

Online Monitoring System for State Schools

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Abstract— Attendance recording and management is becoming important day by day as attendance and achievement go hand in hand. Employers value attendance as one of the most important work ethic. In most of the developing countries, educational institutions and government organizations are still using paper based attendance method for marking attendance. There is an immediate need of replacing these traditional methods with biometric attendance system. The unique identification of fingerprint makes it ideal to use in attendance management systems. Besides being secure, Fingerprint based attendance system will be an initiative towards environment friendly living. Fingerprint matching is widely used in science and technology for a long time. It can also be used in applications such as access control and identity management. This review incorporates the problems of attendance systems presently being used in State Schools; working of a typical fingerprint based attendance system, study of different systems, their advantages, disadvantages and comparison based upon important parameters.

Keywords: Online Monitoring System for State Schools

I. INTRODUCTION

The framework expects to actualize a set of dependable methods for unique mark picture upgrade and details extraction. The execution of these strategies will be assessed on a unique mark informational collection. In blend with these advancement methods, explores then can be performed on the unique mark informational index. The outcomes from these examinations can be utilized to enable us to more readily comprehend what is associated with deciding the measurable uniqueness of unique mark particulars. The principal point that this framework would test whether participation by unique finger impression is sufficient for recognizable proof. It is normal that the work in this framework will achieve the phase of having the capacity to completely test theory.

This venture utilizes a biometric to encourage instructive establishments in keeping up participation for educators in State Schools. It utilizes the most solid manner by which an instructor is extraordinarily recognized through unique mark perusing. Such application is of extraordinary use in schools just as in school for everyday participation. Through this application, a deliberate track of broken instructor's participation can be kept up. This undertaking empowers the easy method for keeping up normality of instructors in State School for going to classes with fewer endeavors.

II. PROJECT SPECIFICATION

A. Project Description

The goal of this project is to daily attendance of the teachers through fingerprint. The project is designed and implements software architecture for fingerprint analysis. The system

should extract out key characteristics evaluated from a scanned fingerprint image and to compare the image with a database of fingerprint which is pre-scanned images and/or extracted feature sets. For this project we would be having a set of previously acquired fingerprints which would be registered and a working fingerprint sensor with software for Windows.

B. Project Task

The venture can be part of a lot of guideline errands speaking to a movement towards the ultimate objective of a working unique mark investigation framework.

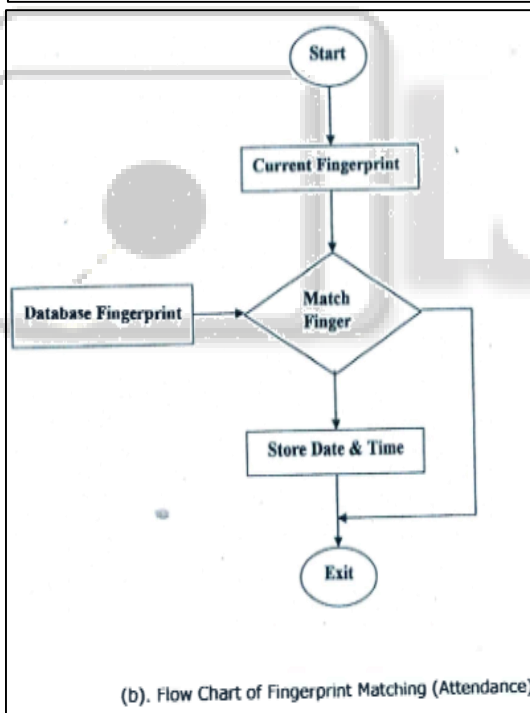
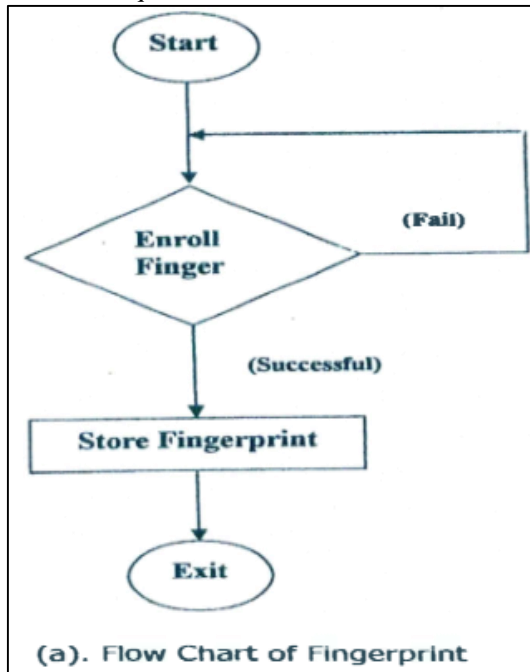
- 1) We had must evaluated strategies for dissecting fingerprints and performing design acknowledgment on sets of fingerprints. A few of the most encouraging calculations methods had executed and introductory testing performed on the test set of unique mark picture gave.
- 2) The Biometric Attendance System programming engineering for the fundamental framework was planned; the principle subsystems required were resolved and a strategy for executing a full framework was assessed; work design and a few of the practical subsystems were actualized.
- 3) We broke down calculations were executed and incorporated with the unique mark sensor, and ongoing obtaining an examination of a finger impression was illustrated; enhancements in preparing speed and actualized and illustrated.
- 4) Upgrades in the investigation of a gained picture might be accomplished through picture handling; joining numerous obtained pictures to give an improved composite picture; or increasingly modern measurable or scientific methodologies.
- 5) Upgrades in example coordinating might be accomplished through different example acknowledgment approaches, the understudies ought to assess a few methodologies, building up an assessment system which empowers a correlation regarding improved acknowledgment and a decrease as far as false positives and negatives.

