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INTERNET OF THINGS USING BIOMETFRIC ATTENDENCE MANAGEMENT SYSTEM

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ABSTRACT:

This paper represents a simple approach to student attendance in the form of an IOT based system that records the attendance using fingerprint based biometric scanner and stores them securely over cloud. We propose a smart finger print base biometric system that works an internet of things. So the attendance should be the monitored from anywhere in thr world. Our system uses a microcontroller based circuit with finger print sensor, push buttons,power supply and wifimodem and to interact the persons with internet based system. We here to use the iot gecko to develop the online attendance display system our circuit is allows the all users/employees and students to first register teir finger print on the system. After successful registration of the finger print stored in system with class assigned to push buttions . the system is also displays the lcd display. This overall system is allows for remote monitoring of biometric based attance from anywhere over iot.

1.INTRODUCTION:

Now a days biometric attendance system is very useful for employees and students and this circuit is consists of atmega microcontroller finger print sensor , wifi module and butter, buzzer, push buttons, wifi modem, crystal oscillator, capacitors, resistors, arduino and buzzer, transistors, cables and connectors and connectors and pcb and bread boards. , lcd and transformer and switch, ic and IC sockets and switches are hardware requirements. So the software requirements are arduino complier and programming language and IOT gecko.

1.1 MICROCONTROLLER:

micro controller is a example of atmega 328p, this controller is a 28 pins and it is based on the hgh performance and low power . this is a analog pns and digital pins and port a and port b and port c and port d. so the atmega328p microciontroller is created by atmel. It is a 8bit nad 28pins are manufactured by microchip, so the atmega 328p is a low power cmos circuits. So the applications of the microcontroller is the industrial systems and digital data processors and poser regulation systems and used in arduino uno and arduino nano and arduino icro boards and display boards. And pheriphial interfaces. So the microcontroller pin diagram is consists of port c and port b and port d. man be connected to external devices. The programme will be excuted

done by using c language. miicro controller 328p is a microcontroller the proper connection and the made by checking the all input ports as well as power supply connections. So the output of pins are connected to external devices. The programme will be excuted by using the c and c++ languages. By using the programmes can be uploading to the microcontrollers.

1.2PIN DESCRIPTION:

The pin description of micro controller diagram is given below.so the pins are 28 pins of atmega 328 p microcontroller.this micro controller is the anlog pins and digital pins,. So the pins due to port c and port b and port d. so the port b pins are PB0-PB6 and port c pins are PC0-PC6 AND port d are PD0-PD7. So the 20 and 7 pin is connected to vcc and 22 and 8 pins are connected to the ground. Atmega 328p microcontroller is the arduino pins.

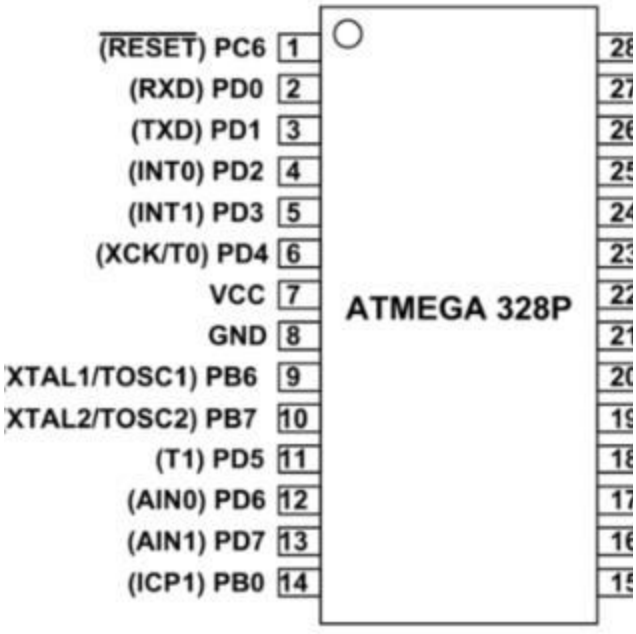


FIG: ATMEGA 328P Microcontroller

2. BLOCK DIAGRAM:

The block diagram of the bio metric attendance system is a power supply and rectifiers and regulators and lcd display and finger print modulres and the microcontroller and using iot. So the block diagram is connected to the microcontroller and rectifier is connected to the poer supply and the rectifier connected to the regulators so the regulator connected to the atmega 328p microcontroller. So the finger print module connected to the micro controller so this diagram represents the bio metric attendance system.

The circuit is given to the below using power supply and microcontroller and regulator and finger print module and display and using IOT. It is power supply range from the 230v and the thre is a need to convert the ac supply stepped down to the 230v to 909v. so this sensors are connectec to the arduino board. The finger print m odule is due to the is a version of R307. R307 is an finger print sensor which is a upgraded version of the R305. R307 is a own data base awhich can store the 1000 templates. Security level for R307 is from 1-5.this module has less false error rate and fast searching processor,uses algorithm to work with scanned finger prints.LCD display is a green light in back ground with characters displays on them black.characters are displayed in the matrix.

