

Smart Attendance System using QR Code

Chanchal Baviskar¹, Nikita Bhokare², Ketki Gaidhani³, Shrinad Patil⁴, Suyog Waghare⁵

Students, Department of AIML (Artificial Intelligence & Machine Learning)^{1,2,3,4,5}

Loknete Gopinathji Munde Institute of Engineering Education & Research, Nashik, Maharashtra, India

Abstract: *In this era of technology smartphones play a big role in our everyday existence. Nowadays smartphones can solve most of the problem very quickly and easily. It has made existence of absolutely everyone clean and much less hard with specific social app, commercial enterprise app, problem solving app, app for training and marketing and marketing and advertising etc. Followed with the resource of the use of the technology the paper purposed a system so one can cope with a problem for recording the attendance. In higher training institutions, student participation withinside the classroom is straight away related to their instructional performance. However, the majority of student attendance registration is still conventionally accomplished, it's tedious and time-consuming, in particular for those publications that comprise massive numbers of college students. Over the years, attendance manage has been done manually at most of the universities. To overcome the manual attendance issues, we proposed and carried out a smart attendance system with the aim to encourage the capability use of the Quick Response (QR) code as a future attendance manage system, to tune and file student attendance in lectures and carrying activities for all relevant publications, as an aim of this paper.*

Keywords: QR Code, attendance, system, student

I. INTRODUCTION

Nowadays, it's far very essential to finish the manner fast, take a look at a few aspects new, get higher outcomes as smooth and effectively as you can. Every sector, specifically withinside the education way and withinside the company world, desires manage systems on the way to allow them to have desirable sufficient control and manage withinside the development of studying or work. Considering those styles of benefits and benefits, we belief that the way of education at the university, in particular, desires a web tool to manipulate student attendance. Among others, regular attendance is an easy and most essential criterion during the education tool. Consequently, the student might also additionally lose the right to sit down an exam if attendance criterion isn't always met. Moreover, if university college students exceed the variety of allowed absences, they'll moreover lose the right to sit down final exams. Given that, the manual approach this is currently used, supply region for additional calculation errors. We proposed and superior a better internet-based totally completely tool to help triumph over such issues. It is absolutely aware about molecular phones, tablets and numerous computer systems users. The proposed model offers information protection and entire class or man or woman student attendance information can be accessed fast and easily, moreover, the record is automatically generated through manner of manner of the professor. The cause of the internet-based totally completely attendance tool is to computerize the traditional way of registering attendance and to provide a less complicated and smarter way to tune institutions attendance nowadays, based totally mostly on a totally specific code for each professor and student called QR code. At the begin of each course, to affirm their attendance, users (professors and university college students) are required to test their unique QR code assigned to them at some point of or on the begin of each lecture, the use of QR studying devices withinside the classrooms. Based on this, the lecture and student attendance file and unique important information may be recorded. The tool will help plenty in improving student attendance in particular guides they need to attend and will keep plenty of time

II. PROPOSED METHODOLOGY

The device lies among on line studying and conventional studying as a facilitation for the attendance record-retaining manner, in a manner that enriches the lecture time in order that it could higher be applied in giving beneficial substances as opposed to losing the time taking attendance.

