

OTP based smart locking system based on IOT

<https://youtu.be/hCkoqktDPY>

Security is a prime concern in our day-today life. Everyone wants to be as much secure as possible. An access control for doors forms a vital link in a security chain.

Using this system, we can unlock/lock the door by using pre-decided password (OTP) and Bluetooth mobile application to increase the security level to prevent an unauthorized unlocking. This OTP based locking system will give user more secure yet cost-efficient way of locking-unlocking system.

The system is fully controlled by Arduino UNO microcontroller which is interfaced with peripherals like switch, Bluetooth, Buzzer and servo Motor. The system has a switch by which the password can be generate and send to the user mobile through Bluetooth. When the user enters the same password through Bluetooth mobile application, Arduino will check that and unlock the door through servo motor. If the system detects wrong password, it will activate the buzzer for alerts. Bluetooth module is used to send/receive the password to unlock/lock the door accordingly.

The main objectives of the project are:

1. Using Bluetooth mobile application.
2. OTP based door accessing system.
3. Audible alerts using buzzer.
4. To unlock the door by controlling through Android phone.
5. To achieve this task using arduino UNO Microcontroller.

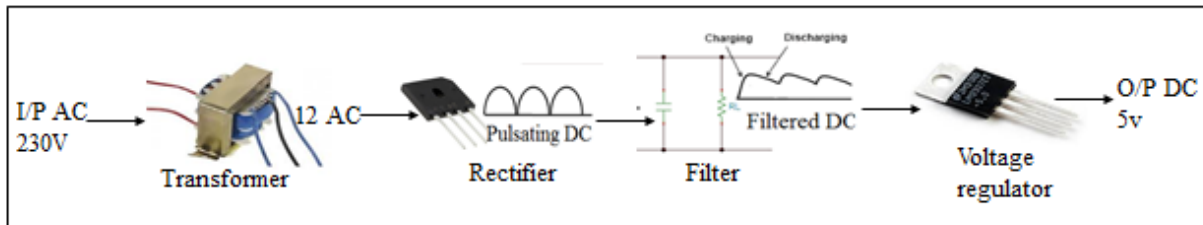
The main building blocks of the project are:

- Power supply.
- ARDUINO UNO Microcontroller.
- Bluetooth.
- Switch.
- Servo motor.
- Buzzer.

Software's used:

- Arduino IDE studio compiling and dumping code into Microcontroller.
- Embedded C programming.
- Express SCH for Circuit design.

Regulated Power Supply:



Block Diagram:

BLOCK DIAGRAM

