

Smart Pupil Superintendence Information System

M. Madhumalini¹, S. Rangeetha², P. Kathiravan³, VR. Shankar ganesh⁴, V. Kayathiri⁵

¹Associate Professor, Department of ECE & P.A. College of Engineering and Technology Pollachi.

²Assistant Professor (SG), Department of ECE& Sri Ramakrishna Engineering College, Coimbatore.

³HoD, Department of ECE & P. A. polytechnic college, Pollachi

⁴HoD, Department of EEE & P. A. Polytechnic college ,Pollachi

⁵UG Scholar , Department of ECE & P.A. College of Engineering and Technology Pollachi.

ABSTRACT

In a real-world scenario of educational field the academic related information's being conveyed in the form of oral intimation, hand- written material, and verbal message among the students. In digital world it is essential to represent the information in computerized term for faster and easier communication. In order to facilitate automated student information system for academic notification to enact smart pupil superintendence information system for advancement of management communication through web based and android based module. Android is an open source Linux based system developed by Google, and primarily aimed at mobile handsets and other portable devices. In short, we will be using them to accomplish our daily task. PHP is a server-side scripting language designed specifically for web development. PHP can run on all major operating systems like Windows, Linux, Unix, Mac OS X etc. Almost all of the major servers available today like Apache support PHP. PHP allows using wide range of databases.

Keywords: Android app, PHP.

INTRODUCTION

This project is an implementation to the concept of the wireless communication between an android app and GSM. In this wireless communication is used sending the message to the students. Main concept behind this project is developed to upload and view the desire data instantly to the user. The wireless technology may be an in-style technique within the communication area and it is one in all the quickest growing fields within the wireless technology. Changes in Information Technology (IT) allow institutes to utilize databases and information's such as student pupil superintendence information system thus, making the accessing of records centralized. One of the changes that came about is android and web-based applications. So, with the help of android and web-based system a student will be able to view the events that are going to take place in the college. This increases the efficiency of college record management because previously the college is dependent on paper records only. The time required is less when compared with the paper records. Student information management system is mainly designed for the use of students.

LITERATURE SURVEY

"College Parent Interaction Using Android Application" 2015¹. this application provides a solution through a simple interface for maintenance of student information and also helps parents to get detailed information regarding their ward such as attendance, fees dues, marks, important notice, event details etc., It also contains query message option for parents so that parents can interact with the college faculty through this application. It also facilitates parents to gain all the notification about the activities held in the college. Each individual parent will be provided with the details of his/her ward only.

Amita Dhale et.al in ² described "A Survey on "Smart Connect" an Android and Web Based Application for College

Management System” 2014, this paper provides a generalized solution to monitor the various works that are carried out by a college for managing it. “Smart Connect” provides a simple interface for maintenance of student information. It can be used by educational institutes or college to maintain the records of students. The creation and management of accurate, up-to-date information regarding a student’s academic career is critically important in the university as well as colleges. Smart Connect deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement detail and other resource related details too. It will also have faculty detail, batch execution details, student’s details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitates us explore all the activities happening in the college. Different reports and queries can be generated based on vast options related to students, batch, course, faculty, exam, semester and certification and even for the entire college.

Aradhana Singh et.al in ³ described “Mobile Web Based Android Application for College Management System” 2017, the android platform provides a number of algorithms for encrypting sensitive information. Some of these algorithms provide stronger cryptographic guarantees in protecting data than others. Cryptographic algorithms are harder to break when there is more unpredictability in the random numbers generated for use in encryption. A way of introducing unpredictability in Android is to use the Secure Random class. The need for encryption is twofold. Firstly, encryption makes it difficult to read and use any sensitive information that an app stores on a device. Secondly, encryption adds an additional layer of security to sensitive information that is exchanged between apps and remote server.