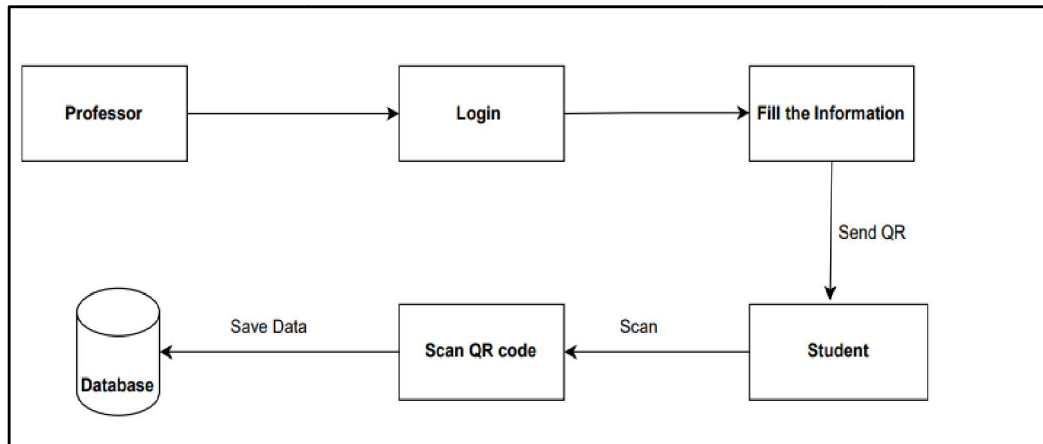


Fig.1.System architecture

First the attendance initiator website to be utilized by recipient (college students, professor, etc) is loaded his/her Smartphone/Laptop. When the website is opened for the primary time, the login manner withinside the website entails getting consumer info like username, password and different info. The excel sheet database for storing dataThe device calls for an easy login manner through the elegance teacher via its Server Module to generate an encryptedQR code with unique information. The attendance internet portal QR code producing module on receiving the request from server invoked through device of a recipient, exams for registered specific ID of the pupil for producing a computed random variety. The random variety is in addition fed to QR code producing module which generates the QR code. The generated QR code is downloaded to the folder and distribute the QR code to the person pupil on his e-mail identity entification Then the pupil registers the attendance the attendance company app utilized by discipline private will open the app if the app has accepted status, then it is going to the display to experiment the QR code. This manner has to show up inside mins for the reason that request generated from attendance initiator app in any other case consultation might expire and recipient has to once more request for any other code. This may be accomplished at any time earlier than the elegance. During the elegance, or at its beginning.

The college students can then experiment the displayed QR code the use of the device Mobile Module. for any pupil in addition to for the entire elegance to finish their attendance confirmation.

III. LITERATURE SURVEY

[2.1] Introduction This bankruptcy evaluations on current gadget, attendance monitoring technology, technology and improvement methodologies. [2.2] Review on Existing System According to appendix A, maximum of the colleges and faculties nevertheless report attendance on attendance sheets. Attendance gadget is really lacking out the evolution. According to Hsarena (2017), University Malaysia Sarawak (UNIMAS) turned into the primary in Malaysia to apply QR Code to report attendance in October 2017 accompanied via way of means of University Technology Petronas (UTP) in January 2018. Attendance System at University Technology Petronas (UTP) Similar gadget has applied on University Technology Petronas and Multimedia University as well. Lecturers will every now and then supply a pop quiz to save you dishonest. No similarly prevention is achieved. [2.2.1] Related Approach Masalha (2014) proposes that the use of QR code to report attendance with extra safety to save you unauthorized attendance registration the use of multi-aspect authentication, which can be username and password with facial identity test. To make certain that the scholars is gift withinside the elegance whilst scanning the QR code, the place can be test as well. Saraswat (2010) proposes that the use of fingerprint scanner to information attendance. Fingerprint is something all of us have uniquely and handy all of the time. By the use of fingerprint scanner, it's going to save you dishonest on attendance and offer handy but steady manner to report attendance. Balcoh, et al. (2012) proposes a set of rules for green attendance control. With face reputation, the attempt of recording attendance is decreased to minimum. The system is achieved in the back of the scene. The set of rules capable of perceive more than one faces from an unmarried image. This will in the end save you dishonest on attendance. We observed that concept of automatic attendance structures isn't always something new. Different areas have extraordinary choices on attendance taking gadget. Ultimately, the gadget will lessen labour paintings and save you attendance dishonest. 2.three Review on Attendance Tracking Technologies The desk



underneath suggests a number of the examples of attendance monitoring technology (The Hans India, 2018). Some of the low-price setups are the use of polling, geolocation, and QR code. Polling required college students to go into the solution that requested via way of means of academics at some stage in the elegance or input a unique precise code. This but is simple to cheat due to the fact college students can ship out the code or solution to their pals who aren't withinside the elegance. Next, monitoring attendance via way of means of the use of geolocation. When college students input into elegance, the gadget will hit upon and report attendance. However, GPS frequently go through with accuracy in indoor condition. This will make the attendance now no longer accurate. Thirdly, QR code. Students required to experiment the QR code that displayed at some stage in elegance to verify 24 attendances. This approach additionally may be cheat easily, via way of means of sending the QR code to pals who aren't withinside the elegance. We should decorate the safety via way of means of including few mechanisms. QR code need to be refreshed at rapid as 10 seconds, so that after the QR code is despatched to college students who aren't withinside the elegance, the code can be invalid. The gadget additionally wishes to permit one tool to login at scholar account at a time. This will save you dishonest on attendance as well.

