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QR BASED FOOD ORDERING SYSTEM

M ANUSHA[1], PEYYETI VASUDEVA RAO2, REDDYPALLY PURUSHOTHAM3, T PRATEEK SINGH4,

2,3,4,5 UG Students, Dept of CSE, MALLA REDDY INSTITUTE OF ENGINEERING AND TECHNOLOGY(AUTONOMOUS), Dhulapally, Secundrabad, Hyderabad, Telangana, India.

ABSTRAT:

In higher education institutions, student participation in the classroom is directly related to their academic performance. However, the majority of student attendance registration is still conventionally done, which is tedious and time-consuming, especially for those courses that involve large numbers of students. Over the years, attendance management has been conducted manually at most of the universities. To overcome the manual attendance issues, we proposed and implemented a smart attendance system with the aim to encourage the potential use of the Quick Response (QR) code as a future attendance management system, to track and record student attendance in lectures and exercises for all relevant courses, as an aim of this paper.

I INTRODUCTION

The process of attendance tracking has always been a crucial and time-consuming task for educational institutions. Traditional methods of attendance tracking such as manual sign-in sheets or card swiping systems have proven to be inefficient and unreliable, leading to errors and inaccuracies in record-keeping. With the advent of technology, educational institutions have started using digital methods of attendance tracking, such as biometric systems, RFID systems, and QR code-based systems. To overcome these challenges, various automated attendance tracking systems have been developed, including biometric systems, RFID systems, and QR code-based systems. Among these, QR code-based attendance systems have gained popularity due to their simplicity, affordability, and ease of use. In a QR code-based attendance system, each student or employee is assigned a unique

Assistant Professor, Dept of CSE, MALLA REDDY INSTITUTE OF ENGINEERING AND TECHNOLOGY(AUTONOMOUS), Dhulapally, Secundrabad, Hyderabad, Telangana, India.

QR code that they can scan using their mobile devices, and the attendance is automatically recorded in a database. In a QR code-based attendance system, each student is assigned a unique QR code that contains their personal information such as name, ID number, and other relevant data. The teacher generates a QR code for each class session, which is displayed on a screen or printed on a sheet of paper. The students then scan the QR code using their smartphones, which automatically logs their attendance in the system. Systems for tracking attendance that use QR codes provide a number of benefits over older technologies. Since the data is automatically recorded in real-time, they are, first and foremost, extremely accurate and reliable. By doing this, the chance of mistakes and inaccuracies in record-keeping is eliminated. Additionally, as the full process of attendance tracking may be finished in a matter of seconds, QR code-based systems are significantly faster and more effective than conventional techniques. Both teachers and students benefit from the time savings, which enables them to concentrate on more crucial duties. Another advantage of QR code-based attendance systems is that they are highly cost-effective. Traditional attendance tracking methods require the use of expensive equipment such as biometric scanners or RFID readers, which can be a significant financial burden for educational institutions. In contrast, QR code-based systems only require a smartphone or a dedicated QR code scanner, which is much more affordable and widely available. An in-depth investigation of a QR code-based attendance system is provided in this research report. The system architecture, its elements, AND its operation are described in the paper. The effectiveness, efficiency, and user friendliness of the system are also evaluated in the study. The study also addresses the benefits and drawbacks of the QR code-based attendance system in comparison to existing techniques for keeping track of attendance.

