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Attendance System Using Fingerprint Identification with Website Designing and GUI

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Abstract – *As We Have Observed Now a Days Every academic institute has their own ways & criteria for students regarding their attendance in class. Keeping day to day data of attendance in real time format and take necessary action it's an crucial task and it is very important. At present attendance is usually noted using paper sheets and the old file system, somewhere technology updates old system with biometric system. It becomes difficult for the management to regularly update the record and manually calculate the percentage of classes attended. Proposed system designed to overcome to overcome the problems associated with attendance system. Biometric systems have been widely used for the purpose of recognition. These recognition methods refer to automatic recognition of people based on some specific physiological or behavioral features. Main aim of this method is to develop transparent attendance system and keep real time data and it is displays online data for parents and other academic use. Attendance System Using Fingerprint Identification with GUI is reliable and easy to implement which gives accurate results.And through website it is very much easy for the parents to observe the daily attendance of the student in academic year.*

Key Words: **Attendance System ,Fingerprint ,WebsiteDesigning, GUI, Student,etc**

1.INTRODUCTION

An automatic attendance system using fingerprint verification technique was developed. Each and every person has an unique thumb impression or fingerprint.The fingerprint technique verification was achieved using extraction of abnormal point on the ridge of user's fingerprint. For the authentication of the specific authorized candidate done with comparison algorithm which will be performing one to one comparison of a captured fingerprint images or impession against the stored impession in the database. The developed automatic attendance system signals either authentication or non authentication based on logical result of previous one to one verification of person's authenticity. Administrator also viewed and developed biometric system using fingerprint identification for attendance automation of students in an organization. For example to pass through a restricted area you may have to scan your fingerprint through a biometric device. A new template will be generated that will be then compared with the previously stored templates in database. If match found, then the person will be allowed to pass through that area. On the other hand verification means the process of checking whether a query biometric sample belongs to the claimed identity or not.Human beings have been using fingerprints for recognition purposes for a very long time, because of the simplicity and accuracy of fingerprints . The person real time monitor attendance of each student in organization irrespective of her/his department to simplify and speed up the process of student's biometric impression. and it will store on the account of that particular student. The proposed system emphasizes a simple, reliable and cost effective model for face classrooms attendance monitoring that uses existing USER ID And PASSWORD for each student with additional short message services to parents as weekly summary with student's overall academic mark's and other activities updated on website.

2.System Design

In the developed system we are getting inputs in the form of biometric thumb impression or image and maintaining its records in an academic institute or college. For an any organization its difficult to manage the students data.Technology updates the drawback of manual attendance records also stores it for the long time future use. For this reason an efficient system is designed. While considering an academic institutes, taking the attendance of students on daily basis and maintaining the records is a wide and long process.

This system gets attendance of individual students attendance with the help of a fingerprint sensor and all the records are of that candidate saved on a computer server. Fingerprint sensors and LCD screens are movable toward

each student in each room. In order to mark the attendance, student has to place his/her left thumb or right thumb impression on the fingerprint sensor. On identification student's attendance record is updated in the database and he/she is notified through LCD screen. No need of all the stationary material and special personal for keeping the records. The developed system replaces the manual system.

2.1 Circuit Diagram and Hardware Implementation:

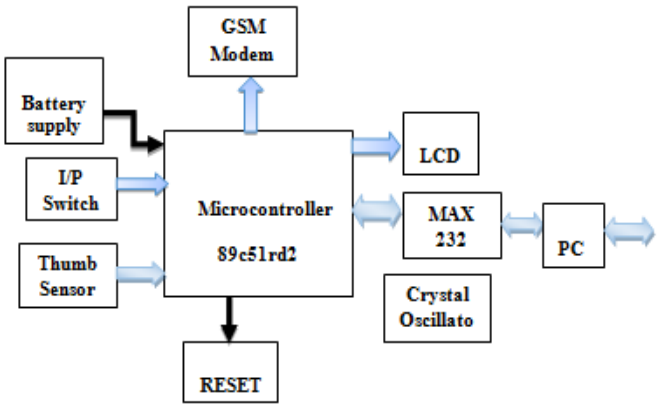

Figure1.Block Diagram

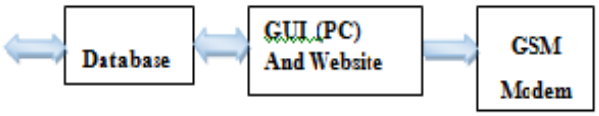

Figure 3 : Transmitter Block Diagram

Description:

