# CMR Institute of Technology

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## Institute Innovation cell


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# Idea Title: DOOR SECURITY ALARM

Problem Statement:

**Securing our home and family is our primary responsibility. All human beings have a place of their own in which they keep their property secure and safe.**

## OVERVIEW

**The term door security or door security gate may refer to any of a range of measures used to strengthen doors against door breaching, Ram-raiding and lock picking, and prevent crimes such as burglary and home invasions.**

## GOALS/Objectives

1. **Home security and family safety are the primary purposes of a home security system.**

## SPECIFICATIONS

**A security alarm is a system designed to detect intrusion, such as unauthorized entry ,into a building or other areas such as a home or school or colleges etc.. The main specification is that we can get the notifications to your smartphone through blynk app .we can get a beep alarm sound too, if we turn off the alarm we get only notifications.**

## MILESTONES

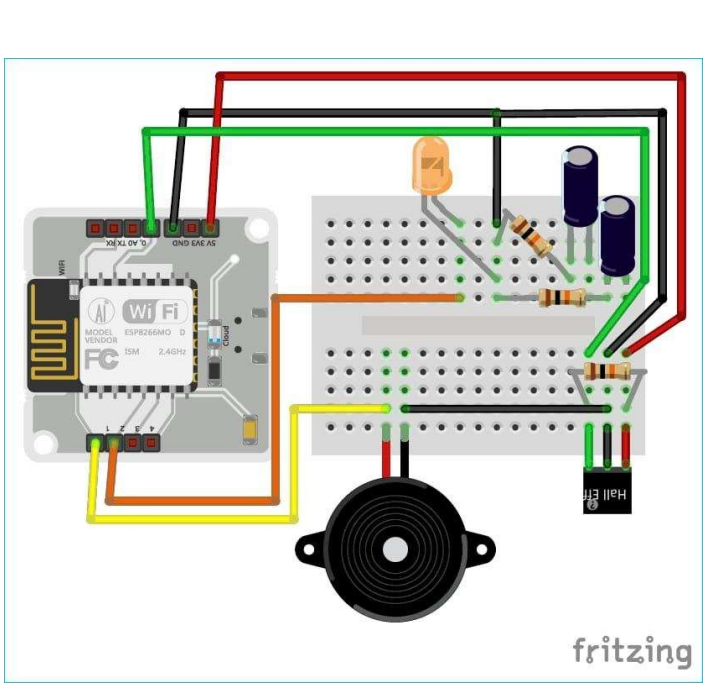
1. Ideation/Data collection

**Today security is one of the prime aspect in our society .Securing our home and family is important . This is simple but effective security system. This model we can use for any lockers or doors and windows etc.**

**Fig 1: problem scenario**

## 2. Model Building

**WeMo's D1 mini module constantly checks status of magnetic door sensors. If there is a change in door sensor, the alarm gets activated and Buzzer beeps . IOT based door security alarm will also notify you through your smart phone using blynk app.**