EXISTING SYSTEM :

In early years a punch card system was used for data storage, also known as Hollerith cards, through which companies were able to store and access via entering the card into the computer system. It is also commonly used nowadays as an attendance system in educational institutions. Employees wave their individual cards near a reader to punch in and out, ensuring the presence of the employee. There are quite a number of previous researches in the field of computer science developed

students' attendance tracking system to improve record taking in class using different technologies. For example, RFID or near field communication (NFC) technology

PROPOSED SYSTEM :

The proposed system by authors on aims to record all student participation based on the generated unique QR code of each course for each class day. The instructors, in turn, copy this QR code and paste it on the first slide to be displayed in the lecture. If the instructor policy is to allow late students in his class and would like to mark them as present or late, then the QR code should also be copied on one of the four corners of as many slides as the instructor wishes. When the students are in class, the first thing that should be done is to pull out their smartphones, open the Mobile Module, and scan the QR code, then the Server Module runs an identity check on the registered students. This is done by comparing the facial image sent per transaction with the stored image on file for the student in question, the system will then control the location of student. Finally, a location check will be performed

SYSTEM ARCHITECTURE:
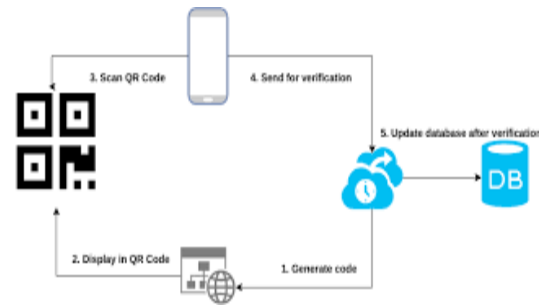
WORKING METHODOLOGY

The methodology for a QR code based attendance system involves the following steps: 1. Designing the system architecture and deciding on the required hardware and software components.

2. Creating a database to store information about students, teachers, classes, and attendance records.

3. Developing an admin module for managing the system, which includes adding and removing students and teachers, creating new classes, and generating QR codes for each class.

4. Developing a teacher module for generating QR codes for each class and taking attendance.

5. Developing a student module for scanning the QR code and marking attendance for each class.

6. Testing and debugging the system to ensure that it works reliably and efficiently.

7. Deploying the system in a real-world setting and monitoring its performance over time.

8. Collecting feedback from users and making improvements to the system based on their suggestions and needs.

ALTERNATIVESTO THIS SYSTEM

1. Biometric Attendance System: Biometric attendance systems employ a person's physiological or behavioral traits, like their fingerprints, their face, or their voice, to track their attendance. This technique is very secure and does not allow for buddy punching or proxy attendance. However, compared to QR code-based solutions, it can be more expensive to deploy, and some people could have privacy concerns.

2. RFID Attendance System: RFID (Radio Frequency Identification) attendance systems use small electronic tags or cards that can be scanned to record attendance. This system is similar to QR code-based attendance systems but does not require a camera or scanner to read the tag. RFID attendance systems are suitable for large-scale attendance tracking, but can be costly to implement.

3. Beacon Attendance System: Beacon technology uses Bluetooth Low Energy (BLE) to track attendance. It involves placing beacons at different locations around the building, and when students or employees enter or exit the area, their mobile devices receive a signal from the beacon, and their attendance is recorded. Beacon attendance systems are more suitable for large spaces and can work well in areas with poor internet connectivity. However, it requires the user's mobile device to have Bluetooth enabled and can be more complex to set up compared to QR code-based attendance systems.

4. Manual Attendance System: Manual attendance systems involve taking attendance through a sign-in sheet or attendance register. This system is the simplest and most cost-effective approach, but it is prone to errors and can be time-consuming to manage, especially for large groups.

IMPLEMENTATION

The proposed approach for QR code-based attendance system is a simple yet effective solution for streamlining attendance management in various educational and corporate institutions. The system utilizes QR codes, which can be easily generated and scanned using smartphones or other mobile devices, to record and track attendance. The

proposed approach involves four main steps:

