

SECRET CODE BASED LOCKER STRUCTURE

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ABSTRACT: *In this case, the degree of security is weak. Thus, in the world and around the world there are many robberies and thefts. Therefore, people are afraid of keeping any of their values in their homes. From now on, many people prefer to store it in banks. However, in this insecure world, even banks are not safe enough to meet the needs of people. The average person feels that their value is protected if there is safety in them. Thus, this project can provide effective safety at the lowest cost. We can create a structure that provides benefits 24/7. The password-based lock system allows access to restricted areas only for authorized individuals. This system is fully controlled by Arduino. The password can be entered using the keyboard. If the password matches the password saved in Arduino, the door will open. This programmed base for password-based nails will provide the customer with a safer and less effortless effort method of unlocking. Automation locking system is a bold step in the future, as mechanical door locks will be replaced by electronic locks.*

Keywords: Arduino, Servo Motor, Buzzer, Power Supply.

I. INTRODUCTION

In this project we provide adequate security to meet the user's needs. The user will be prompted to unlock the password for the door. Upon successful password access, the door will be opened for a certain period of time and it will save or recover it. On the other hand, if the user enters an invalid password, the corresponding equivalent message will appear [1]. This project can be used to provide adequate security for "Arduino-based password protected lockout system" such as bank safes, security gates, locked in the computer BIOS. This project uses an Arduino set consisting of ATMEGA 328. The famous microcontroller consists of 14 digital pins, 6 common analog target pins, 1 KB EEPROM capacity and 2 KB RAM. The password lock system is designed with ARDUINO UNO; once the appropriate code or password is entered, the door opens and the person in question is allowed to enter the safety zone. Arduino Password Lock System is a simple project that uses UNO, and safe passwords will act as a system to open the door. Old locking systems use mechanical locking and can be replaced with new advanced locking techniques. These methods are a mixture of highly mechanical and electronic devices. One of the hallmarks of these smart lock systems is their simplicity and high efficiency.

The automatic locking system consists of an electronic control group that controls the output load via a password. An example of this output load may be a motor, lamp, or other mechanical / electrical charge. Here, we have developed an electronic code lock system using Arduino UNO, which controls load activation. The built-in system is simple and takes input from the keyboard and gives the output accordingly. This system demonstrates a password-based door lock system with Arduino UNO; where, by entering the correct code or password, the door opens and the person in question is allowed to enter the security zone. If someone else arrives, he will be asked to re-enter the password. If the password is incorrect, the door will be locked, preventing access to the person [2][3]. The main idea

of this project is to open the door using the password entered through the keyboard. In addition to activating Pass Buzzer when the password code is entered incorrectly repeatedly. User can change this password at any time. The main component of the circuit is Arduino UNO, which is mainly used to send text messages to the home owner about security breaches. 4 * 4 the keyboard is used to enter the password. The password you entered is compared to a known password. If the password is correct, the system opens the door via a servo motor and displays the door status on the LCD screen. If the password is incorrect, the door will close and display "WRONG PASSWORD" on the LCD.

II. METHODOLOGY

I would suggest a system called cabinet structure based on secret code using ARDUINO. The door only opens when the password is typed in and closes by clicking on the Reset button that secures important things. So the best way to protect your home is to use traditional locks. Today, people are always relying on electronic devices to make their lives more comfortable. The goal of this project is to replace the lockable key in a reliable locker system. The best solution before leaving is for those who always forget to bring home or office keys before departure [4]. With the continued technological advancement, there is no reason to consider more security. A home security system is a great way to provide additional protection for your home or business. Almost every neighborhood is home to thieves, and it doesn't matter whether you live in the city or the country. You need to follow Gong Horen's home security approach to not only protect you and your family, but also your precious things. Embedded systems are found in consumer, culinary, industrial, automotive, medical, commercial and military applications. Communication systems use many embedded systems, from network switches to end-users [5]. Computer networks use dedicated routers and network bridges to route data. Consumer electronics include MP3 players, cell phones, video game consoles, digital cameras, GPS receivers and printers. Home appliances, such as microwave ovens, dishwashers and dishwashers, are compact systems that provide flexibility and features.

