

AUTOMATED ATTENDANCE SYSTEM

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ABSTRACT

The attendance process normally involves circulating a paper for the students to register their names, or the lecturer calling the names and registering the students either in a paper. This all are time consuming process like calling particular student then fill all information, and student give the proxies of their friends even they absent. In the first case the students' attention may be attracted while taking the lectures and at the same time they can register for students who do not being present in the class. While in the latter case the issue of cheating in the form of registering for their friends can be solved but imaging the number of students to be from 50 and above, a great portion of the lecture time will be wasted performing this process. By considering all this issue we develop one system which get attendance and update attendance in one place. In this project we propose a smart attendance system using QR technology that will simplify the attendance process, by generating and scanning QR for attendance. The system is based on QR Technology and run on mobile as application.

I. INTRODUCTION

For the conventional day to day attendance, a professor enters the classroom usually and verbally calls out student names in order to mark the student's attendance or pass a sheet of paper where students have to mark their name or sign on it. Both practices have their own disadvantages. In the first case, if the entire strength of the students attend the lesson then verifying individual students by their name and last name might reduce the intended lecture time; also friends of absent students may try to mark their attendance. These practices place lecturers or professors and their colleges at considerable disadvantages when it comes to taking attendance. To correct these flaws, we decided to use QR technology here. Each generated QR has a unique ID which cannot be duplicated. For using QR, student and faculty both should have android Smartphone. The faculty login and start lecture for attendance at that time the unique QR code generated and scanned by student for attendance. Smart phone, in turn, sends all the attendance data it has collected to the main server by the end of the lecture, or by day end according to the preference of professor. This results into saving of precious lecture time of the professor. A QR code consists of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera, and processed using Reed-Solomon error correction until the image can be appropriately interpreted. The required data is then extracted from patterns that are present in both horizontal and vertical components of the image.

II. OBJECTIVES

The attendance process normally involves circulating a paper for the students to register their names, or the lecturer calling the names and registering the students either in a paper. This all are time consuming process like calling particular student then fill all information, and student give the proxies of their friends even they absent. In the first case the students' attention may be attracted while taking the lectures and at the same time they can register for students who do not being present in the class. While in the latter case the issue of cheating in the form of registering for their friends can be solved but imaging the number of students to be from 50 and above, a great portion of the lecture time will be wasted performing this process. By considering all this issue we develop one system which get attendance and update attendance in one place. In this project we propose a smart attendance system using QR technology that will simplify the attendance process, by generating and scanning QR for attendance. The system is based on QR Technology and run on mobile as application.

III. EXISTING SYSTEM

In current system, Faculty must take a paper or register (Attendance Book) and write down all Students names, roll numbers, enrollment numbers, Mobile numbers etc. After every lecture faculty must call all roll numbers and student names one by one. After taking attendance faculty count how many students were present and how many students were absent. After a certain period of time such as a week or a month faculty counts attendance of particular student to see how much they were present and how much they were absent. Faculty must calculate each student’s attendance in percentage. After that faculty must enter the email address of each parent and put attendance in email. If faculty loses attendance book then all attendance of students will be lost. This process is extremely time consuming for faculty.

IV. PROPOSED SYSTEM

In the proposed system we will try to minimize most of the flaws of the existing system. In the proposed system we use a QR as unique Identification for each lecture. By login and scanning generated QR for lecture students marks their attendance. Attendance record of each student with the lecture is stored on main server side. The steps in the proposed system are as follows: - Details of every individual student will be registered with an Admin. Chances of duplication will be overcome primarily it. Then lecturer will go for lecture with the proposed attendance android application preinstalled in it. Lecturer will login in the application using his/her username and password. After successful login lecturer will set class time and duration for the attendance record. After selecting subject and time duration the QR is generated for that particular lecture. Student has to scan the QR generated on the lecturer’s smart phone. When a student scans QR on mobile then the application will send the student roll number to main server. At main server side student's attendance is recorded for that respective lecture. As lecture ends the lecturer will close the application. The admin or the faculty can update or delete the student’s record using the web application.

