

# QR Based Smart Attendance System

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**Abstract-** In this era of technology smartphones play a significant role in our day to day life. Nowadays smartphones can solve most of the problem very quickly and easily. It has made life of every person simple and easier with different social app, commercial app, problem solving app, app for education and marketing etc. Followed by the technology the project purposed a system that will handle a problem for recording the attendance. The proposed system is a couple of two modules, one for generating the QR Code by entering the student details and second application for taking the attendance and generating the attendance. The student will need to scan the QR code or mark the attendance for current date in the app in order to confirm their attendance. The project discusses how the system verifies student identity to eliminate false registrations. The system deals with the management and evaluation of attendance of all students. The student QR code will be provided for taking their attendance. The attendance will be marked as 0 and 1, 0 for absent and 1 for present in the database of the particular student row in the table. And also shows the time table of the class based on the login person's course details.

## I. INTRODUCTION

Among the various types of attendance systems that have been developed, using punch cards, log books, fingerprint systems, barcodes, QR codes and also RFID still cause lots of problems such as providing incorrect information to the users. The purpose of the smartphone based attendance system is to computerize the traditional way of recording attendance and provide an easiest and smart way to track attendance in institutions nowadays, the most common device that have been come into account in marketing and business are smartphone devices. Moreover, it comprises lots of them running Android OS.

Main objective “QR Code Based Attendance Management System” is a combination of two android applications developed for taking and storing the attendance of the students on the daily basis in the college. Here the professor, who is handling the subjects, will be responsible to mark the attendance of the students. Each staff will be given an android application that is used for taking attendance and generate the overall attendance status. An accurate report based on the student attendance is generated here. Report of

the student's attendance on weekly and monthly basis is generated as desired. The main objective of the automated attendance system is to computerize the traditional way of recording attendance and provide an efficient and automated method to track attendance in institutions.

The mobile attendance systems are used to reduce the time and effort wasted in taking attendance in the colleges. Our project focuses on the creating mobile attendance system using Android studio and database to avoid lots of paper work and prevent data loss. This system applies QR code for each subject, so each faculty member shows the QR code to the students to scan it and make them self-present. The other option is that the faculty member takes attendance by calling the name of the students in class. If the student attends, the faculty member will pull the button and it will change to green (the student is presence), if the student absent the button remain the same without pulling it. Faculty members can manage and check absences of students. Student can only make attendance for every day and check their absences. The developed system helps faculty members to manage attendance easily and efficiently.

## II. LITERATURE SURVEY

### [1] SMART STUDENT ATTENDANCE SYSTEM USING QR CODE

-Arpankumar Patel, Ansel Joseph, ShubhamSurvase, Rohini Nair

#### Abstract

QR Code has a wide range of applications in this evolving technology world. QR code used to store massive information in a smaller space. So we decide to use QR code in our system and proposed smart attendance system using QR code. Secure authentication, is achieved using data-hiding algorithms with the embedded QR Code. In our project by using smart phones student scan QR code which will displayed by the teacher. When student scan this QR code, automatically attendance will be marked according to the user id. It also discusses how the system verifies student identity to eliminate false registrations.

**Keywords:** Mobile Computing; Database; Attendance System

**[2] AN ANDROID BASED COURSE ATTENDANCE SYSTEM USING FACE RECOGNITION -Dwi Sunaryono , Joko Siswantoro , Radityo Angro**

**Abstract**

Student attendance system is needed to measure student participation in a course. Several automated attendance systems have been proposed based on biometric recognition, barcode, QR code, and near field communication mobile device. However, the previous systems are inefficient in term of processing time and low in accuracy. This paper aims to propose an Android based course attendance system using face recognition. To ensure the student attend in the course, QR code contained the course information was generated and displayed at the front of classroom. The student only needed to capture his/her face image and displayed QR code using his/her smartphone. The image was then sent to server for attendance process. The experimental result shows that the proposed attendance system achieved face recognition accuracy of 97.29 by using linear discriminant analysis and only needed 0.000096s to recognize a face image in the server.

**III. OBJECTIVES**

The main objective of the automated QR Code attendance system is to computerize the traditional way of recording attendance and provide an efficient and automated method to track attendance in institutions. Advantages of QR Code Based Smart Attendance System to Provide better security.

**IV. METHODOLOGY**

**PROBLEM STATEMENT:**

- Development of a SMART QR CODE BASED ATTENDANCE SYSTEM.
- Integrating Android device with QR code.
- Analyzing the attendance on daily basis.

