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Biometric Attendance System Over IOT

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A B S T R A C T

Here we propose a smart fingerprint based biometric attendance system that works over IOT so that attendance can be monitored from anywhere in the world. We are using a arudino mega microcontroller and finger print module.Now the online system stores and displays the required data to users as per online login. Thus, our system allows for remote monitoring of biometric based attendance from anywhere over IOT.

Keywords:Wifi Module,Gsm Module,LCD,Arudino Mega,Transformer.

1. Introduction

Normally attendance play major role in any organigation .In previous we take attendance manually by maintaining books and a employ to maintain and take attendance manually. Example in our education system we maintain registers to take attendance manually.teacher who is in thye class take the attendance manually due to this time of the class is wasted.for that problem we came up with a solution automatically attendaqce taking system using biometric.our system take the attendance when the student place the finger o0n the finger print module it will automatoically mark attendance .the details of the student automatically send to our website.

2. Literature Survey

After doing analysis on the recent work done in attendance and performance analysis, we found that many people used different methods to mark attendance And also, this kind of system worked well in all the cases but there were some issues with them, such as the student could mark his/her attendance anything even if he/she is late. Also, certain systems used Arduino and a single board computer with fingerprint biometrics. In such system the idea was to centralized the management system.

Some systems used Arduino and raspberry Pi for attendance recording. Such system implemented attendance recording and consolidation with the help of raspberry Pi and Arduino. But, after a certain extent only marking attendance was not a key point as being an engineer no one is happy with doing a small kind of work so there came idea of managing the performance of the student using such kind of data and a new thing came in market known as STUDENT PERFORMANCE ANALYSIS.

3. Proposed Work

We here use IOT to develop the online attendance display system. Our system allows users/employees/students to first register their fingerprint on the system. After successful registration the print is stored in system with class assigned using push buttons. The system also displays these details over LCD display. Now as soon as the next time a registered user scans the modem, the system checks for authentication and authenticated users data is transferred online to IOT. Now the online system stores and displays the required data to users as per online login. Thus our system allows for remote monitoring of biometric based attendance from anywhere over IOT.

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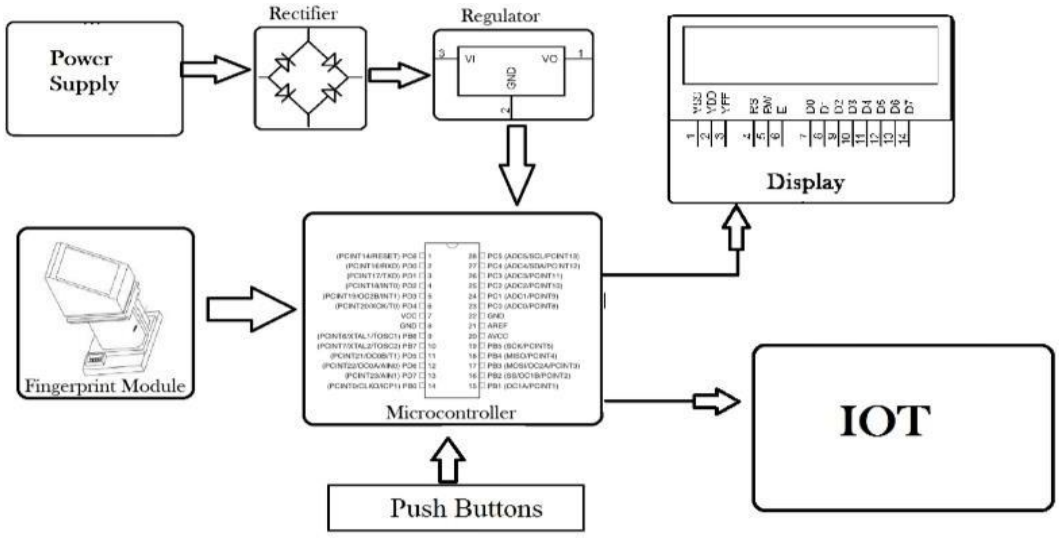

When we switch on the power supply the transformer will convert the 230v ac to 12v dc.the rectifier will reduce the noise.12v dc supply is connected to microcontroller and GSM module.From microcontroller 3.3v pin is connected to Wifi module.Lcd display is connected to the microcontroller. The GSM module is connected to microcontroller,the finger print module is connected to Tx and Rx pins of microcontroller

PIN	SYMBOL	FUNCTION
1	Vss	Power Supply(GND)
2	Vdd	Power Supply(+5V)
3	Vo	Contrast Adjust
4	RS	Instruction/Data Register Select
5	R/W	Data Bus Line
6	E	Enable Signal
7-14	DB0-DB7	Data Bus Line
15	A	Power Supply for LED B/L(+)
16	K	Power Supply for LED B/L(-)

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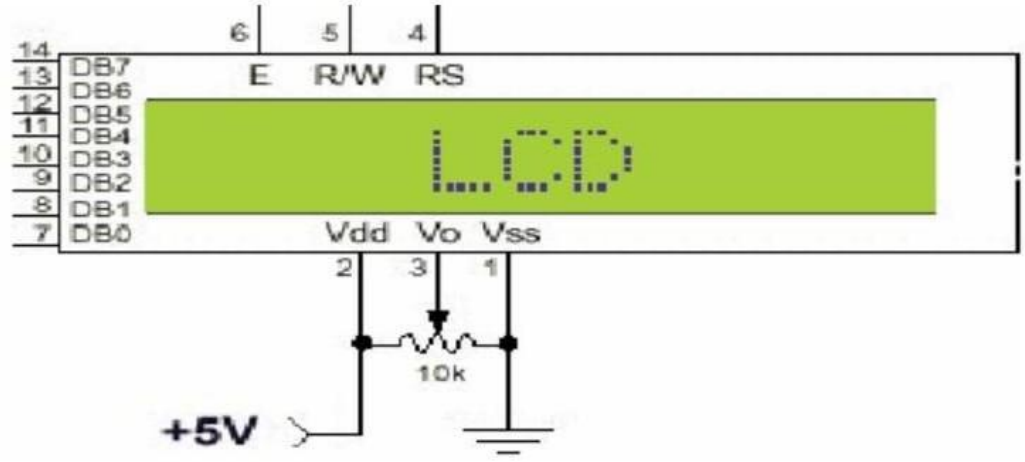

