# MINI PROJECT REPORT

# ON

## ML BASED DOOR LOCK SECURITY SYSYEM


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## PROBLEM STATEMENT -:

ML based door lock security system

## MOTIVATION FOR DOING THE PROJECT -:

The title of my project is my motivation. I have learned about many new devices and their working which I wouldn't have known. The excitement to run and explore these devices was my motivation. Apart from the excitement the real issue is security on which I have worked on.

# INTRODUCTION-:

Today the world is entering to the new phase of automation. Nearly all the devices are automated till date. Today we can control our devices with a voice, click, biometrics, whether it is launching of missile to switching ON/OFF of lights in household.

My project is all about the door lock security system. In this automated world why we should still rely on manual door lock. Anyone can make a duplicate key in cut-price.

This project enables the security with keypad lock, Bluetooth controlled security.

## TOOLS AND SOFTWARE USED-:

- Arduino UNO board
- XESP cable for Arduino UNO
- Big buzzer
- 4 by 4 keypad Matrix
- Pir Sensor
- Male to Male jumper wires
- Male to female jumper wires
- Female to Female jumper wires

Arduino uno

big buzzer

USB cable

Keypad matrix

Bluetooth module

PIR-sensor

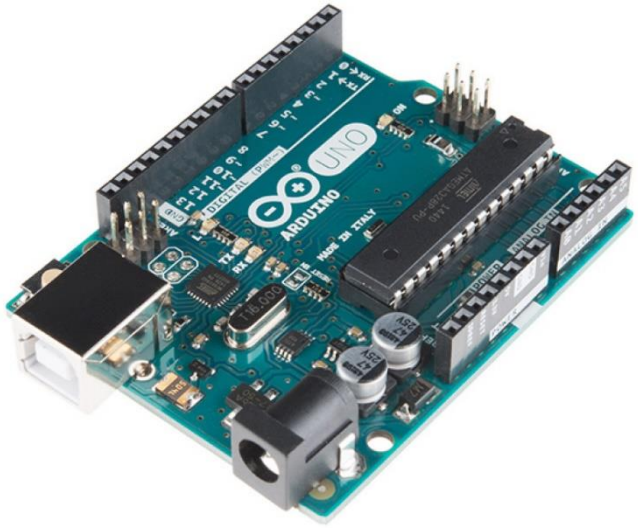
- For coding: Arduino IDE is used. Code written in Arduino sketch using C language.
- Code written is uploaded to Arduino board through Arduino cable.

# METHODOLOGY -:

The project experience was great. It helped me to learn new things and gather information about new technologies and made me realize the use of programming in real life.

Now discussing about my journey and how this learning process started:

- The main component of my project is an Arduino UNO board. It has embedded components like
  a) 8-bit microcontroller having flash memory of 32 kb, RAM of 2 kb, EEPROM of 1 kb



These microcontrollers are developed by ATMEL.

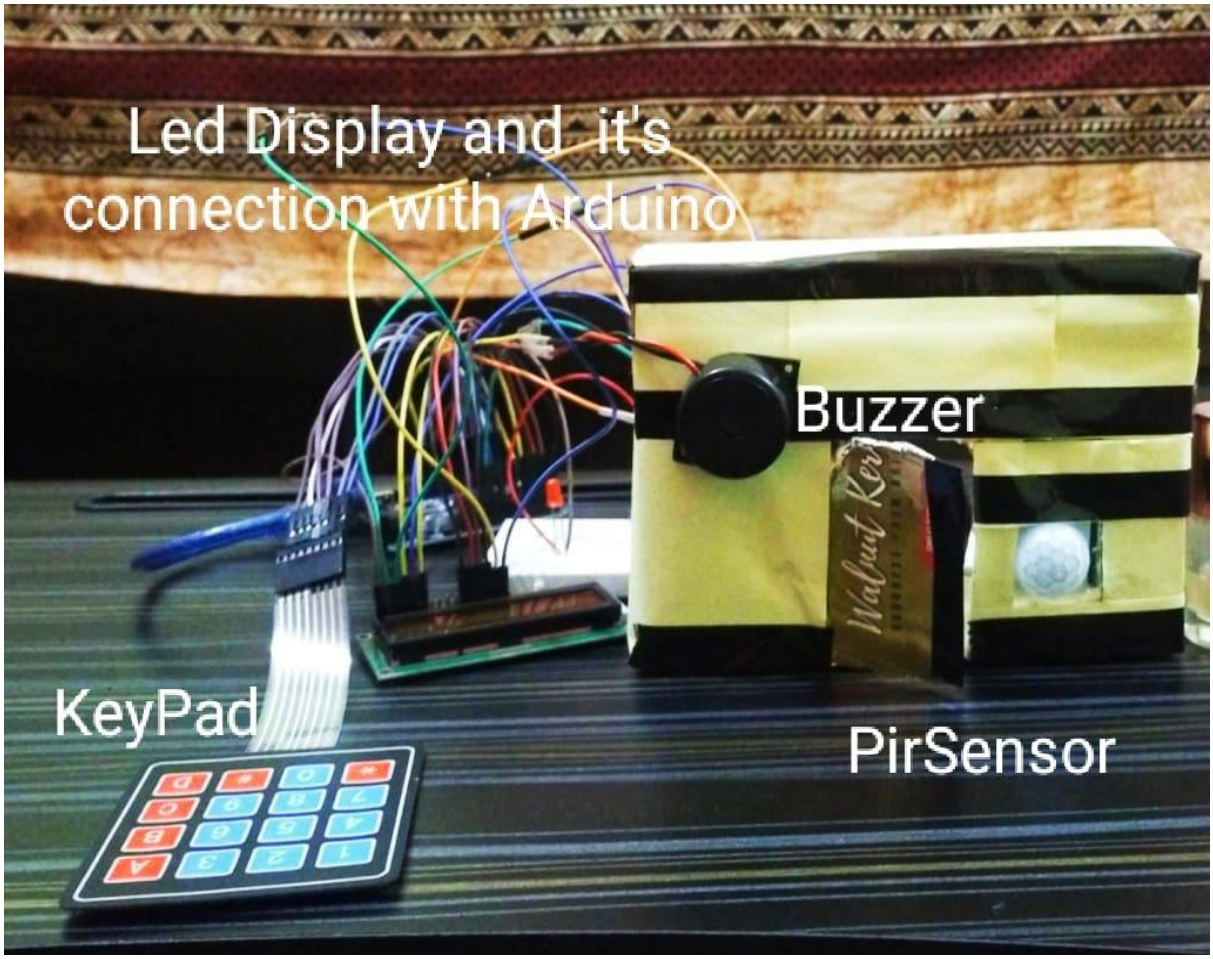
b) XESP cable in order to load our program to Arduino.
c) Further there are analog and digital pins.