IV. RESULTS AND DISCUSSION

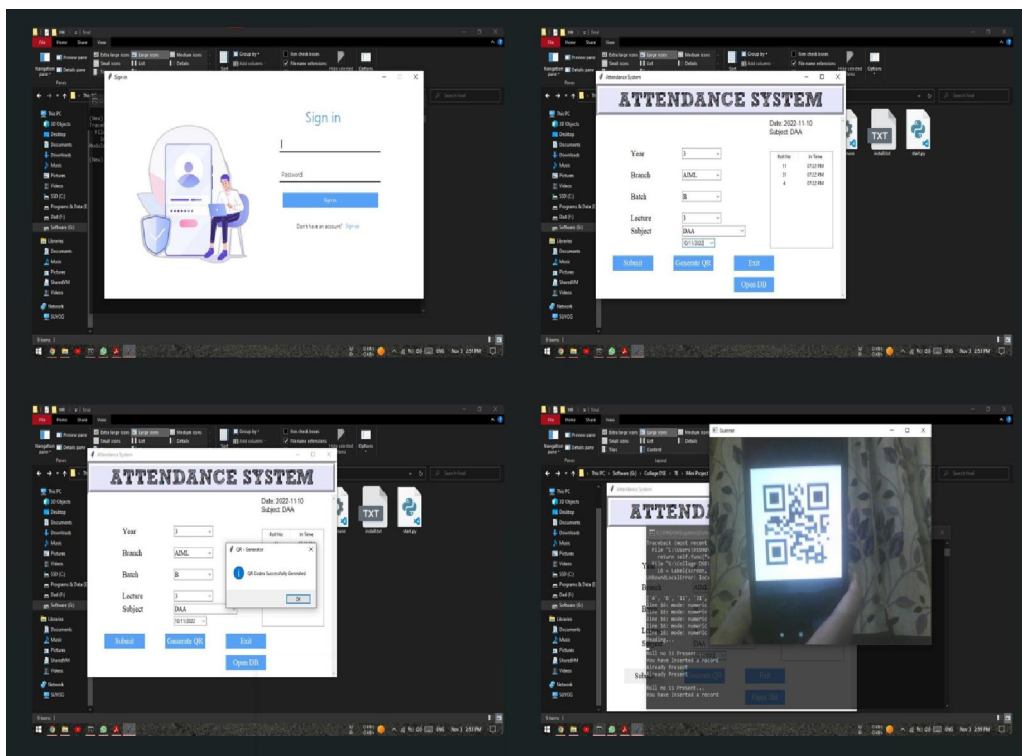


Fig.2. Results

The purpose of this studies has been accomplished. We had been capable of generate code from one of these Effective interfaces.

All of the techniques are the foundational elements which have caused the modern-day and deliberate gadget. Therefore, it's miles critical to apprehend the elements that have an effect on scholar and lecturer intentions to apply the QR code for this purpose.

V. FUTURE WORK

- Attendance management system based on the smart cards.
- Uses face recognition technology to identify and verify a person.
- Biometric attendance system utilises a fingerprint to allow employees to clock in and out of their office.

VI. CONCLUSION

These days it is required to keep up with the latest technologies, especially in the field of education. Educational institutions have been looking for ways to enhance the educational process using the latest technologies. Seeing as everything moves towards digitalization, we think that this system is pretty much necessary for the University. The acceptance of QR code by students and educators is critical to the successful implementation of this technology. Therefore, it is important to understand the factors that affect student and lecturer intentions to use the QR code for this purpose.

VII. ACKNOWLEDGMENT

With a deep sense of gratitude, we would like to thank all the people who have enlightened our path with their kind guidance. We are very grateful to these intellectuals who did their best to help us during this Project work. The special gratitude goes to Prof. M. D. Sanap who guided us especially in academic and paper presentation activities and to all the staff members of the AIML Engineering Department for their precious suggestions and guidance in completion of this project work. We're very thankful to Prof. N.V. Kapade, Head of AIML Engineering Department who encourage us to complete our project work his valuable suggestion. We feel proud and find privilege to express deep sense of gratitude to, Dr. K.V. Chandratre, Principal of Loknete Gopinathji Munde Institute of Engineering Education & Research, Nashik, for his comments and kind permission to complete this project work. We're also grateful to all support staff of our department for providing library and internet facilities. Last but not the least we acknowledge deep indebtedness to our parents and friends for their inspiration and to all known and unknown helping hands for their help and cooperation in all phases of the project.

REFERENCES

- [1]. Convolutional Neural Network (CNN) for Image Detection and Recognition 978-1-5386-6373-8/18/\$31.00 ©2018 IEEE
- [2]. http://eprints.utar.edu.my/3386/1/FYP_report_corrected.pdf
- [3]. https://www.researchgate.net/publication/275605455_A_Students_Attendance_System_Using_QR_Code
- [4]. <https://ieeexplore.ieee.org/document/9134225>
- [5]. <https://docs.python.org/3/library/tkinter.html>
- [6]. What is a QR Code?, available at: <https://www.the-qr-code-generator.com/whats-a-qr-code>, last accessed: 07 Jan 2020

BIOGRAPHY

1. Chanchal Bavisker, Under Graduate Student, Logmieer, Nashik, Maharashtra, India
2. Nikita Bhokare, Under Graduate Student, Logmieer, Nashik, Maharashtra, India
3. Ketki Gaidhani, Under Graduate Student, Logmieer, Nashik, Maharashtra, India
4. Shrinad Patil, Under Graduate Student, Logmieer, Nashik, Maharashtra, India
5. Suyog Waghere, Under Graduate Student, Logmieer, Nashik, Maharashtra, India