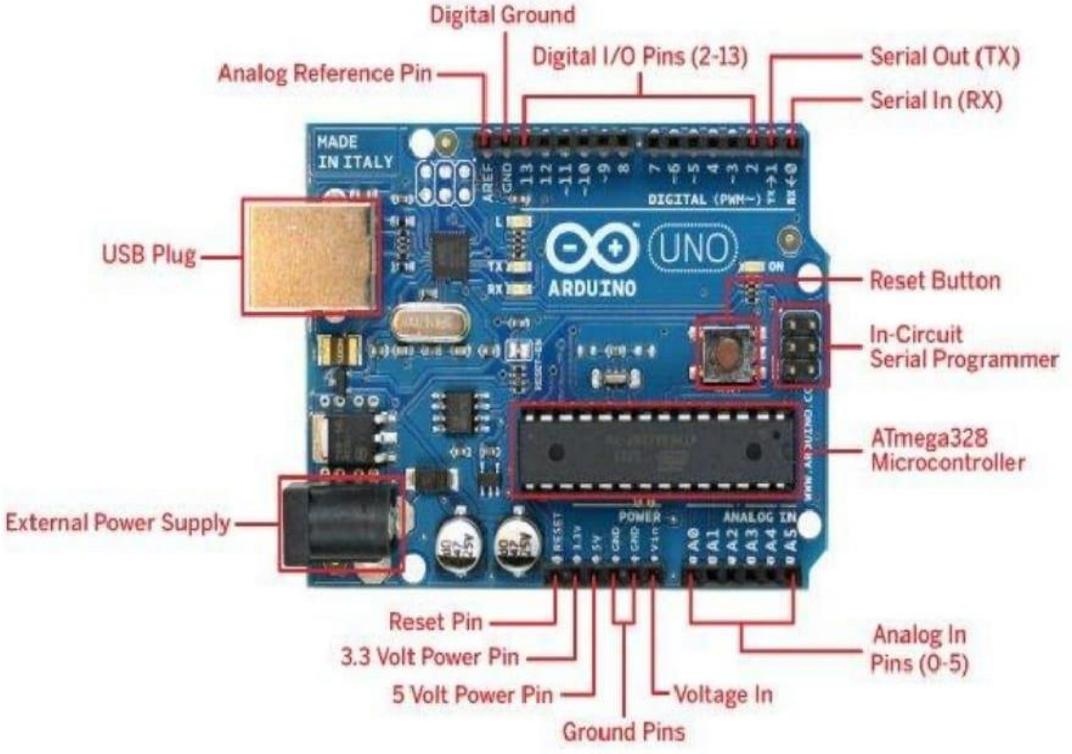

Figure 2 Structure of Arduino Uno

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4.Results and Implementation

When we place the finger on the finger print module it will verify and tally the finger print and send the attadance to the website.

5.Conclusion

Attendance is marked after student identification. For student identification, a fingerprint recognition based identification system is used. Fingerprints are considered to be the best and fastest method for biometric identification. They are secure to use, unique for every person and does not change in one's lifetime.

References

[1] D. Acharya and A. K. Mishra, "Wireless Fingerprint based Student Attendance system", National Institute of Technology Rourkela, 2010. http://ethesis.nitrkl.ac.in/1765/

[2] C. Saraswat, C. et al, "An Efficient Automatic Attendance System using Fingerprint Verification Technique". International Journal on Computer Science and Engineering. 2(02):264-269, 2010

[3] S. Pankanti, S. Prabhakar, and A.K. Jain, "On the Individuality of Fingerprints". IEEE Transaction on Pattern Analysis and Machine Intelligence.24(8), 2002

[4] O. Shoewu and O. Badejo, "Radio Frequency Identification Technology: Development, Application and Security Issues". Pacific Journal of Science and Technology. 7(2):144-152,.2006

[5] T. Nawaz, S. Pervaiz, and A.K. Azhar-Ud-Din, "Development of Academic Attendance Monitoring System Using Fingerprint dentification".2009

[6] M. Kamaraju, P. A. Kumar, B. A. Krishna and B Rajasekhar, "Embed -ded Fingerprint Recognition System", Recent Researches in Telecomunications, Informatics, Electronics and Signal Processing, 2013

[7] O.O Shoewu, M. Olaniyi, and A. Lawson, "Embedded Com puter-Based Lecture Attendance Management System". African Journal of Computing and ICT (Journal of IEEE Nigeria Computer Section). 4(3):27 – 36, 2011

[8] S. Kadry, and M. Smaili, "Wireless Attendance Management System Based on Iris Recognition" 2010.

[9] K. L. Cheng, T. Xiang, Hirota, and K. Ushijimaa, "Effective Teaching for Large Classes with Rental PCs by Web System WTS".Pro. Data Engineering Workshop (DEWS2005), 2005

[10] S .S. Chikkerur, "Online Fingerprint Verification System". M.Sc. Thesis. SUNY: Buffalo, NY, 2005

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