ANDROID BASED SMART ATTENDANCE SYSTEM USING QR CODE: A REVIEW

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ABSTRACT

Smartphones are becoming more preferred companions to users than desktops or notebooks. Knowing that Smartphones are most popular with users at the age around 26, using Smartphones to speed up the process of taking attendance by university instructors would save lecturing time and hence enhance the educational process. This paper proposes a system that is based on a QR code, which is being displayed for students during or at the beginning of each lecture. The students will need to scan the code in order to confirm their attendance. The paper explains the high level implementation details of the proposed system. It also discusses how the system verifies student identity to eliminate false registrations. This application, once installed can be used to download the students list from a designated web server. Based on the downloaded list of students, the device will then act like a scanner to scan each of the student cards one by one to confirm and verify the student's presence. The device's camera will be used as a sensor that will read the QR code printed on the students' cards. The updated attendance list is then uploaded to an online database and can also be saved as a file to be transferred to a PC later on. This system will help to eliminate the current problems, while also promoting a paperless environment at the same time. Since this application can be deployed on lecturers' own existing Android devices, no additional hardware cost is required.

Keyword: - Android Device, QR Code, .

1. INTRODUCTION

In most educational institutions, participation of students in learning process is regarded as a vital exercise for allowing knowledge transfer. This signifies the importance of having students to attend the scheduled lectures and classes. Conventional methods for recording student's attendance are still adopted by most colleges. One common method is by having students to manually sign the attendance sheet, which is typically passed around the classroom while a lecturer is giving the lecture. This approach could undoubtedly allow the students to cheat about their attendance, where a student may sign for an absent student. Besides, such attendance sheet could easily be misplaced or lost.

2. LITERATURE REVIEW

VISHAL BHALLA, TAPODHAN SINGLA, ANKIT GAHLOT, VIJAY GUPTA [1] Bluetooth Smart is a wireless technology aimed at innovative applications in the healthcare, fitness, beacons, security, and home entertainment industries. The technology makes use of electronic tags to facilitate automatic wireless identification, with a Bluetooth Smart enabled device. We are attempting to solve the problem of attendance monitoring using a Bluetooth Smart based system in this paper. This application of Bluetooth Smart to student attendance improves the time taken during manual attendance and human errors and provides administrators the statistics of attendance scores for use in further managerial decisions.

ANKITA AGRAWAL AND ASHISH BANSAL [2]: Educational institutions proprietors in our country and the complete world are concerned about regularity of student attendance. Student taken as a whole academic performance is affected by it. The predictable method of taking attendance by calling names or signing on paper is extremely time consuming, and hence inefficient. Radio Frequency Identification (RFID) based attendance system is one of the answers to address this problem. A system that can automatically capture student's attendance by flashing their student card at the RFID reader and save all the mentioned difficulties. A system that has been built using the web-based applications such as JSP, MySQL and Apache to cater the recording and reporting of the students" attendances. Net Beans IDE 6.1 is used for developing the overall system. We have proposed the system in this paper using C#. Microsoft Visual Studio is used for the system designing. Also, the issue related to fake /false attendance from beginning to end the RFID system has been addressed, we eliminate it by using a special object counter for the leader count.

PALLAVI VERMA1, NAMIT GUPTA.[3]: In this paper provides the design method of portable fingerprint based student attendance system using GSM. The system includes terminal fingerprint acquisition module and attendance module. It can realize automatically such functions as information acquisition of fingerprint, processing, and wireless transmission, fingerprint matching and making an attendance report. After taking the attendance, this system sends the attendance of every student to their parent's mobile through GSM. Attendance system facilitates access to the attendance of a particular student in a particular class. This system eliminates the need for stationary materials and personnel for the keeping of records.

PRATEEK VERMA, MAHEEDHAR DUBEY [4]: Attendance plays a vital role in evaluating a student. The traditional method of taking attendance manually is very time consuming and often leads to human error. This paper elaborates the implementation of Radio Frequency Identification based Student Attendance Management System using Open Source Software in a multi-user environment. The system uses python as backend for reading tags. A JAVA based desktop application is used to authenticate lecturers, run the python code and record tags in an XML file. Finally, the XML file is uploaded in the server for processing and interpreting student's attendance. User can view attendance by accessing the web portal.