QR code generation, QR code scanning, attendance record keeping, and reporting. Firstly, the system generates unique QR codes for each student or employee, which can be printed on ID cards or distributed through email or messaging applications. These QR codes contain relevant information such as the student/employee's name and ID number. Secondly, when the student or employee arrives at the designated location for attendance, the QR code is scanned using a smartphone or other mobile device with a QR code scanner app. The app reads the information encoded in the QR code and sends it to the system's database for attendance recording. Thirdly, the system maintains a record of attendance for each student or employee, which can be accessed and viewed by authorized personnel. The attendance data can be stored in a cloud-based database for easy and secure access. Finally, the system provides a reporting feature that allows authorized personnel to view attendance records for individual students or employees, as well as generate reports for entire classes or departments. This feature can be used to monitor attendance patterns and identify students or employees who may need additional support. The suggested method has a number of benefits over conventional attendance control methods. In the first place, it does away with the necessity for human data entry, which saves time and lowers the possibility of mistakes. Second, it offers real-time attendance monitoring, enabling fast intervention when required. Thirdly, administrative procedures can be further streamlined by simply integrating it with other systems.
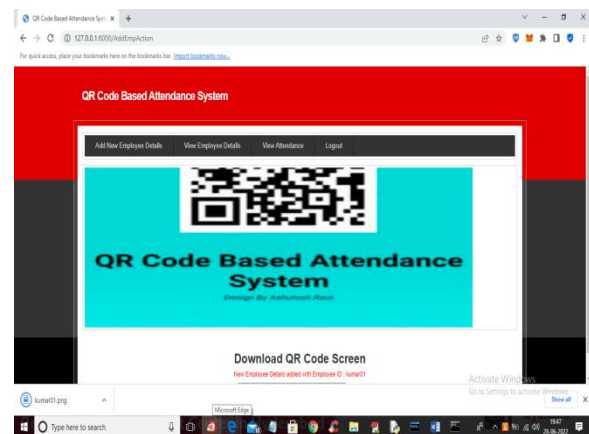

In above screen in browser status bar we can see QR image is downloaded and admin will give this image to employee and he can saved this image in mobile and then can show this image from his mobile to WEBCAM to mark his attendance and now open that image and view QR CODE like below screen
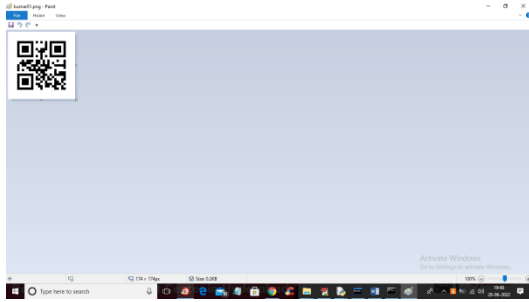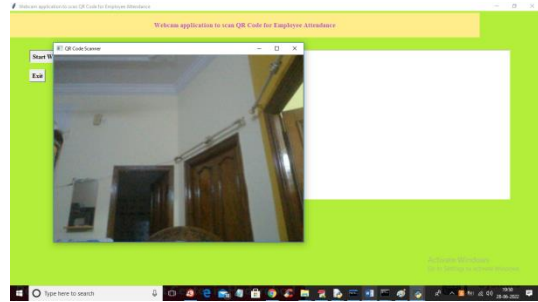
In above screen we can see QR code and now in application click on 'View Employee Details' link to get below details
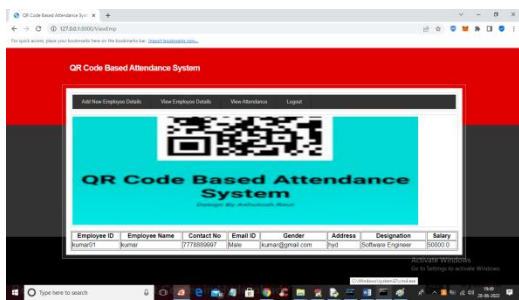
In above screen admin can view all employee details and now to mark attendance double click on 'RunWebCam.bat' file to get below screen
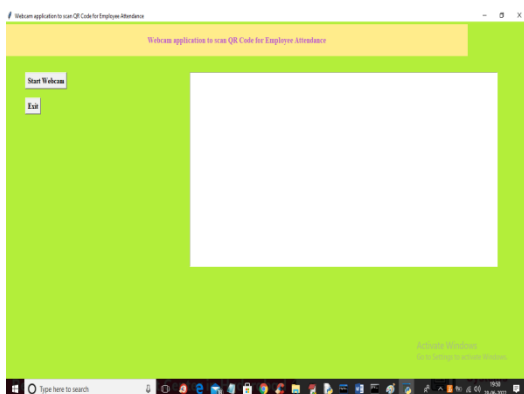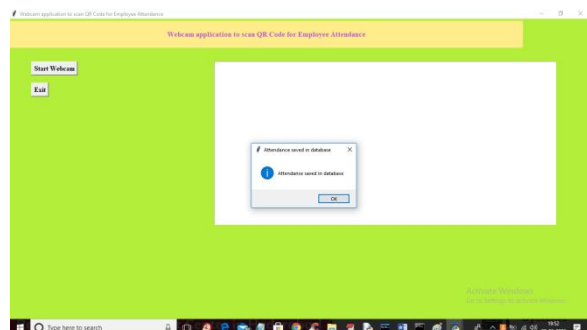

