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FINGERPRINT BASED DOOR LOCK SYSTEM

Shubham Rahinj, Sarika Lohar, Tanaj Tamboli, Prof. Sushma Bhosale

PCET's Nutan Maharashtra Institute of Engineering and Technology, Pune, Maharashtra, India

(Professor Sushama Bhosale, Electronics and Telecommunications Engineering, PCET's Nutan Maharashtra Institute of Engineering and Technology, Pune, Maharashtra, India)

I.ABSTRACT

This function includes a smart and low-key door lock and a visible fingerprint connector. To implement this assignment, we will be using Atmel Atmega328p, fingerprint sensor, gsm module, motive motive power, engine and a few different hardware tools. The fingerprint sensor will be integrated inside the door panel, facing the outer part of the door, so that people cannot enter the control machine externally. The latches can be adjusted inside the door panel, so that the size of the door helps the strength of the latch. We will use some latch on the panel to separate the pressure between them when trying to apply pressure. The fingerprint sensor will pick up a human fingerprint and transfer it to a small controller to match its records. If the print fits one of the microcontroller reminder fingerprints, the small controller will lock or release the latch, based entirely on its modern world. If the fingerprints are overseas on a small controller, the buzzer will be noisy and one will have to try again. If the wrong fingerprints are tried five times in length, the machine will notify the owner to tell him or her about the site. The gadget can also go to a secure nation where it will end up thundering to let neighbors know something is wrong. The device may be reset immediately after installation of a known printer.

Keywords: Fingerprints, Security, Automatic Items

II.INTRODUCTION

These days the security of the office / company is a great opportunity for everyone who is not at home or at home. When it comes to security laws, it is one of the main problems in this busy competitive world, where one cannot find ways to provide security for one's personal property. Instead, you find an opportunity solution that produces better, more reliable and secure atoms. This is the generation where everything is connected with society, where everyone can find the truth everywhere in the world. So the chances of 1 information being hacked are a big problem. Because of these risks it is very important to have some kind of diagnostic gadget in order to access personal information. Today, non-public identification is becoming a major problem worldwide. Among the most common ID methods we see password strategies and identification cards. But it is easy to steal a password now and playing cards can get lost, which is why it makes such methods unreliable. his key inside or occasionally while the thief simply broke the lock and stole everything. These kinds of situations always bother people who use the door lock with a key. Although in some places people use smart playing cards, a situation may arise when someone loses a card or keeps a cardboard box inside. Then there are security guards who lock houses or workplaces and keep the keys safe. But there are also cases where a person with a key can be unavailable or has long gone to a few emergency procedures, which can cause unnecessary delays for people in need of something urgent. These are some of the problems that people may face when using smart cards or playing cards. At that time folks.

system, system lock door fingerprint access. Our design is designed to provide better guarantees as customers do not need to remember passwords and do not want any kind of keys or cards that often roam. If a person's fingerprints

were allowed inside the system he or she would not be able to deal with any kind of delay in entering the room. The shadow of the fingerprints is one of the most stable structures because the individual fingerprints are completely different from the others. Unauthorized access can therefore be prevented by using a design key that holds the fingerprints of one or more authorized clients and opens the device where access to the device is located. Bio-metrics validation proves to be one of the best styles because the skin on our arms and legs show movement and flow similar to the ridge pattern on all clear and unstable fingers. This makes fingerprints a unique identifier for all of us. Recognition and reliability of fingerprint scanners may not be without its problems in the use of current hand-held gadgets such as mobile phones and laptops.

In this report, we discuss past history and related research papers in section 2 in which bio-metric-based locking features, proposed solutions and fingerprint methods are provided. Then describe the design and operation of the proposed locking device in Section 3. Usage information includes circuit diagram, architectural design, door design, chip controller format, function of all gadget. The fourth section contains a flowchart and a set of proposed gadget rules. The full performance test is described in section five. This file is finally finalized in Section 6.