3. ACTUAL FABRICATION OF MODEL:

In this system architecture there are three modules Students, Admin and teacher. In this system student information will hide in QR Code, when student will scan QR Code at that time student attendance will automatically store in database and at the end students attendance will be calculated and send it to teacher for analysis.

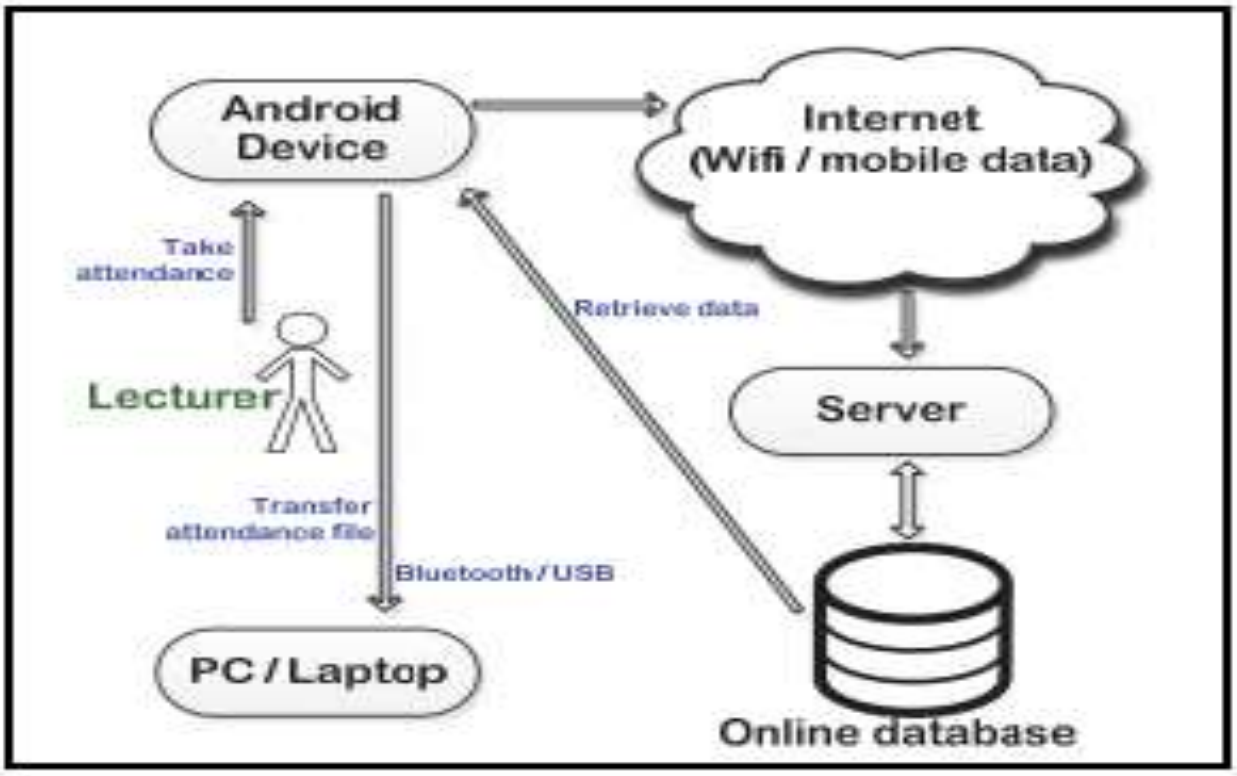

Fig.No. 1 Actual System Architecture

4. SUMMERY

In recording student attendance, conventional methods are still adopted in some institutions, where the instructors call out the student names one by one or by taking signature from each student to determine their presence. Nowadays, better methods are also employed, i.e. by relying on a system to record the attendance of students in semi-auto manner, such systems are absolutely excellent as a solution to existing problems, but one obvious drawback is the additional cost of hardware and maintenance. Hence, it was our target to develop an attendance system that will require minimal hardware cost, setup and maintenance. i.e. by having the application to run on the instructor's existing Android mobile device. Besides that, to prevent data loss, an online database will be used especially to store the recorded student's attendance. The system was successfully developed by following the client-server framework. A complete design of the system was created first, followed by the actual implementation of the system both on the server and Android device. The development was finalized with the system testing on the overall system.

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