Catarina Silva et.al in ⁴ described “Mobile application development process – a practical experience” 2017, for development of android applications, there are certain guidelines and rules to be followed which are listed in the “Mobile application development – a practical approach”. The app developers least significantly adapt the existing software development processes to suit their purpose. This leads to variations in existing processes and introduces new trends hence establishing new guidelines for the developers. So there is need of official documentation of guideline for app development, which we have also followed in the app development process.

Hardik Punmiya et.al in ⁵ proposed “Android Application for College Management System” 2014, this paper proposed that it is a simple yet powerful integrated platform that connects the various entities of the institution, namely administration, staff, students and other specialized models. It is a handy application that can be used by the students, staff and administrator to facilitate communication. The application introduces portability as it is used on a mobile device and can be carried anywhere. Since the application is used on a mobile device with android OS, it improves connectivity between the students and the staff, thus helping the institution to provide a more transparent system altogether. Not only does the connectivity improve, the application also reduces a substantial amount of paper work that is otherwise needed for the daily tasks in an institution. It is a useful tool that can be used by all the members of the institution, anywhere, anytime, on an android mobile device. Since all the tasks are done on a mobile device, there is no paper work involved and it provides direct access to the staff and students. Direct access here means that the student can download assignments or they can put up queries and the staff can upload assignment or answer queries irrespective of where they are at a given time. The application provides a portal to them that can be used in a very efficient manner to facilitate communication, improve connectivity and provide transparency.

EXISTING METHODOLOGY

As the technology is developed day by day, the technology should be used to get an efficient result in adequate time. For attendance management in the present system all work is done on paper. The whole session attendance is stored in register and at the end of the session the reports are generated. It requires lot of paperwork and is time consuming. College cannot even provide urgent notifications to students in case of emergency. In today’s time most of the colleges have their own websites which displays college information, students get timetables, test schedules, event

schedules on these websites. But for retrieving this information the students have to log in to the website. The students visit the website if they are having internet connection and these websites can be viewed on digital phones as well. There is one problem with the websites that if there is no internet connection then these websites cannot be reached. Hence offline connectivity is the biggest issue with the websites. The college management involves execution of different activities, using different software for different purposes is very tedious job. So, the best solution for this is to make one software for carrying out different activities involves in college management. There are different operating systems for different mobile phones but the 83% of mobile users uses android based mobile phones. So,,this paper focuses on development of both Android and Web Based College management system development.

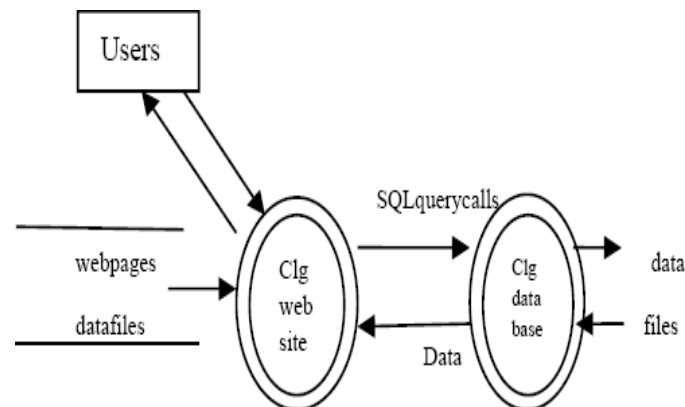


Fig.1. Existing System Flow Diagram

PROPOSED METHODOLOGY

Android Studio is specifically designed to accelerate the process of Android mobile app development. It is the official IDE for android development, and includes everything to build android apps. The XML files are used to define the actual UI (User Interface) of the application. It holds all the elements or the tools that want to be used in the application like Text views, Buttons and other UI elements. In available IDE i.e. Android Studio, Java is default language to code whereas C and C++ are in options. Java code can run on any platform. It doesn't require the source code on that machine at which platform, where it will be executed. A class file can be executed on any platform i.e. Windows, Linux, Mac etc. It means the code is portable. So that an application can run on any smart phone. Android Studio (IDE) uses DVM (Dalvik Virtual Machine) instead of JVM (Java Virtual Machine). The file generated by DVM is the .dex format. It safeguards the native code from memory leaks and each platform in the Java language is used to compile for different functionalities in the application. In Web Portal frontend is implemented by using HTML, CSS, JavaScript and backend uses PHP and MySQL. In this application PHP CodeIgniter architecture is used CodeIgniter is an application development framework which is used to build interactive websites in PHP. Thus, the uses of CodeIgniter framework supports multilingual support, responsive interface, web installer, backup and restore facility. All these services are applicable to the application also because of the use of CodeIgniter framework. Proposed flow diagram can be seen in Fig (2).

