

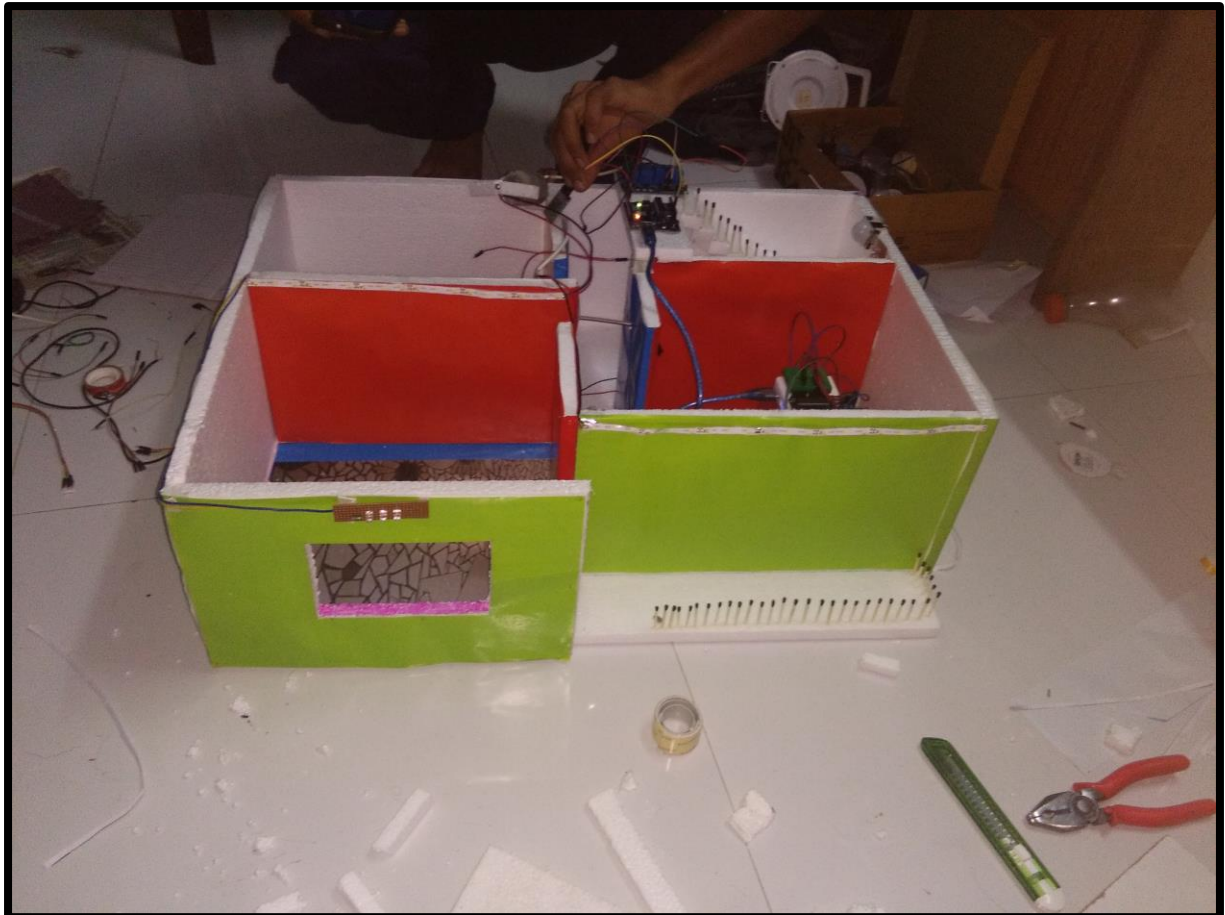


# HOME AUTOMATION

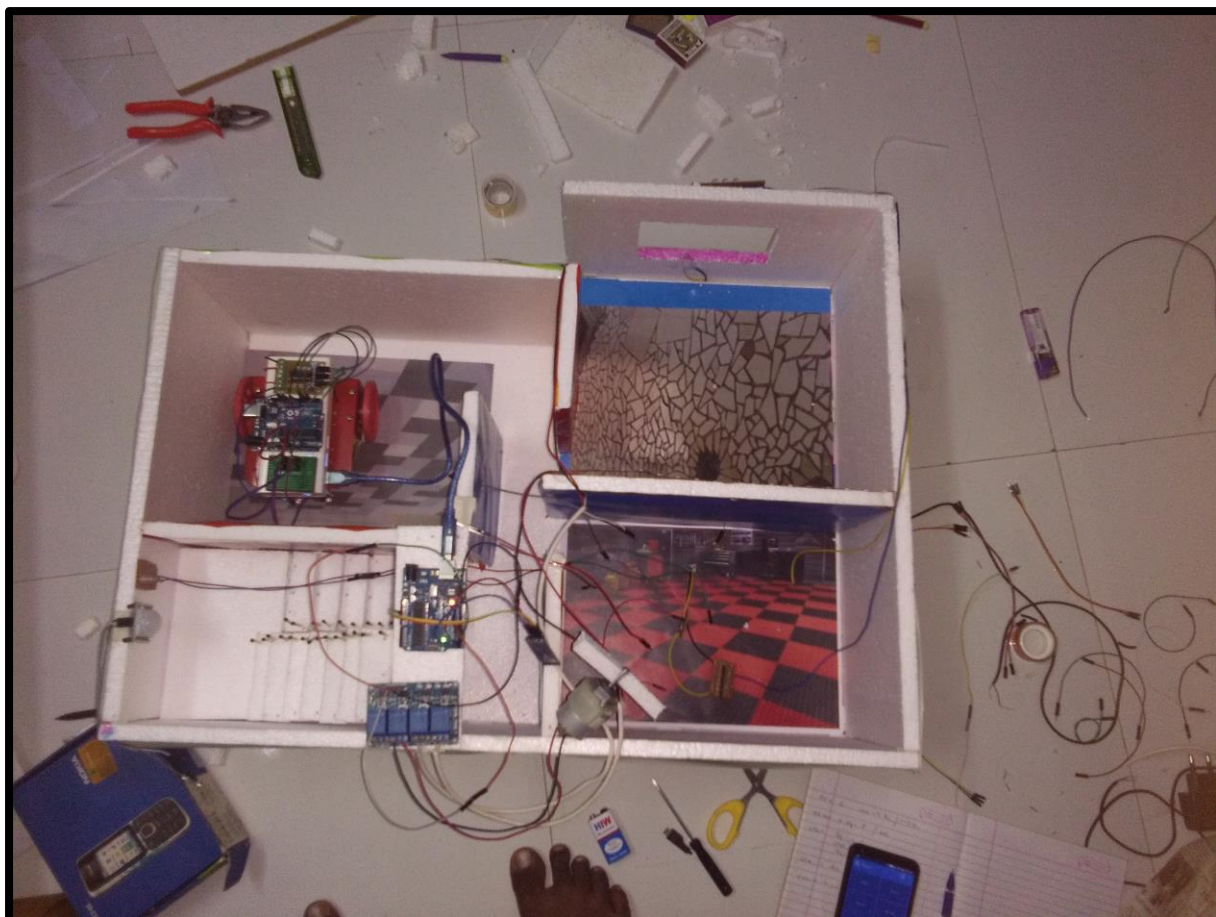


Pratik HRohane

Feb 2018





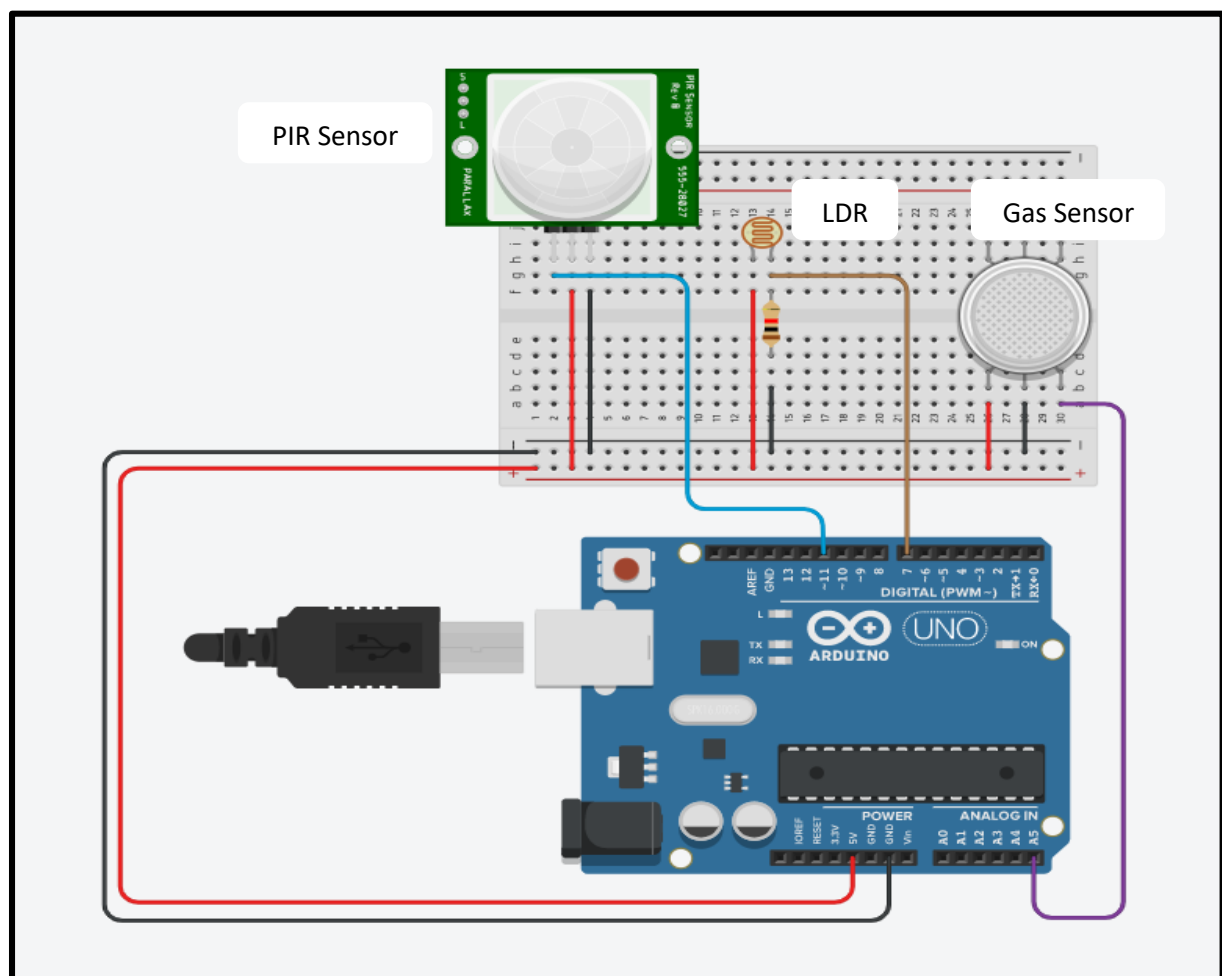


Home Automation is the automation techniques through which we can