software which is deliberated to begin with exchange of information in a secure manner to affiliate with students, faculties, and the college administration. The application contains all data regarding information of the student. SMS is defined as an application based on internet that aims to all levels of management that provide information within an organization. This system can be used as a information management system for the college.

For a given staff/student the Administrator creates a login id & password using this they can access the information from the database. The information regarding student and faculty is stored in the database. This application can be effortlessly used in any educational institutions. In private and government educational institutions also it can be implemented. SMS application is an Android application that means it is easy to access and easy to control from anyplace and at any time. Student attendance information is stored in respective educational institutions with distinct details. The responsibility of the faculty to maintain the record regarding attendance and internal assessment marks. Maintaining the attendance report by manually is not systematic, not secure and in addition to that more time is needed to organize the record and to determine the average attendance of individual student. Also manual internal assessment record system also not secure, more time is needed to organize it and getting an average is difficult. So it is significant to have a system and which will overcome the downsides of traditional system like information arrangement of a student, average attendance estimation, to enter student internal assessment marks, to generate the average and also to get the report of student attendance as well as internal assessment progress. By this application students can directly communicate with faculty. Faculty is able to share the ongoing events and news among all the students according to their firm. There is a message sharing system in which the message is shared between teachers and students. Student can ask query and teacher can provide any solution regarding it.

II. LITERATURE SURVEY

The [1] system has come up with many functionalities for educational institutions to track the student progress and managing attendance. It helps both student and guardian to keep track of student progress without visiting to the college. It also notifies student and guardian during the time of important events which are happening in institution. The student information has the particulars (like student's id, date-of-birth, sex, email, phone number, etc.) invade to the system by the faculties. All these particulars is stored in the database.
The paper [2] provides the particulars to carry out the performance, management and decision-making functions of enterprises or organizations.

Enormous growth of students is caused to expand the functionality in the respective educational institutions. As student added to the educational system it is difficult to manage and track student details. To overcome this we come up with this new approach student information management system with some additional features. This new approach will provide fast processing, efficient student tracking, and produces desired result. It is more secure, reliable and easy to use.

Attendance [3] is a part of any system to keep track of the particular person. It is mandatory process in educational system which directly reflect the student progress. In any institute attendance management is normally a manual process. Faculty takes attendance according to section and then submit data. The data will save on database server through GPRS. Database layer is responsible for sharing and storing data. The diagrams are provided to provide complete information about student, faculty, and educational institute.

III. SYSTEM DESIGN

The design of the system deals with data flow diagram and class diagram. It depicts how our system will function internally, its various stages and modules of the SMS. Every user have will provide the username and password by this they can access their account. Every account is verified by admin. Student can see the dashboard where he can see attendance, timetable, notice, news & events.

Admin have the separate dashboard where he/she can review and register the user. Admin has right to update, create, delete or block the user data. Admin can create the scheme and scholarship and make it available for users to register on it. Every user has a message module for student to communicate with staffs and other student.

A. Data Flow Diagram

The data flow diagram is a graphical representation of data of SMS. It helps to understand the flow of the system functions.

B. Structural design

Figure will show the structural design of the system. User will have to login first. If the user of the system that logged in is admin he will register students/faculties in the system. Admin will have only complete privileges on the system. He will be able to sending circular notice and timetable of the particular class according to the day.

IV. TECHNOLOGY USED

A. Android

Android is a mobile operating system developed by Google. It is based on a modified version of the Linux and other open source software and is designed primarily for touchscreen mobile devices such as smartphones and tablets.

Android Studio is used for building android application using Java. Android Studio is the official integrated development environment for Google’s Android operating system, and designed specifically for Android development.
B. Java

Java is the most used mobile app development programming language. Android apps can write in Java using IDE called Android Studio. Developers complete most projects in Java followed by Ruby according to Version Eye. So if we have knowledge of Java, will be able to create Android apps of all types. It is most suitable language because it runs on all the platforms including the all the versions of Android.

C. Firestore Database

Cloud Firestore server is used for storing data as backend. Cloud firebase is a fast, fully managed, cloud-native NoSQL document database that simplifies storing, syncing, and querying data from mobile, web and IOT applications at global scale. Its client libraries provide live synchronization and offline support, while its security features and integrations with firebase and Google Cloud Platform (GCP) accelerate building truly apps.

V. Results

A. Login Panel

The system start with login panel where Student, Admin, Faculty will log in.

B. Home Page

In this Students can Attendance, Notice, Timetable, Notes and other things that is shared by Teachers and Admin.
VI. CONCLUSION

An Android based mobile application for Student Mobile Application is presented. The application offers reliability, time savings and easy control. It can be used as a base for creating and enhancing applications for viewing results, tracking attendance for colleges or any workplace. Students and their parents will also view results, attendance and curriculum details using this application. Also students can view details, notifications anywhere and anytime. The application will greatly simplify and speed up the result preparation and management process. It provide high security and a system that reduces the work and resources required in traditional process.

The proposed system provides the new way of computing and displaying an operations with responsive and attractive user-interface. The application can be updated and its functionality can be updated in future. We try to add some extra features in this application like library remainder. Since this application will be handled by the college whenever they need any changes in an application they can make it without the upfront investment, and the system will be more secure when it is handled by the own college.

REFERENCES