In above screen click on 'Start Webcam' button to start web cam and get below screen

In above screen webcam started and now employee has to show QRCODE from his mobile like below screen and once QR code detected then system will mark attendance


In above screen to webcam I am showing QRCODE and once detected then will get below screen

In above screen we got dialog box saying 'attendance saved in database' and each employee each day only one time webcam will scan his QRCODE and if he

want again then delete all rows from database. Now go to previous application and then click on 'View Attendance' link like in below screen
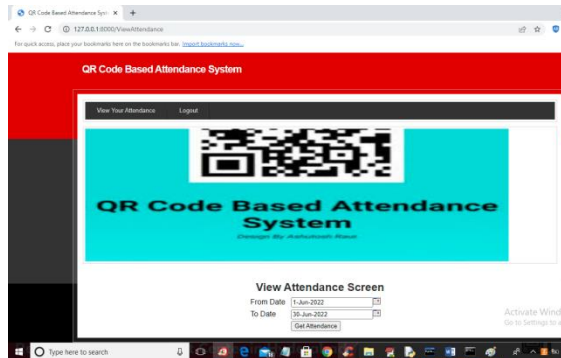
In above screen employee can select start and end date and then press button to view his attendance for selected days
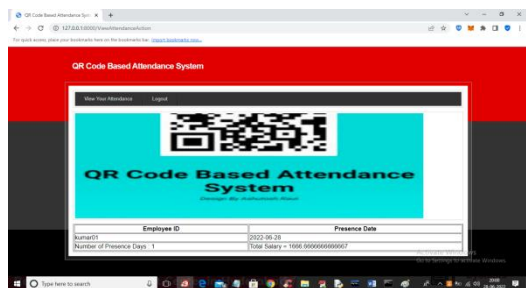
In above screen employee can view all present days date and current payable salary. Similarly you can add any number of employees and go for attendance and view it.

CONCLUSION

The QR code-based attendance system is a reliable, efficient, and convenient method of taking attendance. The system provides a simple way to track attendance, reducing the time and effort required to complete attendance tasks manually. It also minimizes the potential for errors and inaccuracies that can occur when taking attendance manually. The implementation of a QR code-based attendance system also has a positive impact on educational institutions, particularly in terms of cost savings. It eliminates the need for costly attendance tracking equipment and software, as it can be easily implemented using mobile devices and open-source software. The system provides an opportunity for students to take responsibility for their own attendance, as they are required to scan their QR code to confirm their attendance. This helps instill a sense of accountability among students and promotes a culture of punctuality and attendance. In comparison to more traditional methods of recording attendance, the QR code-based approach has many benefits, including improved efficiency, accuracy, and affordability. While the system might have certain problems, especially with internet connectivity and security, they can be avoided by taking the right steps. Overall, the QR code-based attendance system is a promising innovation that could completely change how educational institutions track student attendance.

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