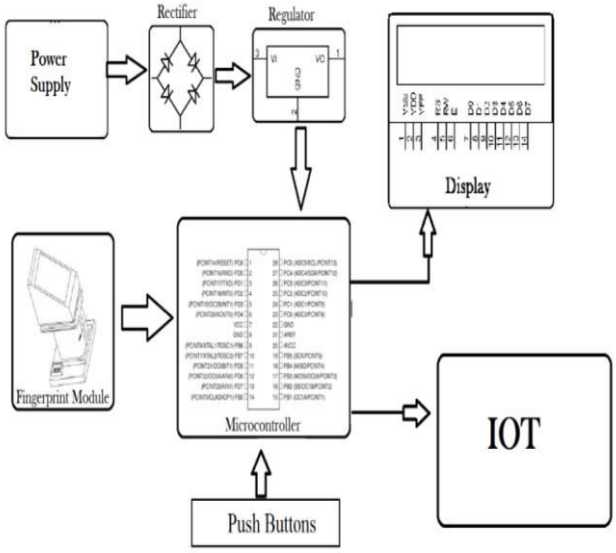
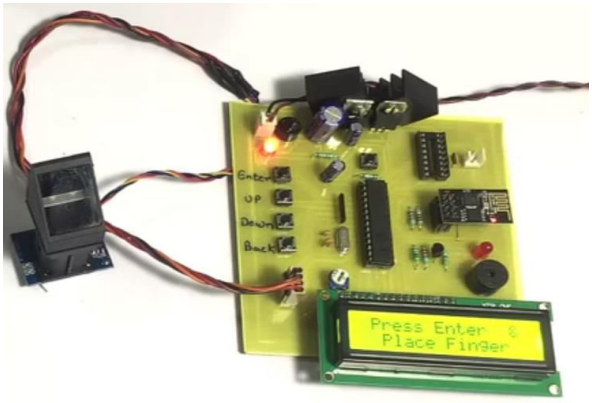


FIG: Block diagram

3. SIMULATION AND RESULTS:

RESULTS AT HARDWARE:

All operations are going to in this model are displayed in the LCD display. A wel come message is followed by displaying are verified finger print in the finger print module. next a menu operations are displayed. by setting one of the options, a process can be invoked.



RESULTS AT SOFTWARE:

The registration page to get an account in the website so that attendance for that user can be marked and viewed. Login page is used to login to the account and view the attendance. Attendance page gives details based on the role of the user. If the user is a student, only his attendance is displayed. If the user is a teacher, teacher's attendance and their class' attendance can be viewed. If the user is HOD, HOD's attendance, staff attendance and all classes' attendance can be viewed. Only logged in users can check the attendance.The User ID, Finger ID and the date and time when the attendance is marked is viewed here. For Teachers and HOD, their attendance along with their class attendance can be viewed. Attendance details for students, teachers and HOD are different. Students and teachers have to select their class while registering so that while viewing attendance details there will be no confusion.

FIG: attendance details for teacher

4.CONCLUSION:

In the project we take the biomeric attendance system automatically by using the finger print sensor. the students present and absent list are generated on the computer system automated by connecting the zigbee technology. The students who are absent in the class are marked.and the message is sent to the students parent individually by gsm technology.thus the student attendance management system is made easy with this system. IOT based biometric attendance system which is compact, portable, fast, consume less, power is created.the hardware works very efficiently.there is no issues in the hardware.the connection between the hardware and software is established. The attendance details are stored in the database.

5.REFERENCES:

[1] Piyush Devikar, Ajit Krishnamoorthy, Aditya Bhanage, Mohit Singh Chauhan, "IOT Based Biometric Attendance System", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCE), Volume-5, Special Issue 2, October 2016, P10-13.

[2] Jayalaxmi Kounder, Nishigandha Jambhale, Tanisha Sawant, Sayli Wadkar, Prof. Sonali Suryawanshi, "Biometric Attendance System using IOT", Journal of Emerging Technologies and Innovative Research (JETIR), Volume-5, Issue 10, October 2018, P173-176.

[3] Fahad-Bin-Mazhar, Oli Ahamed, Md.Rasedujjaman, "Biometric Smart Attendance Kit with Fingerprint Scanner by Using Microcontroller", 1st International Conference on Electrical and Electronic Engineering (ICEEE), November 2015, P1316.

[4] Nadar Prince, Abhishek Sengupta, Ms. Keerthi Unni, "Implementation of IOT Based Attendance System on a Dedicated Web-Server", International Journal of Scientific and Engineering Research (IJSER), Volume-7, Issue 6, June-2016, P351-355.

[5] M.A. Meor Said, M.H. Misran, M.A. Othman, M.M. Ismail, H.A. Sulaiman, A. Salleh, N. Yusop, "Biometric Attendance", 2014 International Symposium on Technology Management and Emerging Technologies (ISTMET), May2014, P1-6.

[6] Ayushi Mathur, Mr. Rupal Gupta, "Analysis of Algorithms used in Biometric using Fingerprint Authentication for 3D Authentication System", International Conference on Advanced Computing (ICAC), 2016, P398-406

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