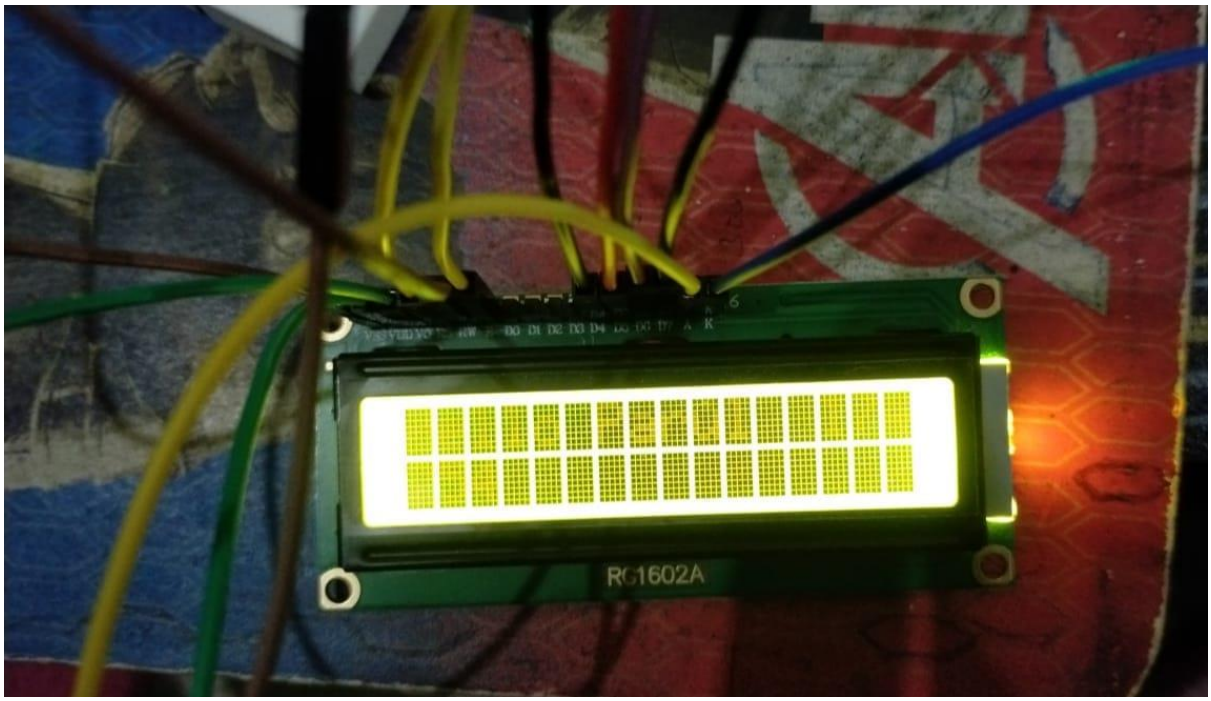
- Connections are made with other devices like buzzer, keypad, and pir sensor with the help of jumper wires.
- Put the bandwidth in 9600 of Arduino so that we can use built-in serial monitor.
- Code is to be dialed by the user through a keypad for security.

Now the system is ready...

## CONCLUSION-:

The completion of project went quite well. I learned many things about embedded devices and their working, along with this I was able to learn practical use of IOT. Overall working was great as I came up with great piece of knowledge & understanding of the topic.

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