Android and Web-Based College Academic App

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Abstract: As the world is moving towards modernization technology has become an important part of everyone's life. Virtualization has been done in every field. So, students of school or colleges, or universities require a system that supports any device for getting all the necessary information like the student attendances, notices, etc. Every educational institute provides limited services to all its users including students. If provided services are more than easyto use is very difficult. The student can get all the necessary information and assistance through this system. It is quite a long process to register and maintain the data of hundreds of students taking admission every year in college. Many times, due to manual error the data is misplaced or there are small errors in the datasheet. It is also a task to get the database of a particular student from the heaps of data. This system works to reduce this work and for efficient handling of student databases. The students can directly register themselves through this system. As there are different logins for the students and the professors the database is maintained without any disturbance. The data of each student can be retrieved directly by the admins through this system without any errors or misplacement of the database.

Keywords: Android Studio, Firebase, JavaScript, Html, CSS

I. INTRODUCTION

For an organization to succeed in its work, good management is a key element. For an educational institute, communication between studentsand faculties serves an important factor to establish good management.

Nowadays, every organization relies on various digital applications that ensure constant communication among its people. This avoids mis-communications and hence boosts productivity tremendously. In an educational institute like a college, this productivity refers to students.

This system provides various services essential for the student which can be accessed from anywhere. This paper proposes the implementation of cloud campus which is then brought accountable via an application-based platform and web-based platform. Cloud campus can be more precisely explained as the digitalization of everything that goes on in an institution and student's academics. It is not feasible to perform documentation of student data manually over files as it is unsustainable. Whereas if documented over cloud storage it can be easily maintainable and sustainable. The formulated optimization of problems associated with the un-sustenance of student's on-paper documented data can be surmounted via exporting the data over a hosted cloud server. Also concatenating encryptions over data can make it more sustainable and secure.

Experimental results including qualitative and quantitative ones show that hosted and encrypted data over a cloud can be • Sustainable: Cannot be deleted at

the first moment, even if deleted can be rolled back through a backup.

• Maintainable: Data is up-to-date.
• Easily Documented: Any updating to data can be easily performed
• Unauthorized access can be avoided
• User can be kept updated from time to time

The data of student that is held accounted by institutions is mostly on paper which can be accessed by unauthorized individuals and can be easily manipulated.

To overcome this keeping the data on a cloud server that is too encrypted is feasible.

The student can be kept more updated via online information rather than providing him with paper data as online data can be easily and recursively accessed anytime and anywhere.

It is not feasible to perform documentation of student data manually over files as it is unsustainable.

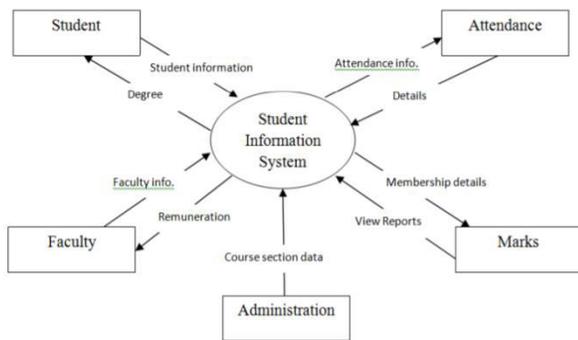Whereas if documented over cloud storage it can be easily maintainable and sustainable.

Fig: DFD (Data Flow Diagram)

II RELATED WORK

[1] Shiv Kumar, Shrawan Kumar Sharma, Divya Dagwar, 'Android Based College Campus App', International Conference on Computing Methodologies and Communication (ICCMC 2018).

[2] Golhar, R. V., Vyawahare, P. A., Borghare, P. H., & Manusmare, A., 'Design and Implementation of Android Based Mobile App for an Institute', In Proceedings of International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT), March 2016, pp. 3660-3663.

[3] Vishwakarma R Ganesh, 'Android College Management System', International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume 5, ISSN: 2278 – 1323, Issue 4, April 2016.

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[5] Alexandra den Heijer, 'Managing the University Campus', ISSN 2072-7925, CELE Exchange 2012.

[6] Bishnu Prasad Gautam, Shree Krishna Shrestha, 'Effective Campus Management through Web Enabled Campus-SIA', International Multi-Conference of Engineers and Computer scientists 2012 Vol I, March 14-16, Hong-Kong.

[7] Mary Jane Magno-Tan, Allan V. Crisostomo, Bill Villaflor, and James C. Faller, 'Cloud-Based College Management Information System for Universities', International Journal of Information and Education Technology, Vol. 4, No. 6, December 2014.

[8]
JadhavSnehal Balasaheb, Supekar BhagyashriSitaram, Wakode Vrushali Khushalrao, Vasaikar Nikita Ashok, Mandlik Priyanka Bhausaheb 'Web Based College Admission System' in IJEDR-2014.

[9] Jianye Liu, Jianka Yu, 'Research on Development of Android Applications' in Fourth International Conference on Intelligent System -2011.

III PROBLEM STATEMENT AND OBJECTIVE

A. Problem Statement

Most of the college/university/school data is on paper to be more precise the data that is been collected is fragile so any data that is collected in this case is not safe and can be easily manipulated. In order to overcome this, there is an indeed requirement of digitalization of this data, to be more specific giving this data cloud support and thereafter encrypting that data is necessary. Moreover, providing every possible facility that is required by students and the teaching authorities over an application-based and web-based

platform that can be indeed accessed from anywhere avoiding the rush and any possibility of complication.

B Objective

The main Objectives are following:

- To provide a virtual platform for all the academic activities of the institute.
- To make it easy for the students to register themselves using a virtual platform rather than on paper.
- To make an academic system for students which can be accessed from anywhere at any time on any device with an internet connection.
- To make a database of each student secure with cloud database services.
- To avoid manipulation and unauthorized access to the database.
- To provides various features like attendance and notices via the application and website.

