



Patuakhali Science and Technology University

Project Name

Password Security Lock System Using Arduino &
Keypad

Course Code: EEE-212

Course Title: Electrical Technology Sessional

Submitted To

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Abstract

Security is a main concern in our everyday life. Each and every individual needs to feel secure. An access control for doors forms an essential part in our security pattern. Doors locked using conventional locks are not as safe as they used to be, anyone can break in by breaking these locks. We n to make a framework that will give 24/7 benefit. Password based door lock system allows only approved persons to access restricted areas. This system is fully controlled by Arduino. The password can be entered via a keypad. If the password is matched with the stored password in Arduino the door gets open. This programmed password-based bolt framework will give client more secure and minimal effort method for locking-opening framework. The security door lock automation system promises a bold step to the future where mechanical door locks will be substituted by electronic door locks.

Introduction

Password based door lock system provides security for homes through a security password which is confidential for the user alone. The user will need to enter a password to unlock the door. On successful password entry, the door gets open for a specific amount of time letting the individual to enter into the house. On the other hand, if the user enters a wrong password the door does not get opened.

Components Required:

Before building our password door locking project, first, we need to collect the required components and then go ahead and follow the step-by-step building process.

List of components:

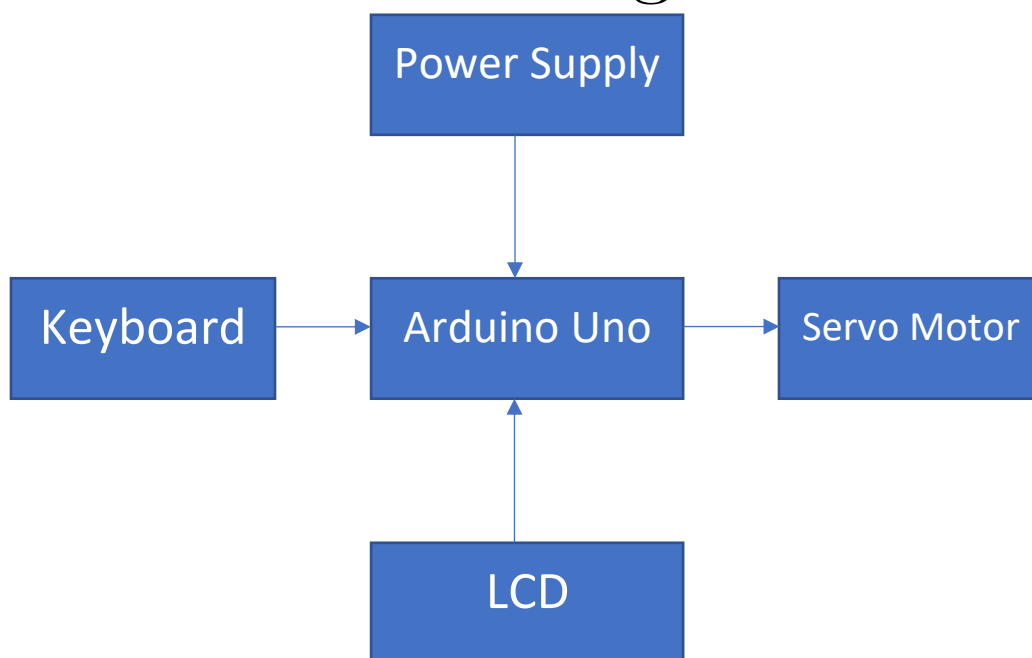
S.N.	Components Name	Description	Quantity
1	Arduino Board	Arduino UNO R3 Development Board	1
2	Keypad	4X4 Keypad	1
3	LCD Display	JHD162A 16x2 LCD Display	1
4	Potentiometer	10K	1
5	Servo Motor	SG90 Servo Motor	1
6	Buzzer	5V Active Buzzer	1
7	Connecting Wires	Jumper Wires	>=20
8	Breadboard	-	1

Working

The user can enter a password which is suitable to their needs. The entered password during installation will be saved as SET PASSWORD. During initial stage the system will get locked. Again, when the user enters a password, the entered password is checked with the predefined set password. If the password matches then the servo motor deflects and the door gets unlocked. Whenever the individual wants to enter into

their houses, he or she has to enter the correct password. If the password is correct or not the Arduino will check in its database. If the password entered matches with the set password, the LCD will display unlocked message on its screen and the door gets unlocked allowing the individual to enter.

Block Diagram



Conclusion

The main purpose is to design a security system which is beneficial to each and every individual. We designed a security system using Arduino. The system we designed is a success and provides security effectively. The system is cheap and affordable to everyone.