III. LITERATURE SURVEY

In the research paper "Fingerprint system based on fingerprints", Ajinkya Kawale (May, 2013) states that fingerprints are patterns of holes and holes in the surface of the finger. Like all other elements in the human body, these layers make up a combination of genes and nature. The genetic code in DNA gives general instructions about how the skin should be formed in a developing embryo, but the specific way it is formed is the result of random events. With the help of assemblies, fingerprints can be used to create secure and inaccessible door locks and several locking systems. Interfacing is a way to establish a connection between Microcontroller and Interface. Interactive fingerprints are common and can interact with any small controller. It is a combination of computer hardware (i.e., Visual Connector) and Software (i.e., the source code of the communication, also called Driver). In simple terms, to use LED as an output device, the LED must be connected to a portable pin for the controller and there must be a system running inside the controller to make it open or close or blink or blur. This program can be developed using any programming language such as Assembly, C, Basic etc.

In "Advanced Door Lock Security System using the Palmtop Recognition System", Kawser Wazed Nafi, lecturer at Stamford University talks about the separation of the security system interface. According to him, a security system that uses a fingerprint interface can be categorized into the following modules:

- Fingerprint analysis software module that accepts fingerprints;
- Hardware interface module and lock system module.

He added (the author) added, the gradual fragmentation of the assassination plot looks like this,

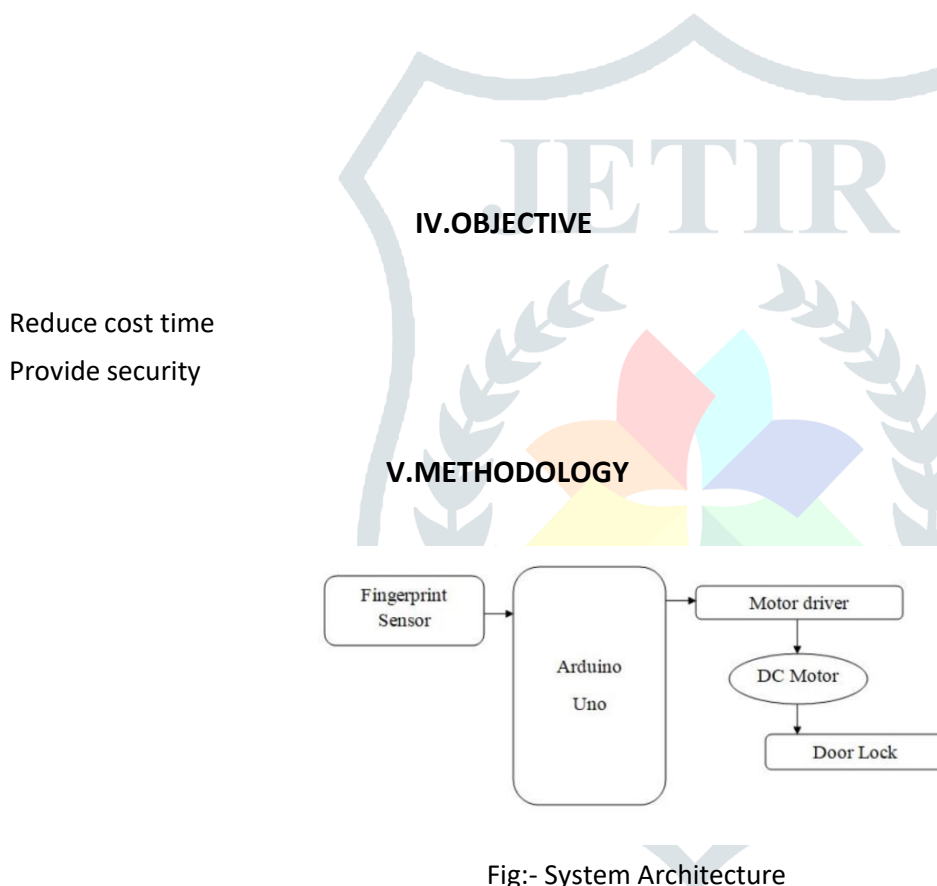
- Biometrics literature research - especially with regard to the analysis of fingerprints.
- A study of the basics of image processing algorithms to compare images with a different view of fingerprints.
- Integration of MATLAB as a planning tool for image processing and comparison.

In a large paper, "Personal authentication through biometric technologies", Fernando L. Podio (2002) points out that fingerprints are one of the many forms of biometrics, which are used to identify individuals and to establish their identity. Analysis of fingerprints for similar purposes often requires comparison of several aspects of print pattern. These include patterns, which are integrated elements of ridge, and small points, which are distinctive features found within the patterns. According to him, it is also necessary to know the structure and properties of human skin in order to successfully use other photographic technologies. Minutiae and patterns are very important in analyzing fingerprints as no two fingers have been shown to be identical. He also adds that the three basic patterns of fingerprint lines are arch, loop, and whorl. In his description- Arch are poles that go in from one end of the finger, up in the middle to form an arc, and then out of the other end of the finger. Ridge loops come in from one side of the finger, form a curve, and then exit on that side. Finally, he says that whorl are layers formed around the center of the finger. In a whorl pattern, the ridges form a circle around the finger.