V. ARCHITECTURE DIAGRAM

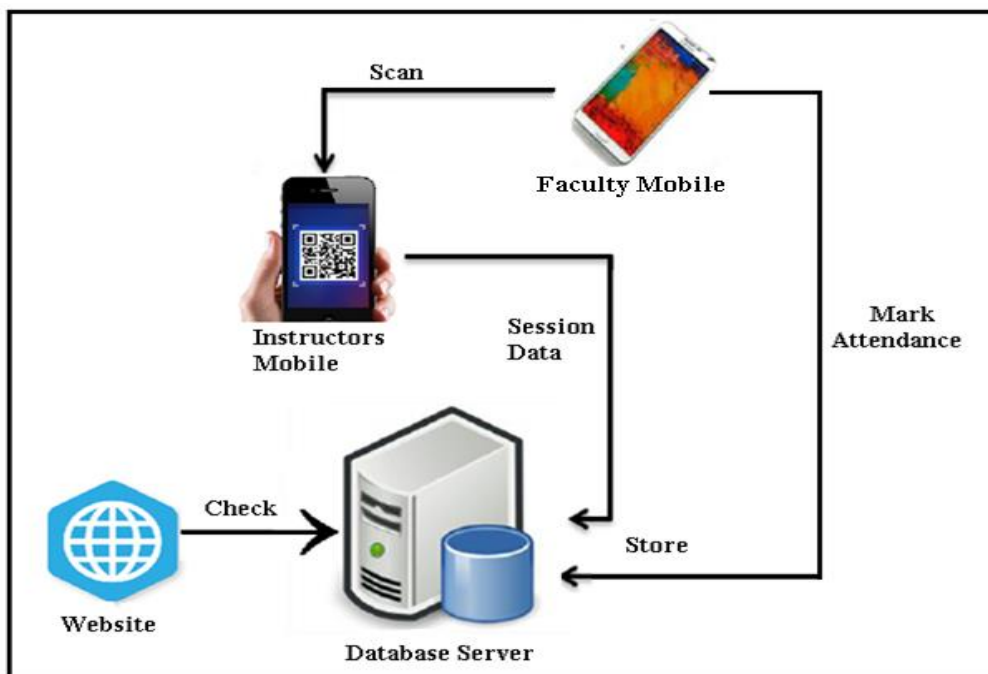
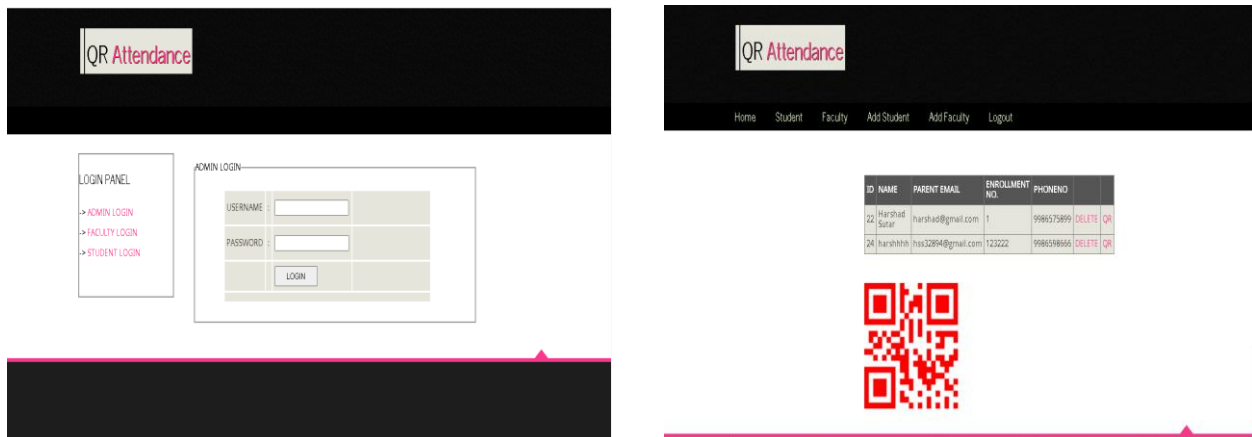