**PROPOSED SYSTEMS:**

To achieve the above discussed objectives, a step-by-step methodology has been followed. The details of methodology are given below:

- Develop a Login page for students.
- Develop a unique QR code generator android app for every 30secs.

- Develop an Android app that take the attendance with respect to the specific date based on the QR code and shows the time table details.
- Develop an Android app that take the attendance with respect to the specific date and shows the time table details.

**Advantage of proposed system:**

- Provide better security.
- Maintenance of the system is easy and cost effective.
- Generate the result quickly.
- Provide accurate and efficient data.

**V. MODULES**

- Login module
- Attendance module
- Time table module
- QR code based attendance module

**LOGIN MODULE:**

A login application is the screen asking your credentials to login to some particular application. You might have seen it when logging into Facebook, twitter e.t.c. Here the student information is given to authenticate for attendance marking.

**ATTENDANCE MODULE:**

The Attendance module that allows students to mark attendance of the students registered in their class for current date.

**TIME TABLE MODULE:**

In the wake of login the app the understudy move to the following page. Which will contain the timetable of the class in which student belongs to.

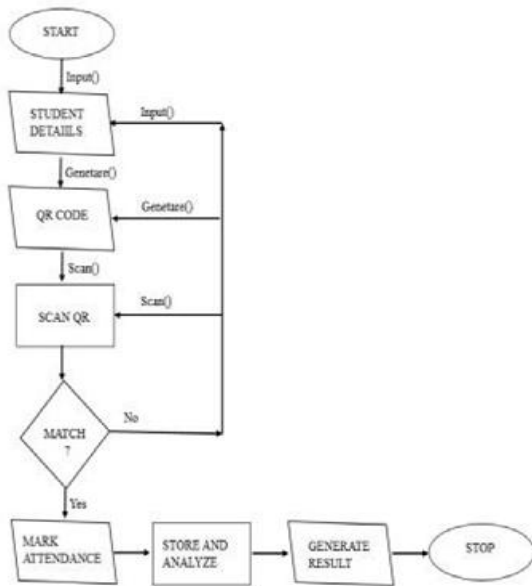
**QR CODE BASED ATTENDANCE MODULE:**

- In this module, the QR code is generated for every 30 seconds and verified by android app using the details of student such as roll number, student ID.
- If the QR code matches then the attendance will be marked.

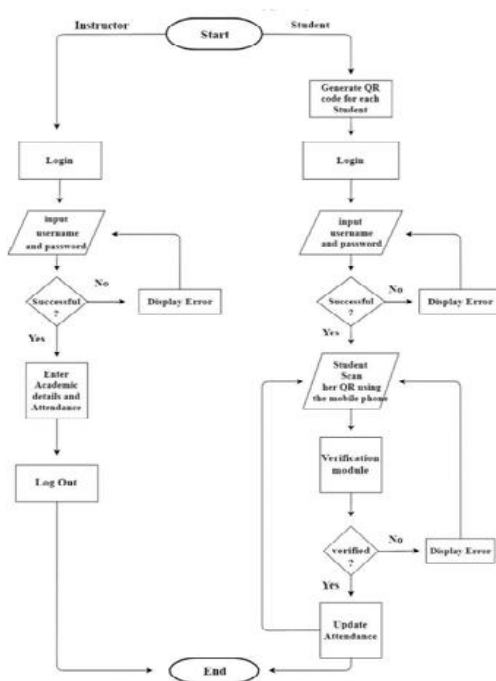
**ANDROID APPLICATION:**

Android is a mobile operating system that runs on Linux and is available as an application for smart phones and tablet computers. The Open Handset Alliance, headed by Google, and other businesses created Android. Android provides a standardized approach to mobile application development, so developers simply need to create for Android and their applications should be able to run on various Android-powered devices.

**FLOWDIAGRAM**



**BLOCKDIAGRAM**



**VI. CONCLUSION**

The developed system presented in this project has been successfully designed and tested .The student’s attendance status will be marked. Attendance monitoring system is very important in our daily life. It is possesses a really great advantage, among the whole types of code scanning technology, QR Code Based Smart Attendance System is the most accurate .In this project, we have given an introduction of Attendance monitoring system and its advantage. It is an efficient method to store the attendance in the smart phone rather than wasting the paper.

Our future work will focus on providing missed class topics and notes available to students. Full control to professor with more secured and enhanced options. Finally we conclude, if we integrates this attendance monitoring system with face identification tool then system will solve the real world attendance problem.

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