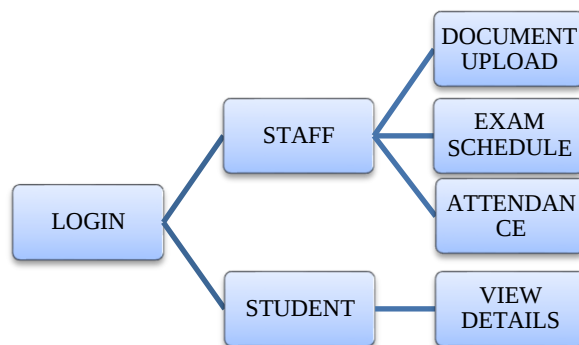


Fig.2. Proposed Flow Diagram

SOFTWARE DESCRIPTION

ANDROID APP:

Android is created by Google. It is a mobile operating system. Android app is created by using Android studio library file. The file format is as shown in fig (1). The home page of android app is shown in fig (2). The staff login has various options in applications which is as shown in fig (3) whereas students can only view the information.



Fig.1. Android Studio library file



Fig.2. Homepage of Android App

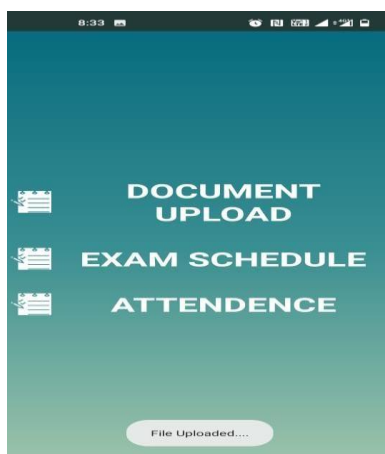


Fig.3. Options in staff login

SERVER:

Server page is created by using the IP address for storing the information. The stored message in server page as shown in fig (4).

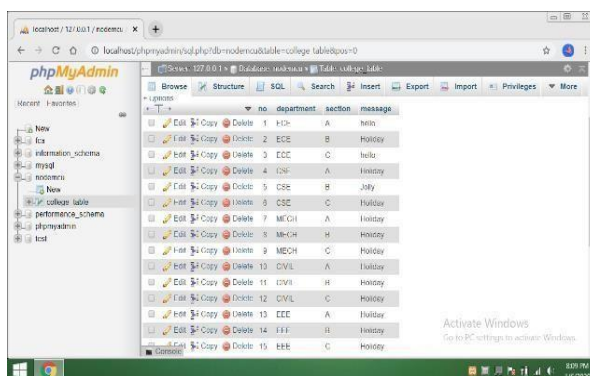


Fig.4. Server Page

The PHP page is created by using PHP get method with XML code. The home page of PHP is shown in fig (5).



Fig.5. PHP Homepage

CONCLUSION

This project is one of the most crucial strides taken in the development staff/student portal student and makes the staff very prompt regarding students and college work[6]. This paper aid in automating the existing manual system. This is a paperless work. It can be monitored and guarded remotely. It cut down the man power required and provides accurate information. Malpractice can be pared. All years together huddled information can be saved and can be accessed at any time. For this reason, the data stored in the repository helps in taking decision by management. So, it is improved to have a Web Based system. All the stakeholders, faculty and authority can get the required information without delay. This system is crucial in the colleges and universities.

FUTURE ENHANCEMENT

In future enhancement, features like video calls between the staff and students, paying fees for the students can also be added.

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