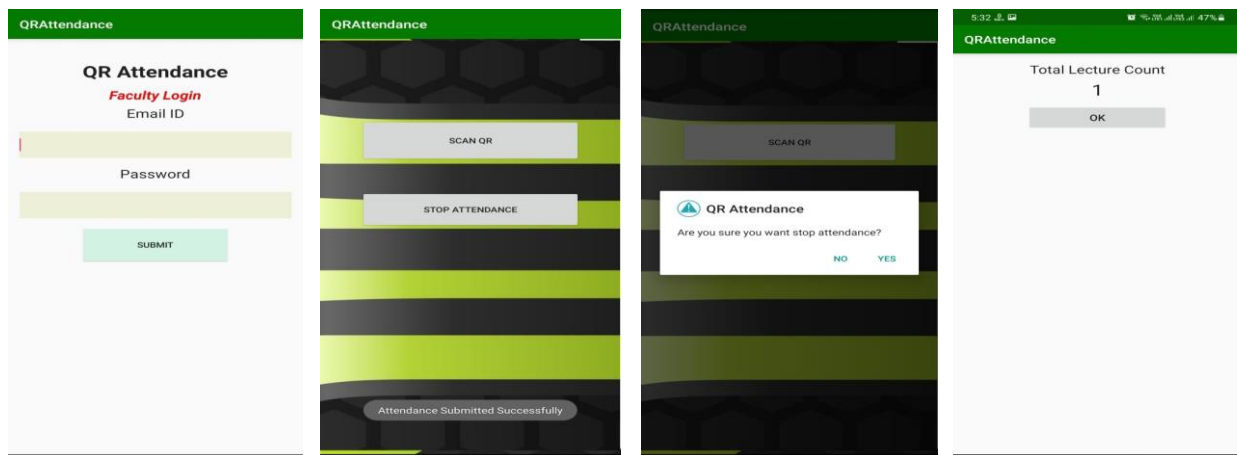
Fig: Proposed Block Diagram

VI. RESULTS

As shown in this Screenshot, we have created a Website where Admin, faculty and Student Logins are there. Admin Can Add Faculty and Students. When Admin adds Faculty then Faculty’s Username and Password also generate automatically and send to faculty’s registered Email. QR codes can generate automatically when Admin add students. Each Student has separate QR code and when Faculty scans that QR in Android Application then That student’s Attendance will automatically gets submitted.



This is the Home page of our Application which has Faculty Login. Login Details can be get from Faculty's Registered Email ID when Admin adds faculty , Automatic Password gets generated and send to Faculty's Email. When Faculty Login into Application, Faculty must choose Subject, Semester and Time Slot. After that SCAN QR button will appear. After Clicking Scan QR, Mobile's Scanner Will Open and Faculty must scan Student's QR code.



When Faculty scans all student's QR those who are present , then Faculty has to click on Stop Attendance button, after submitting Attendance teacher has to Enter secret PIN number to submit attendance. Pin number can get from Email ID where login details are there. After Entering PIN Number , Total Lecture Count will be Displayed . All submitted attendance will go in Database and Faculty and Students can check attendance from Website and Teacher can send Email to parents who have less than 75% Attendance.

VII. CONCLUSION

The QR system is flexible, that is by adding more modules it can also be extended. The technology employed for the proposed system is QR, and the coding has shown reliable and stable outcomes. Also, this application has secured important data that we have stored in these QR. Additional functions can always be added into the proposed system and greater security can be provided to the QR. QR technology is ever growing, and the time has come for us to harness for ourselves, its potential and abilities. The main aim of this project has been to harness and demonstrate potential usage of QR technology and build a simple system based on it.

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