C. Methods

A simple task breakdown for this project is as follows:

- Analyze and review available literature on image enhancement and minutiae extraction techniques.
- Produce a series of picture enhancement techniques to aid the minutiae extraction process.
- Get a set of authentic techniques to press out the minutiae from fingerprint images.
- Take note of the result of the performance of the techniques using the fingerprint data set.
- Use existing techniques as the benchmark for comparing the performance of the technique developed.

- After reliably developing and testing minutiae detection techniques, statistical analysis experiments on the data set can be acquired and documented.



III. HOW DOES THIS PROJECT WORKS

To run this project first we have to operate this project in “Settings mode or Admin mode”. In this model we have to enter data into the database of finger print sensor, for this we need to scan impressions of fingerprints of the person whom we want to afford admittance to our security system. This can be performed whenever a new entry has to be appended to the system. Then this project is ready to mark attendance and has to be used in “Normal mode or Search mode”. In this way the system compares the input fingerprint received with the previously stored fingerprint from its storage. If the entry

matches with the memory then it gives out ok signal along with the identity number of that person. But if the entry does not match with the memory then it waits for the correct fingerprint and if after some span of time the correct fingerprint is not applied, an e-mail goes to the admin regarding the non-availability. The output obtained from the fingerprint sensor is fed to the microcontroller. Microcontroller then compares the result data set. Function of microcontroller is to store attendance depending upon the input received. In case of OK signal from fingerprint module, microcontroller stores attendance.

IV. ADVANTAGES

- 1) Faulty teachers in government schools will be more regular in attending their classes since now no password or no attendance sheet signature is required, so no helper can make an attendance on behalf of others as fingerprints are unique for every teacher.
- 2) Government officials do not need to waste their time for regular checking of the government schools or no such duplicacy of records would be entertained.
- 3) No need to maintain attendance sheet as the attendance are electronically stored in database and online monitoring can be easily done.
- 4) The system helps the admin of the State Schools to easily find out defaulters.
- 5) An attendance log could easily be maintained.
- 6) It saves time, cost, efforts and resources available to the students of the State School.

V. CONCLUSION

Our project "Online Monitoring System for State Schools" is an extensible work for any school or institution in this fast world. Still there is a great deal of improvement work and flexibility for the coming technologies in the various demanding directions. The language been used is very vast and even the under Microsoft products is trying to rule over the Information Technology, So we hope that this project will be the point of interest for our successors to be enhanced further to market it compatible with the demands of the organization requirements.

REFERENCES

- [1] M. Kassim, H. Mazlan, N. Zaini, and M. K. Salleh, “Web-based student attendance system using rfid technology,” IEEE Control and System Graduate Research Colloquium, October 2012,
- [2] S. Nainan, R. Parekh, and T. Shah, “RFID technology based attendance management system,” CoRR, vol. abs/1306.5381, June 2013.
- [3] R. Anjum and V. Kamble, “Student tracking and attendance monitoring system” September 2017.
- [4] J. Dwivedi, A. Tyagi, A. Pushkar and H. Kanpur, “Rfid technology based attendance management system,” International Journal of Engineering Science and Computing (IJESC), vol. 7, no. 3, July 2017.
- [5] Head First Java by Kathy Sierra, Bert Bates, last accessed, last accessed August 2018.