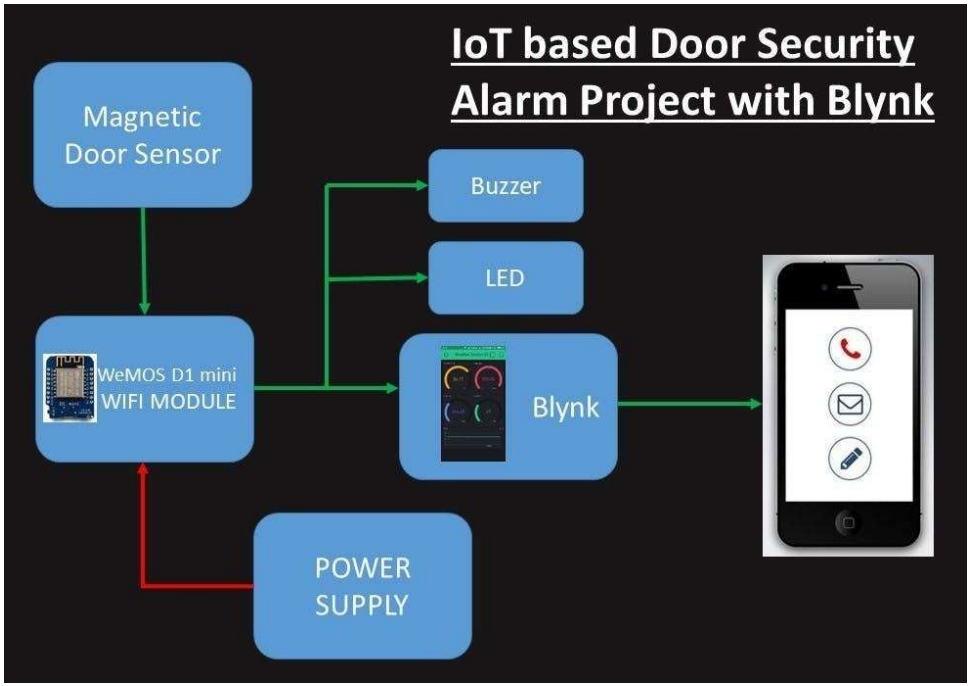




**Fig 2 Model or blueprint:** _____

## 3. Components/Tools Understanding and usage

**WeMo's D1 mini module :**

**This WeMo's d1 mini is like a "little Arduino with Wi-Fi for a great price. It's based around the ESP8266,**

**Has one analogue port and 11 digital ports.**

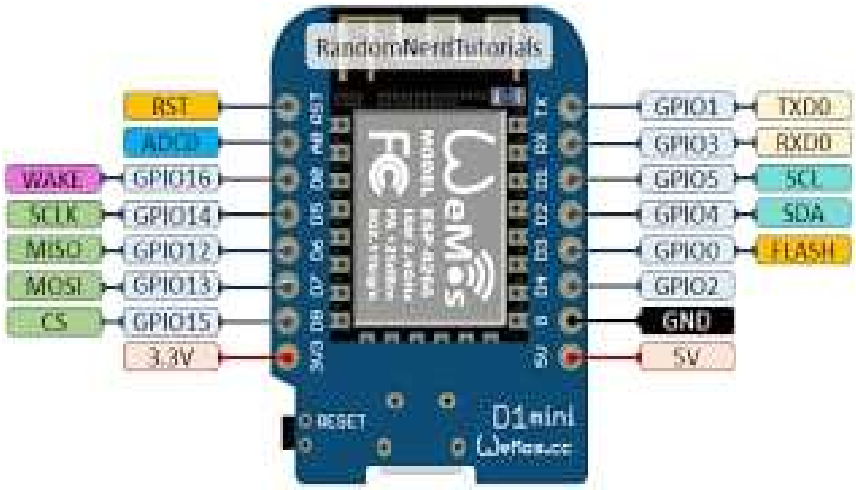



**Fig 3.1: Component 1**

## Magnetic door sensors:

**Door sensors have one read switch and one magnet creating a closed circuit. If someone opens an armed door, the magnet is pulled away from the switch which breaks the circuit and triggers an event.**

**Fig 3.2 : Component 2**

## Transistor :

**Once the reed switch is open, the resistor R1 pulls the base of transistor to low state which turn ON the transistor . this will allow the current to flow from emitter to collector via the load(buzzer).**


**Fig 3.3: Component 3**

## 4. 5V Buzzer

**A buzzer with 5 volts [ Buzzer 5v-10mm-HYDZ-PCB Mountable] sound level 85db .**

**The small buzzer 5v and PCB Mountable. ITS small size makes it prefer for all types of DIY and breadboard projects as well as actual electronics production .**

**This buzzer module emit really loud sound when 5v is applied to it .**

**FIG 5V buzzer**

## 5. Prototyping

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**Fig 4 Prototype: _____**

## 6. Testing

Fig 5 Testing/Users feedback

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