1. **Microcontroller(89c51rd2):** MicrocontrollerAT89c51 is supposed to use in the proposed system for the interfacing of keyboard.

2. **GSM Modem:** Dual band GSM/GPRS 900/1800MHz.It can Configurable baud rate. It can be used Access control devices. & Supply chain management.

3. **Thumb Sensor:** The fingerprint sensor is combination of R305 FP+PIC MCU board that can read different fingerprints and store in its own flash memory. The sensor can perform three functions namely Add (Enroll) , Empty Database or Search Database and return the ID of stored fingerprint.

4. **Crystal Oscillator:** It generates the frequency 413 Hz required to microcontroller kit.

5. **Reset:** Reset is used to microcontroller kit.

3. Proposed Work:

3.1Software Implementation:

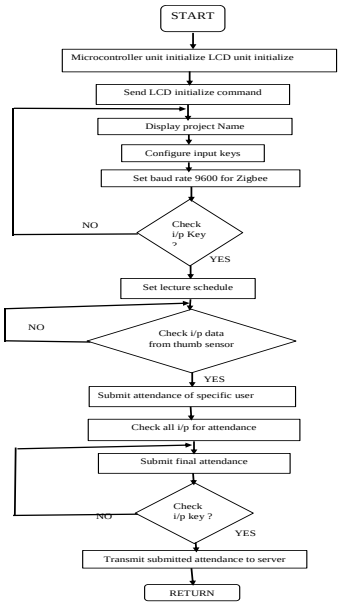

Figure 4:Flowchart II

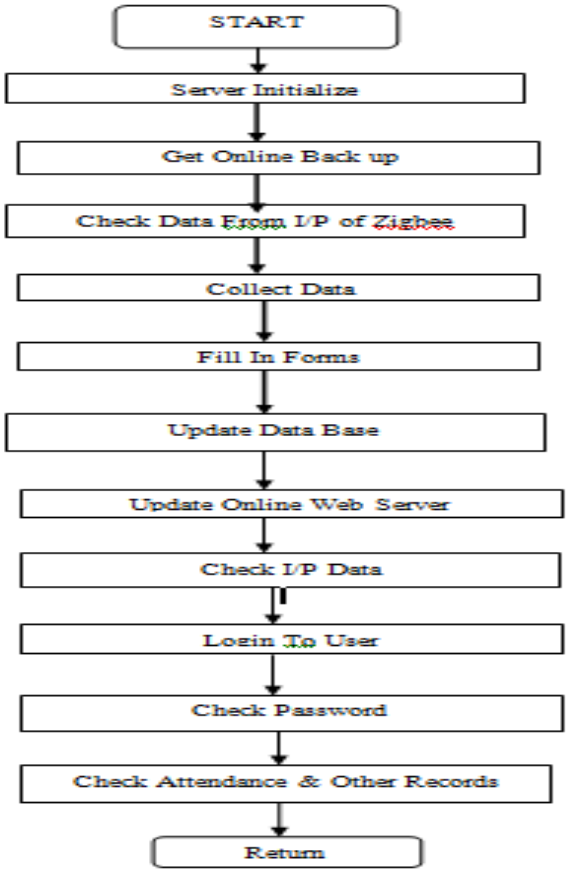

Figure 4 : Flowchart II

Software Design

Fingerprint identification is based on two factors:
1) Persistence: the basic characteristics and features do not change with the time.
2) Individuality: fingerprint of every person in this world is unique
To store the data of student present in the Attendance machine we have to build software which can store the data and schedule the data as per the student record. The data is feed to the software with the help of cabel MAX 232.
By the help of software the staff member can enroll the student class-test marks, attendance updates,as per student record.

