Smart Campus Management Using Android Application

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Abstract: The objective of this paper is to develop Smart Campus Management framework using Android. The application provides the facilities to access the courses which are distributed over the net. The application maintains the attendance system of staff and students, course details student entry, student attendance entry and activities. On selection, course details and faculty teaching learning process are addressed. Further the application accomplishes with various profiles and reports. The proposed system focused on android and web development to develop improve the efficiency and performance of the framework, then sorting technique is used for analysis.

Keyword: Application, Android, web development.

INTRODUCTION

The support and administration of underlying data is just a tiring process in the instructive establishment. Hence a viable framework for the administration of understudy scholarly data such as their Attendance, Curriculum execution is needed. Besides the understudies likewise need to be redesigned of their execution occasionally for their change in the Scholastics. The workload of the instructors is immense when taking care of subjects for more than one class. In the customary way, the participation of every last one of understudies is recorded physically in a log book and after that entered once more in a desktop application. The same system is taken after for recording the imprints for every inward exam. Era of reports on the data utilizing such framework is a monotonous procedure which might frequently bring about blunders. Asmart phone based application utilizing Android can be used to make this process less demanding, secure and less slip inclined. Lessening of manual work and that's just the beginning proficient data administration will be accomplished through this framework.

LITERATURE SURVEY

(June 2014, Mr. GautamShanbhag,etal)[1] Dealed with the participation utilizing cellular telephones, give an option way. Correspondence between instructors also the guardian is additionally a vital issue that ought to too be considered; on the grounds that parent can just get the data about their ward after the collaboration with educators. Taking the participation on cellular telephones rather than customary methodology is one stage forward to economical advancement. Doing likewise take a shot at cellular telephones spares our assets as well as empowers the client to get simple and intelligent access to the participation records of understudy. The application that we are building can permit instructor or any departmental head to take the participation through their cell phones, oversee records, educate to their guardians or gatekeepers to the status of his/her offspring of what really they are doing it. The framework is executed on S60 Symbian stage.

(Jan 1, 2007-jonathan sidi, et al)[2] proposed Framework that is fit to record the understudies participation utilizing intuitive data, producing the reports, seeing the understudies and instructors profiles, and giving the understudies timetable. The framework is likewise able to produce the email with client administration usefulness for example, including new client, erasing a client, enlisting a course etc. Students simply check the scanner tag on their lattice card, utilizing scanner tag scanner and done, The understudies participation is upgraded continuously as each participation enrollment happen, The framework has the capacity produce the participation, reports in pie outline and measurement.

(February2012,RajanPatel,etal)[3]Proposed Framework for Incorporation of universal registering frameworks into classroom for dealing with the understudies participation utilizing RFID innovation.

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RFID innovation can be a capable instrument in serving to deal with understudy's participation all through the working school day and improve classroom security. RFID innovation has been connected to take care of issues where it is important to take naturally record the developments and areas of understudies in a classroom of school/college environment. A continuous clever framework is actualized in conjunction with RFID equipment to record understudies' participation at addresses and research centers in a school/college environment. RFID is a innovation that takes into consideration a tag joined on personality card to speak remotely with a peruse, in place for the label's identifier to be recovered.

(April 2013- K. Akhila,etal) protected structure for actualizing distinctive instructive administration portable applications like, versatile participation, portable imprints register and so forth by utilizing Android what's more java applications. The second part will influence Close Field Communication advances and gamification conduct way to consolidate amusement mechanics into action situated learning frameworks. To overhaul all the information through web server by utilizing GPRS innovation. The application offers dependability, time reserve funds and simple control. It can be utilized as a base for making comparable applications for following participation in workplaces on the other hand any work environment.

(August 2014-Unnati A. Patel andDr. Swaminarayan Priya R)[4] Proposed RFID is a robotized distinguishing proof and information gathering innovation, that guarantees more exact and opportune information passage. RFID is not really another innovation;

SYSTEM ARCHITECTURE

The framework structural planning has an advanced mobile phone with android OS, a web application, a database server and the client as its segments. The android advanced mobile phone or tablet must utilize 3G or Wi-Fi system for web integration to guarantee better execution. The client will login to the application through an android PDA. The user type is confirmed with the database server and access is given to the proper client. The web application likewise can be utilized to login and perform certain operations, for example, enlistment of clients, era of reports. The web application and the android application access information from a typical Database server .

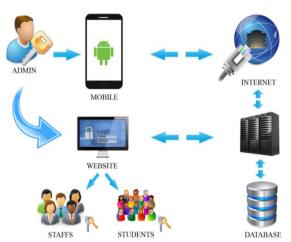


Fig.1: Proposed Framework

MODULE DESCRIPTION

Admin

In this application admin has a permission to add students name and details, and staff id toaccess application; He is controller of this application.

