



Institute of Engineering & Technology

Department of Computer Engineering & Applications

SYNOPSIS

SHREWD GUARD

Team

Shantanu Singh (171500309)

Atul Kumar Yadav (171500067)

Ayush Gupta (171500071)

Members Supervised by

Amir Khan

Technical Trainer

About the Project:

Today we have too many safety issues like in our home, offices, shops, factory. Sometimes we are not in the condition to call or message someone and tell them what is happening. So, to deal with this problem, we are going to develop a safety app with combined which will help the user without performing any sort of much action. It is the combination of different types of sensors. For example, a door or window sensor is installed at the main entry points which a thief is likely to use to get inside- balcony, main door or a large glass window. Motion sensor is typically used in common area like living room or drawing room, so if a thief manages to get inside somehow, he can still be detected if he moves around. Smoke sensors are used to provide the protection from fire accidents. There are many other types of sensors.

These sensors are quite small, like a paperweight and they are wirelessly connected with a main unit called 'control hub' (or control panel). Control hub is the most important component of the alarm system as this is where configuration settings are done! Usually, the control hub has an inbuilt siren for emergency but sometimes additional siren is also installed for extra protection. A user can operate his alarm system from mobile app or a remote key which works exactly like a car key - So when you go out of the house, you lock the door and 'Activate' the system and you go inside the house and open the door, you 'Deactivate' the system!

A good quality alarm system from Visonic, Pyronix, or Eldes can cost anywhere in between 40000 – 60000 which is significantly more than CCTV camera or video door phone! However, Indian market is flooded with much cheaper alternatives which are quite poor in quality and full of false alarms!

Motivation:

The main reason behind selecting this topic is the security issue faced by a home, shop, factory, office in a common family of India and to increase the safety. As we have seen the crime increasing day by day and somehow, they are not safe anymore. Sometimes during physical unavailability of the person suddenly. Because of these types problems we are going to develop this application.

Testing technologies:

Testing can be done manually by installing it in different devices and use each and every feature of the application.

Scope:

We can convert this into a major project by adding more features to it and will add different gestures to perform the task.

Future Scope:

The future scope of the app is dependent on the users. If they want more security, then it can be modified as per their demand.

Requirements:

a) Hardware:

- **node MCU {microcontroller board}**
- **Raspberry Pi 3**
- **Wi-Fi Router**
- **Sensors (LDR)**
- **Cables and wires**
- **Mobile**
- **Connectors**
- **Bread board**

b) Software:

- **Arduino Software (IDE)**
- **Python (interpreter)**
- **Android Studio and SDK tools**
- **PHP**

c)Technology

- **IOT**
- **Embedded System**
- **Mobile App**

