ATTENDANCE MANAGEMENT SYSTEM USING COLOR QR CODE

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Abstract: In this digital era, smartphones are getting additional most well-liked companions to users. Victimization smartphones to hurry up the method of taking attending by university instructors would save time within the lectures and easing the attending management. largely students attending is soft on the assistance of attending sheet given to college members. This attending sheet is crammed manually that will increase work load and consumes ton of your time. This project proposes a system that's supported QR code, that is being displayed for college kids throughout or at starting of every lecture. QR code is connected into the ID card and student’s personal details may be found by scanning the QR code with good phones. In an establishment, there are numerous departments, to individualize between these departments completely different color QR codes are given to every departments. The department of explicit student is decided by the colour of QR code on the scholars card. the scholars can ought to scan the code so as to verify their attending. the college conducting a specific lecture has to enter the count of total range of scholars attending the lecture into the system. every device will scan one QR code at a time for the attending. this method verifies student identity to eliminate false registrations. If {the range the amount the quantity} of scanned QR codes is larger than the whole number of scholars attending the lecture then the attending of all the scholars isn't thought-about. this method helps in substantiating the false attending of the students.

I. INTRODUCTION

Maintenance of student attendance is the most difficult task in various institutions and colleges. Every institution has its own method of taking attendance such as using attendance sheets or by some biometrics methods. But these methods consumes a lot of time. Mostly student’s attendance is taken with the help of attendance sheet given to faculty members. It is not sure whether the authenticated student is responding or not. Calculation of attendance is another major task which may cause manual errors. In some other cases, attendance sheet may get lost or stolen by the students. To overcome such situations there is a need of automated attendance management system. This project proposes a system that is based on color QR code, which is being displayed for students at beginning of each lecture. The android application provides rapid access to any information regarding the student’s attendance. QR code is attached into the ID card and student’s personal details can be found by scanning the QR code with smart phones. Each department has a different colored QR code. This helps to differentiate students from various departments.

II. EXITING SYSTEM

THE FOLLOWING OUTLINES THE ISSUES WITH THIS SYSTEM:
1. The method is performed terribly slowly.
2. The paper type is lost by academics. This ends up in mistakes in traveller rates.
3. In some cases, academics have issues writing student names clearly (e.g., unhealthy handwriting). This ends up in issue for the system manager once getting into knowledge.
4. The shape is usually incomplete, which suggests some fields can’t be completed; e.g., date, subject name, teacher name, etc.
5. All knowledge (paper forms) area unit entered to a Microsoft surpass file at the top of every category. This ends up in important labour for the system manager.
6. The system manager could build mistakes once conniving the percentage for every student, that may lead to associate unwarranted failing grade for a particular module. However, the calculation method is kind of concerned as a result of there's a big quantity of addition, division, and multiplication.
7. Students might not see the bulletin board that asserts attending warnings.
8. The paper type might not be sufficiently giant to record all absent students’ names.
III. LITERATURE REVIEW

1. Recommendation System and its Approaches:

   To overcome the drawbacks of existing system, the proposed system has been evolved. This project aims to reduce the paper work and saving time to generate accurate results from the student’s attendance. This system provides with better user interface and hence easing the attendance management system.

2. Problems related to Recommendation System:

   Existing system is the manual entry for the students. Here the attendance will be carried out in handwritten register. It will be tedious job to maintain the record of each and every student. The human efforts required are more here. The retrieval of information is not easy as the records are maintained in hand written registers. The existing system does not provide flexibility to users.

3. Proposed System:

   To overcome the drawbacks of existing system, the proposed system has been evolved. This project aims to reduce the paper work and saving time to generate accurate results from the student’s attendance. This system provides with better user interface and hence easing the attendance management system. In this digital era, smartphones are becoming more preferred companions to users. Using smartphones to speed up the process of taking attendance by university instructors would save time in the lectures and easing the attendance management. A colored QR code is attached into the ID card and student’s personal details can be found by scanning the QR code with smart phones. Each department has a different colored QR code. This helps to differentiate students from various departments. The faculty conducting a particular lecture needs to enter the count of total number of students attending the lecture into the system. Each device can scan a single QR code at a time for the attendance. Here, the staffs who are handling the subjects will be responsible to mark the attendance of the student. Each staff will be given a unique identity to handle the subjects. An accurate report based on student’s attendance is generated here.

IV. IMPLEMENTATION

   QR CODE:

   QUICK RESPONSE CODE QR code (abbreviated from Quick Response Code) is the trademark for a type of matrix barcode (or two-dimensional bar code) first designed for the automotive industry in Japan. Bar codes are optical machine-readable labels attached to items that record information related to the item. It was initially patented; however, its patent holder has chosen not to exercise those rights. Recently, the QR Code system has become popular outside the automotive industry due to its fast readability and greater storage capacity compared to standard UPC barcodes. The code consists of black modules (square dots) arranged in a square grid on a white background. The information encoded may be made up of four standardized types (“modes”) of data (numeric, alphanumeric, byte / binary, Kanji) or, through supported extensions, virtually any type of data A QR code, as shown in Fig. is read by an imaging device, such as a camera, and formatted algorithmically by underlying software using Reed-Solomon error correction until the image can be appropriately interpreted. Data is then extracted from patterns present in both horizontal and vertical components of the image. Figure shows a sample of an unencrypted QR code that will be needed by the proposed system.

![Fig 1. QR code](image1.png)  ![Fig 2. Color QR code](image2.png)
- **Add Faculty**

![Add Faculty](image1)

- **View QR**

![View QR](image2)
- **Login (App)**

- **ScanQR (App)**

- **Homepage**
V. CONCLUSION

This project assists in automating the existing manual system. This is a paperless work. It can be monitored and controlled remotely. It reduces the man power required. It provides accurate information always. Malpractice can be reduced. All years together gathered information can be saved and can be accessed at any time. The data which is stored in the repository helps in taking intelligent decisions by the management. So it is better to have an information Management system. All the stakeholders, faculty and management can get the required information without delay. This system is essential in the colleges and universities.

References


