

1.INTRODUCTION

Nowadays, it is very important to finish the job fast, learn something new, and get higher results as easily and efficiently as possible. Every sector, especially in the education process and in the business world, needs management systems that will enable them to have adequate control and management in the development of learning or work. Considering all these advantages and benefits, I thought that the process of education at the university, in particular, needed an online system to manage student attendance. Among others, regular attendance is a basic and most important criterion throughout the education system. Consequently, the student might lose the right to sit for an exam if the attendance criteria are not met. Moreover, if students exceed the number of allowed absences, they might also lose the right to sit for final exams. Given that, the manual method that is currently used leaves room for more calculation errors. I proposed and developed a better web-based system to help overcome such issues. It is fully responsive to mobile phones, tablets, and various computer systems.

1.1 Purpose

QR code (abbreviated from Quick Response Code) is the trademark for the matrix of barcodes (two-dimensional bar codes), which was first designed by the automotive industry in Japan. Bar codes are optical machine-readable labels that are attached to items and record information related to the items. It was initially patented, but its patent holder has chosen not to exercise those rights. In recent times, the QR Code system has become popular outside the automotive industry due to its fast readability and greater storage capacity compared to the standard UPC barcodes. This code contains black modules (square dots) arranged in a square grid on a white background. The information encoded is made up of four standardised types (or "modes") of data (numeric, alphanumeric, byte, and Kanji), so virtually any type of data is contained. A QR code is read by an imaging device, such as a camera or scanner application, and formatted by algorithms in the underlying software Reed-Solomon error correction such that the image can be appropriately interpreted. Data is then extracted from the patterns present in both the

horizontal and vertical components of the image. The QR features are listed in a sample of an unencrypted QR code that will be needed by the proposed system.

1.2 Scope

The present work will focus on providing missed class topics and notes to students. Full control to the professor with more secured and enhanced options. Finally, I conclude that if i integrate this attendance monitoring system with a face identification tool, the system will solve the real-world attendance problem.

1.3 Need for System

Existing System

In the 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 data by 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 their presence. There are quite a number of previous studies in the field of computer science that have developed student attendance tracking systems to improve record-keeping in class using different technologies. For example, RFID or near-field communication (NFC) technology.

Disadvantages

- Less Accuracy
- Low Efficiency

Proposed System

The proposed system records all student participation based on the unique QR code generated for 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's 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 student's location. Finally, a location check will be performed.

Advantages

- High Accuracy
- High Efficiency