

Team Name: Let Me In !

Project Name: Room access technology.

Team Members:

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Project Details:

Many a times, we set off from our homes having forgotten to lock the door in a hurry. Also, sometimes a relative/friend shows up at your home all of a sudden while you are away and thus they have to wait since they don't have the key. Besides, thefts are on the rise and they are mostly due to poor room locking technology.

For all these reasons a smart room access technology becomes imperative. As an attempt to address this issue, our project is to design a smart locking and security system.

The aim is to build a system which is cheap and most importantly reliable, which can potentially make use of and integrate technologies like fingerprint scanning and voice recognition. Also develop a mobile app for additional security.

The owners will be able to access the room through fingerprint scanning. For others to be able to enter when the owners are not at home, there will be a two step authentication. Firstly through the mobile app, the owner will have to grant access after which the person asking for access will have to authenticate entry through voice recognition. Thus, entry will be secure and convenient for the owner. There won't be any need of carrying a key all the time.

Project Timeline:

WEEK 1: Basic ideation and learning the skill sets required like android studio, arduino programming. Deciding and purchasing the parts required for the project.

WEEK 2+3: One team will start developing the app, while the other team will start working on the arduino module.

WEEK 4+5: Hands on making of project and integrating the mobile app with the arduino (building the user interface).

WEEK 6: Trial of the project. Bug fixing. Covering up for any delays in the project.

WEEK 7: Finishing touches and design improvement.

## MAIN COMPONENTS REQUIRED:

- 1) Arduino
- 2) Arduino wifi shield
- 3) Bluetooth receiver
- 4) LCD display
- 5) Relays
- 6) PIR sensor
- 7) Fingerprint module
- 8) Voice recognition module

## KNOWLEDGE TO BE GAINED (from Mentors help)

- 1) Android App Development
- 2) Arduino Coding and Wifi Shield usage
- 3) Fingerprint Scanning Technology
- 4) Voice Recognition Technology

Estimated cost :- Rs. 7000

Relays + Relay Board = Rs. 200

Arduino =Rs.1500

LCD Display = Rs. 200

Fingerprint Scanner parts = Rs. 2000

Voice Recognition Module = Rs. 3000

PIR Sensor = Rs 150