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DIGITAL LOCK SECURITY MECHANISM

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ABSTRACT:

We have doors and lockers at home. Only authorized individuals are allowed to unlock and open the doors. This mechanism was put in place primarily as a deterrent against locker/door burglaries. This is an electronic/digital lock system that is currently being used. For added security, a digital door lock system with smart security features is being considered. An unauthorized person's vibration sensor attached to the lock will activate and send a notification to the camera, which will then capture an image of the unauthorized person and sound a buzzer, and the image will be immediately sent to the authorized person's email and the authorized person will receive a notification message. Because of the central control module's attachment to the door, there is no need for an additional sturdy mechanism to be built in as a unit. This system integrates itself into the home's LAN/WiFi network.

INTRODUCTION

People in the poor countries always look for security in their homes. Researchers are developing new technology to enable the use of security devices in the home. One of the primary functions of this gadget is to keep intruders out of your house. The primary goal of this study is to lower the number of workers by replacing them with new technologies. Only the owner or authorized person may unlock a digital lock using their fingerprints, and a buzzer sounds if the lock is disturbed by an unauthorized individual. These are all the new and enhanced technologies that have been incorporated into the game.

All approved owners' fingerprints, as well as those of friends and guests, must be stored in a database in order to gain access. When installing a lock, this should be done. People within the house shouldn't open the door if they think a visitor is outside and aren't sure who it is. Everyone has made this error at some point, and

it can lead to serious issues. In order to circumvent this problem, we can make use of remote.

Remote allows us to access remote from any location. To begin with, the digital lock features a fire and smoke alarm system, as well as trespass sensors and appliance operation sensors. We've added a new functionality to the lock system here. There are still some issues with digital locks, but the addition of a buzzer, a vibration sensor, and a camera has improved some of them.

The central monitor gives instructions to the sensor on how and where to relay data. Then the alarm is immediately triggered. The goal of this technology was to conserve energy. To receive the digit command, a GSM module is included. GSM phones are commonly used to receive SMS messages from the digital lock system and then change them. Programming the lock system with

the PIC is also included. In the event that an unauthorized individual tries to access or open the device, an alarm is triggered and the owner is notified through SMS and email. We can take appropriate safety actions based on the information we get via SMS.

LITERATURE REVIEW

Plan and Implementation of GSM-based Advanced Entryway Bolt Security Framework Using PIC Stage discusses the GSM-based advanced system for securing entryways. An engine was used to open/bolt the doors with a secret 5-digit code. Notices were sent to pre-defined flexible numbers, as a technique of identifying unapproved interruption, when the secret word was entered correctly. An apparatus engine was created to control a house's front door. For better control, a new game plan was appended. An international gathering on power, instrumentation, control and processing was held in 2015.

Structure and Use of a Ringer with Entryway for Advanced Calling Secure Framework for Bolt In today's world, the term "Home Security" has become a problem because of the use of unique finger impressions. Individuals and their homes are put to the test in terms of how well they can build up their own personal security. A security device or, in other words, the idea of a regular ringer for phone calls is advocated in this section. The gadget examines a person's unique identifier and compares it to a database of unique identifiers to determine if the person is a known or unidentified visitor. The passageway entryway spontaneously opens when it recognizes a home part. In the event that the individual is a known guest, the device plays a tune, but it does not open the door automatically; instead, the door can be opened from inside the house by anyone. Individuals don't have to move toward the way to open it because it's known as visitor. In addition, if the gadget recognizes the person as an unknown visitor. In 2016, the Global Conference on Development Science, Building and Innovation was organized by M.A. Kader and colleagues.

A Wi-Fi Security Framework for Keen Bolts Even if a landlord has many sets of keys for every apartment, car, and door he owns, it might be difficult to keep track of who has access to who in large apartment complexes or brotherhoods. If you misplace your keys, you'll have problems with safety. Present-day advancements will be showcased in the inventive bolt framework model shown here. The uniqueness of this approach is based on its ability to take use of emerging technologies in a clever and other effective method. Any bolt framework can use this advanced entrance bolt framework. Rather than relying on the traditional key framework, a computerized entrance bolt structure incorporates advanced data, such as a mystery code. Entryway Focal Control Modules are necessary to keep an additional powerful component for the full entryway. This, in reality, has taken up residence in the immediate neighborhood of the house. Additional security and access to the system are included in this. Advances in Computational Apparatus for Designing Applications by Sami El Murr et al. (2016)

Home Computerization's Brilliant Advanced Entryway Bolt One of the best house mechanic-friendly computerized entryway bolt frameworks. We propose a system in which a computerized entryway bolt is implanted with a module and acts as the primary controller for the overall home automation system. The sensor and entryway base station system. In this case, an entryway bolt framework is given that includes RFID to validate the client, contact LCD, an engine to open and close the entryway, a sensor to identify the situation within the house, and a control module to regulate various modules.. Using the controller and the computerized entryway bolt, status may be observed and regulated. A home mechanization system in an advanced entryway gives customers the ability to monitor and regulate the condition of their home before entering or departing it, since the entryway bolt is one of the first and last things they encounter when entering or leaving the house independently. It allows customers to

control the temperature in their homes via the Internet via an open system.

PraneshSthapit (2009) TENCON 2009-2009 IEEE District 10 Meeting.

MERITS AND DEMERITS & SUGGESTIONS

MERITS

Key Less:

No need to carry keys and they will be less likely to be lost or stolen.

Control:

You can control and restrict who goes can access the lock.

Reduces Theft:

Since the lock is digitalized with camera, sensor and buzzer possibilities of theft will be reduced.

Security:

These locks gives more security to owners, because the camera has been attached with lock it will automatically sends the picture of unauthorized person to authorized person mail and also sends a notification message.

DEMERITS

Failure of Power:

Generally digital locks are powered up by electricity, if your house/ apartments has a power failure then the door will not work especially during rainy season.

Forgetful:

Sometimes there is a chance that authorized person may have chance to forget the PIN.

Hacking:

Since the lock is digitalized and deals with the technology there is a chance for hackers to hack our PIN/Key.

Jamming:

A fault model door lock may lead to jamming of the security system.

SUGGESTIONS

Spare keys, such as those for keyless cars, can be provided in the event of a power breakdown.

When a user loses their pin, the pin can be retrieved by linking the pin to their cell phone.

You can use second-level authentication in the event of a suspected hacker attack.

- To avoid jamming, regular maintenance should be performed.

CONCLUSION

It was the goal of this study to shed light on the current security system in door locks and provide new ideas. The employment of a buzzer, sensor, and camera for enhanced security was described in this article. When a person's face is completely obscured by a full-face mask or helmet, it is evident that the unauthorized person's identity can be viewed but cannot be traced. It will be possible to do so in the near future.

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