In medicine, identifying the dead is very important. Reliance was often placed on physical examination to determine the identity of the deceased. Card receipts are usually limited to live lessons. Several studies have suggested the use of scanners such as electric fingerprint printing for cadaver. However, as far as we know, no research has been done on cadaver to confirm the identity of the nearest body. We wish to propose a general procedure for the authenticity of the deceased by using a card receiver device to match his or her fingerprints with an ID stamp. The equipment tested was the Sagem Morphosmart MSO350. The research method was in accordance with the manufacturer's instructions. The study was conducted on patients who died from natural diseases at Sultanah Aminah Hospital. A total sample of 153 deaths, including 88 Malays (57.5%), 51 Chinese (33.3%) and 14 Indians (9.2%) between the ages of 16 and 95 were included in the study. We found that the percentage of matching fingerprints was 94.8%. It concludes that the card receipt device is useful for identifying the deceased and their Malaysian identity document.

Subtle printing was developed in the aluminum window frame over two years after installation. The ability to develop fingerprints after such a long time is possible due to the "corrective" element in the metal frame. To understand this unusual case, we have to simulate an event in a laboratory.

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In our construction we used Atmega328p as the microcontroller which is the heart of the system. Since Atmega328p has only 28 pins (14 on each side), we had to use two Atmega328p microcontrollers. Our system design consists of the following components:

1. 1 R307 Sensor Module for Reading Fingerprints
2. 2 ATMEL ATmega328P microcontroller
3. 2 DC Gear Motors / Magnetic Anti-interference Smart Chassis - Yellow + Silver (DC 3 ~ 6V)
4. 1 L298N Stairs Car Driver
5. 1 GA6-B mini GPRS GSM module A6 SMS voice board development 5V
6. Serial to USB Servers with FTDI
7. 1 9V Case Battery Holder Turn on / APPLY Switch
8. 1 AA Battery Holder / Case 4 room
9. 2 16 MHz - Crystal Oscillators
10. 3 9V Extra heavy duty 0% Mercury batteries
11. 2 Ceramic Capacitor 104 (100nF each)

12. 1 Ceramic Capacitor 220 (22pF)
13. 1 The giant
14. 3 loaves of bread
15. They do not jump from male to male
16. Micro Sim
17. LEDs
18. 3 AA batteries

VI. HOW THE SYSTEM WORK

1. In this program, the user will insert fingerprints into the fingerprint scanner connected to the door latch with a small controller. After the scan is printed, the system uses its own information and looks the same. If any similarities are found, the latch opens and thus the door opens. The same thing happens when a user wants to lock the door. Proper fingerprints make the latch closed, locking the door behind the user.

2. When incorrect fingerprints are provided, the system bugs a buzzer indicating "Retry" on the LCD display. When 5 or more consecutive wrong fingerprints are provided, that is, if anyone tries to log in continuously, the system enters safe mode where the alarm goes off indicating an "Emergency Mode" on the LCD screen. The message is delivered to the owner who was notified of the burglary attempt

VII. CONCLUSION

The design and use of the fingerprint lock gadget can be customized and adapted to the circumstances. This method of locking doors is more expensive than having to have lock structures within the normal market. Our fingerprint lock gadget has an extremely accurate level and is similarly short to understand fingerprints that allow seamless integration with customers and provide solid security. In our country, S., Private businesses and authorities are more involved in security. Many businesses want to know about the use of this type of lock method however the available gadget has a very high input value. Due to this low price, many small firms cannot afford such buildings. Remembering setup fees we aim to develop a device that should be affordable for large and small firms. This design can be enhanced with extensive development and additional capabilities and additional millions may be introduced to the gadget. So we don't want to spend that much money on just one lock if this can be used to trick many departments. A device for storing printer without the use of a laptop may be made, but it will require larger components than the ones we used. To maintain proper safety, a complete machine should be placed inside the door panel or other part of the door. The battery gadget can also be made or powered by the sun. One of the main advantages of this system is its flexibility.

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