**ITWS-2 Project Ideas**

**Idea 1: Complete Home security System**

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***Abstract Idea :***

*This project consists of 3 separate but inter-related parts.*

*1.Motion sensor to detect movements during night time which will be detected using IR sensors.*

*2. A sonar + IR based mechanism to detect the opening and closing of main door. The system will ask user for a password every time the door is opened. An alarm will ring if password is not entered within specified interval after opening the door. The module will also contain a camera which will take photo of anyone entering the house every time.*

*3. A sound recording mechanism which will continuously record sound and alert the user if a sound above a specific amplitude is heard in his/her absence.*

*4. Internet connection mechanism to alert the owner of any intruders in his absence.*

***Hardware components required***

1. *4 Arduino Boards*
2. *IR transmitter and receiver*
3. *Camera Module*
4. *Ultrasonic sensors to detect the opening and closing of doors*
5. *Number keypad module for entering password*
6. *Sound recording mechanism*
7. *Wifi/Bluetooth Module to interconnect all arduinos.*

***Hardware components required apart from those in kit***

1. *Number Keypad for entering password (200 Rupees)*
2. *Camera Module ( 600 rupees)*