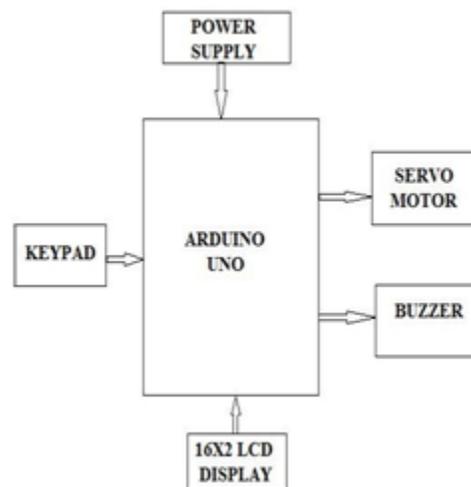


Fig 1: Block Diagram of Locker

Advanced HVAC systems use network thermostats to more accurate and effectively control the temperatures that vary by day and season. Home automation uses wired and wireless networks to control the lights, climate, security, audio and sight, etc. of the embedded devices. Transportation systems are increasing moving from in-car to in-car systems [6][7]. New aircraft have advanced aircraft, such as inertial guidance systems and GPS receivers, which also have significant safety requirements. Electric or electrical machines use electrical or electronic controllers. Automobiles and electric vehicles, as well as hybrid vehicles, are increasing using integrated systems to reduce efficiency and reduce polling.

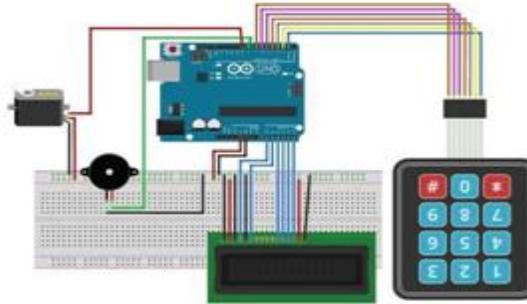


Fig 2: Circuit Diagram

In this project, we will create a non-lockable door opening system that uses a keypad to access and open or close the door. First, we will connect to the 3 x 4 keyboard. To connect the keyboard with the Arduino, we use analog and digital pins. We used analog pins because we needed more than 14 digital pins for this project. If you are using an Arduino Mega, you do not need to use an analog pin. Connect the first six pins of the keyboard to connect the analog and other Arduino A0 ~ A5 pins to digital pins 3 and 2 to connect the push-pull solenoid to the Arduino, because we will need to use the external power to operate at 6 ~ 12V and much more than what the Arduino can provide. . To do this, we will use the TIP120 NPN transistor as a DC / DC switch that can provide 6 ~ 12V. Arduino UNO keyboard connection pin-8 pin-1, pin-7 pin-2, pin-6 pin-3, pin-9 pin-4, pin-5 pin-5, pin-4 to pin-6, pin-3 pin-7, pin-2 pin-8 and 2 are used here by a servo motor (100Ω) Following Arduino connections Orange cable is connected to pin 11., red wire is connected to 5V, and black or brown wire is connected. The ground connects to the Arduino and Arduino pins ground with a 12.13 resistor and hood and a 5 volt supply.

III. OUTPUT OF SECRET CODE BASED LOCKER STRUCTURE

This hardware configuration explains how Arduino Password Protected Lock System works. The password is initially set to the default. When operating the device, the servo angle of the door lock will be reset. The user is now required to enter the password. The user enters the password using the keyboard that Arduino reads. The entered password is verified with the specified password. When the password matches, the engine will open and the door will open for 30 years. The sound of the door opens. The LED states that the user must "enter a password". If the password is correct, the door will open, the valve will light up and sound. The engine opens the door that opens the door.

RESULT 1

When we enter password correctly through keypad. Servomotor rotate 180 degree

And the door opens. When we press “#” the door closes.

RESULT 2

When we enter incorrect pin through keypad. The door remains closed and buzzer beeps.



Fig 3: Door Opened



Fig 4: Door Remains Closed

IV. CONCLUSION AND FUTURESCOPE

A password-based security system is used in places where we need more security. It can also be used to protect cabinets and other doors. The system consists of a numeric keypad, and the keyboards are connected to the microcontroller by constantly monitoring the keypad and someone enters the password and checks the password with the password stored on the memory card, and if so, turns on the corresponding microcontroller. . The system will allow those who know the password and who does not know the password. We may send this data to a remote location using your mobile phone or the Internet. You can add a fingerprint sensor to allow authorized people to use fingerprints.

V: REFFERENCES

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