3.2 Website Designing

The Aim of the Project is to inform the Parent about the student Attendance and to aware them about the marks of Class-test or any Student Related Information. To Assure this Aim we have to Design an Website Which will give the Information to Parent of the Student Marks and there Attendance records.
Therefore Each student will be allotted an **REG.NO** Through which the student will be verified. Then all the Information Related to the student will be ported to the **REG.NO**. Such as Class-test marks, Attendance Updates. Each Parent will be Allotted a **USER ID.** And **PASSWORD** of the particular Student REG.NO .So that the parent can check the data of attendance as well as Class-Test Marks.
If the Staff Member has to give any Important Information directly to the Parent's they can Mail them on their USER ID .So That The Parent's will be Aware of Student Updates in Collage.

3.3 Hardware Implementation

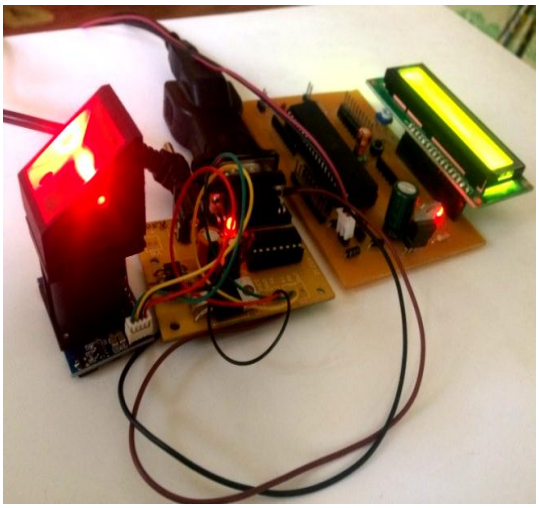

Figure 5. Fingerprint Identification Kit

4.Result:

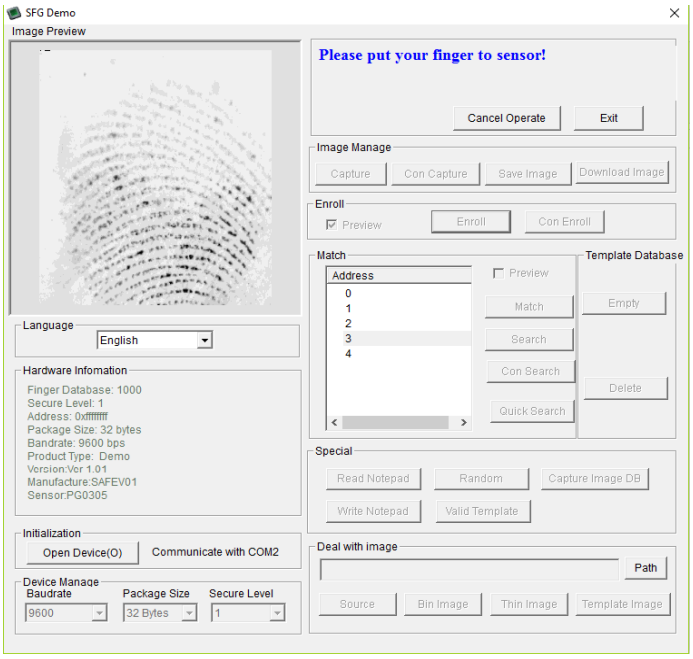

Figure 6.Result Of Project

5. CONCLUSION

In this paper we have concluded that the above proposed system that a reliable, secure, fast and an efficient system has been developed replacing a manual and unreliable system. Results have shown that this system can be implemented in academic institutes for better results regarding the management of attendance. This system will save time, reduce the amount of work the administration has to do and will replace the stationery material with electronic apparatus. Hence a system with expected results has been developed but there is still some room for improvement.

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