Staff

Staff login into application and access student information (name, reg.no) and update the details of attendance, activities etc..,

Attendance Module

The Attendance module permits the Lecturer to enter the participation of the understudies into the database. After login, the teacher will choose the year and segment of the class. The rundown of understudies with their move number is shown. Naturally, all understudies are checked with present

worth. The speaker can simply uncheck the missing understudies and submit the participation to the database. This module sends the message to missing understudies details to their home and also admin.

Timetable Module

In this Module the specific staff can know the timetable of which class will be go to an understudy can get to the staff to specific classroom to go to the class.

Academic Results

The imprints scored by the understudies in internal exams are put into the database through this module. The teacher will login, select the kind of the exam e.g., unit test, model exam and afterward the year, area and subject in the application which shows the understudies list. Presently, the imprints for every understudy is entered and submitted to store in the database.

Student Activities

In this module the staff can overhaul the understudy data points of interest of Co-Curricular Activities details like Paper presentation & Participation in Seminar/ Symposium/ Workshops/Technical Events as of late went to and Implant Training subtle elements, Internship subtle elements and Industrial Visits Details of understudy scholarly.

APPLICATION

This Android Application can be used in Universities and Colleges, Schools, Training institutions etc.

SCREENSHOTS

The proposed concept is implemented and the screenshots of the step by step process is given in detail under this section. This will help the researchers to proceed in a proper path during implementation.



Fig. 2: Student & Staff Login



Fig. 3: Student Portal

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Fig. 4: Student Profile

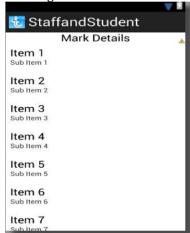


Fig. 5: Student Mark Details



Fig. 6: E-book download

CONCLUSION

This venture will assist the teachers with reducing their remaining task at hand by decreasing the time and figuring required to refresh the participation physically. They can without much of a stretch get the updates about execution of their wards and advise guardians by speedy updating. Understudies and their folks will likewise see the participation and educational programs subtleties utilizing this application.

FUTURE ENHANCEMENT

Library Management system module can be integrated. Also, the location of the absentees can be tracked by developing GPS module.

REFERENCES

- [1] Shanbhag, G., Jivani, H., & Shahi, S. (2014). Mobile Based Attendance Marking System using Android and Biometrics. *IJIRST-International Journal for Innovative Research in Science & Technology*, 1(1), 87-90.
- [2] http://www.w3schools.com/sql/
- [3] http://stackoverflow.com/
- [4] http://www.w3schools.com/php/
- [5] Professional Android™ Application Development.
- [6] http://javatpoint.com/android-tutorial
- [7] http://www.tutorialspoint.com/android/
- Bai, G., Ye, Q., Wu, Y., Botha, H., Sun, J., Liu, Y., & Visser, W. (2018). Towards model checking android applications. *IEEE Transactions on Software Engineering*, 44(6), 595-612.
- [9] Narendrakumar, T., & Pillai, A. S. (2017). Smart connected campus. *International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT)*, 1591-1596.
- [10] Li, C., Logenthiran, T., & Woo, W. L. (2016). Development of mobile application for smart home energy management: iSHome. *IEEE 6th International Conference on Power Systems (ICPS)*, 1-6.
- [11] Van Merode, D., Tabunshchyk, G., Patrakhalko, K., & Yuriy, G. (2016, February). Flexible technologies for smart campus. *13th International Conference on Remote Engineering and Virtual Instrumentation (REV)*, 64-68.
- [12] Korkmaz, I., Metin, S. K., Gurek, A., Gur, C., Gurakin, C., & Akdeniz, M. (2015). A cloud based and Android supported scalable home automation system. *Computers & Electrical Engineering*, 43, 112-128.
- [13] Adamo, D., Nurmuradov, D., Piparia, S., & Bryce, R. (2018). Combinatorial-based event sequence testing of Android applications. *Information and Software Technology*, *99*, 98-117.
- [14] Geraldo Filho, P. R., Villas, L. A., Gonçalves, V. P., Pessin, G., Loureiro, A. A., & Ueyama, J. (2019). Energy-efficient smart home systems: Infrastructure and decision-making process. *Internet of Things*, *5*, 153-167.
- [15] Septian, I., & Alianto, R. S. (2018). Comparison Analysis of Android GUI Testing Frameworks by Using an Experimental Study. *Procedia Computer Science*, *135*, 736-748.