IV PROPOSED WORK

This system can be used by the institute to maintain the student database efficiently.
The Application and Webpage make it easy for the students to get all the information like notices, attendance, etc. via the system anywhere and anytime The student data is kept safe and sound without any errors or any unauthorized access. The database of any student is easy to retrieve by the faculty. The system is easy to use and user-friendly for any type of authorized user. As the database of every student is stored in the cloud database there is no loss of data due to any problem and if lost can be backed up very easily.
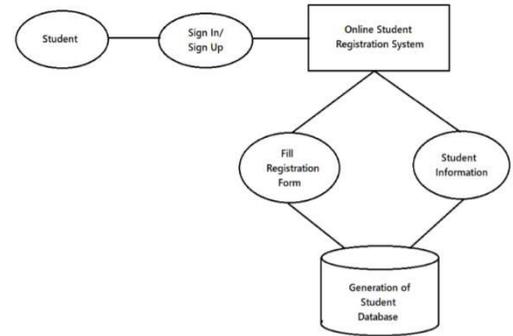

Fig: DFD

This system can be used for properly maintaining the student database as it is a quite long process to register and maintain the data of hundreds of students taking admission every year in college. Many times, due to manual error the data is misplaced or there are small errors in the datasheet. It is also a task to get the database of a particular student from the heaps of data. This system works to reduce this work and for efficient handling of student databases. The students can directly register themselves through this system. As there are different logins for the students and the professors the database is maintained without any disturbance. The data of each student can be retrieved directly by the admins through this system without any errors or misplacement of the database. The student can get all the necessary information and assistance through this system. This system can be used to eliminate the manual errors occurring during the storage of the student databases.

A. Module Descriptions

This system will inform students about various notices via notification rather than going to the institute. It will provide all the details of the attendance of each student. The data will be stored in a cloud database in order to keep the data secure and avoid manipulation of data.
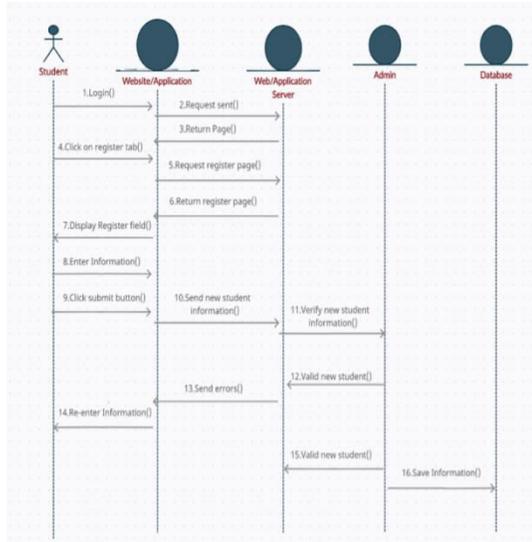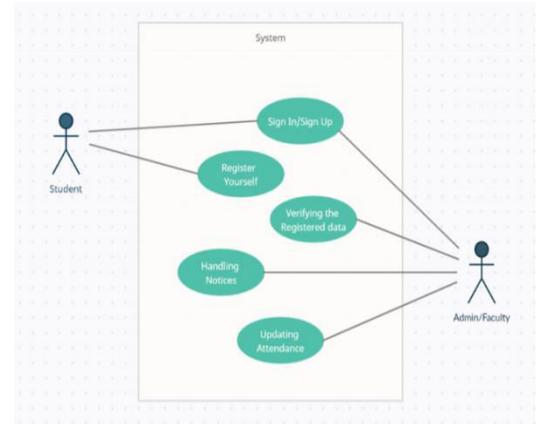
Fig: Sequence Diagram

B. Admin Module

The Admin will check the data input of registered students. Admin user is capable of editing and retrieving the data. Admin is specifically the institute faculty. The The faculty will manage the attendance of the students.

C. Student Module

Each Student should create a login and register themselves. They have to enter all the details asked, which will generate a database of the student. Students can checktheirattendance through this system. They can view the notices added by institutes through this system.

Fig: Sequence Diagram

V TECHNOLOGIES USED

a. IDE used
   - Android Studio for mobile application
b. Database
   - Cloud database for managing data of each student and keep it secure.
c. Languages Used
   - Java for Android Application
   - Html, JavaScript, CSS for Web Application.
d. Version Control
   - Git
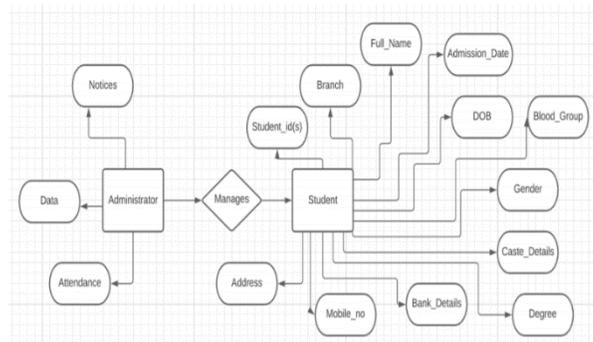   - Github(Sharing the code using version control)

Fig: ER-Diagram

VI CONCLUSION

With this system, we can successfully manage and extract the data of every individual student and manage the student database effectively. With the use of a cloud database, the data remains safe, away from unauthorized access. In case of loss of data the backup data accounted for can be retrieved. The data can be accessed from anywhere with the android application and the web application. The data is secured from any manipulations and kept intact.

VII REFERENCES

[1] Shiv Kumar, Shrawan Kumar Sharma, DivyaDagwar, 'Android Based College Campus App', International Conference on Computing Methodologies and Communication (ICCMC 2018).

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