automate process of home appliances and other home functions, and that can be controlled with our phone, even remotely. In this project I used Adriano microcontroller, Bluetooth module, sensor and Relay to control home devices.

## Table of Content

1. Circuit Diagram
2. Components Required
3. Flow Chart
4. Working
5. Code

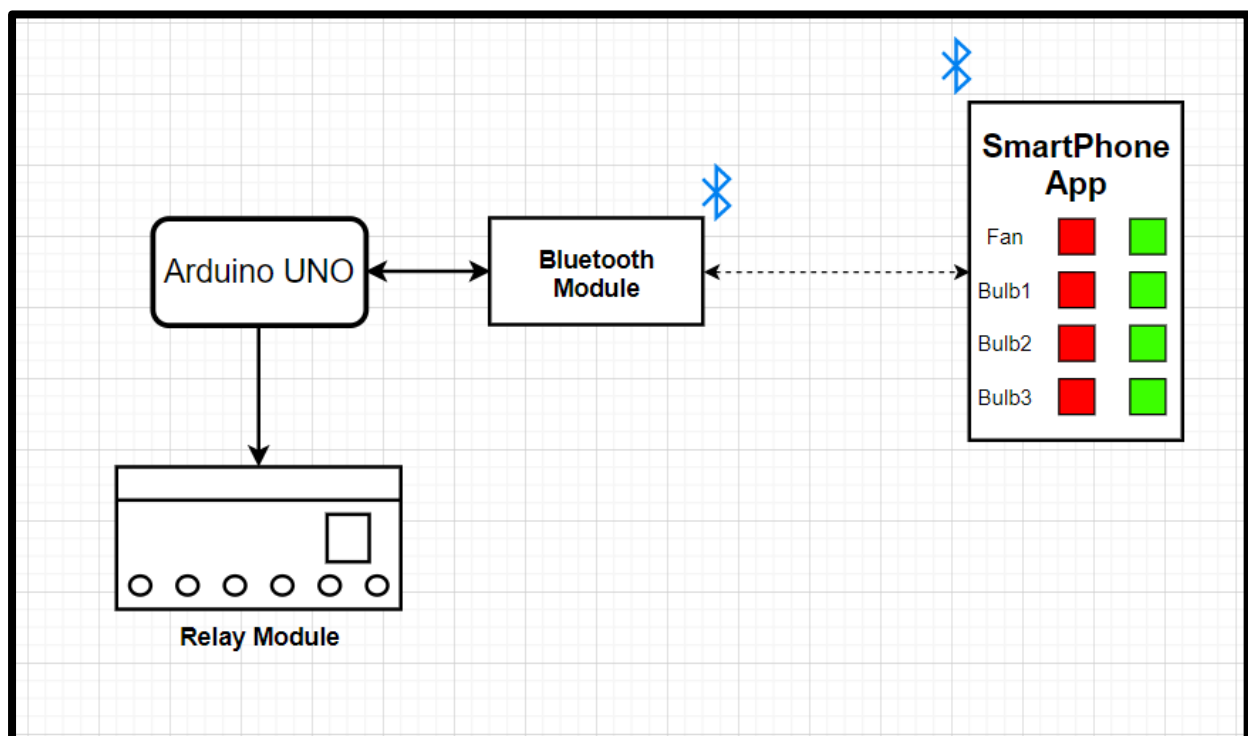
## Circuit Diagram



## Component Required

- Arduino UNO
- Bluetooth Module
- 4 Channel Relay
- LDR
- Butane Sensor
- PIR sensor

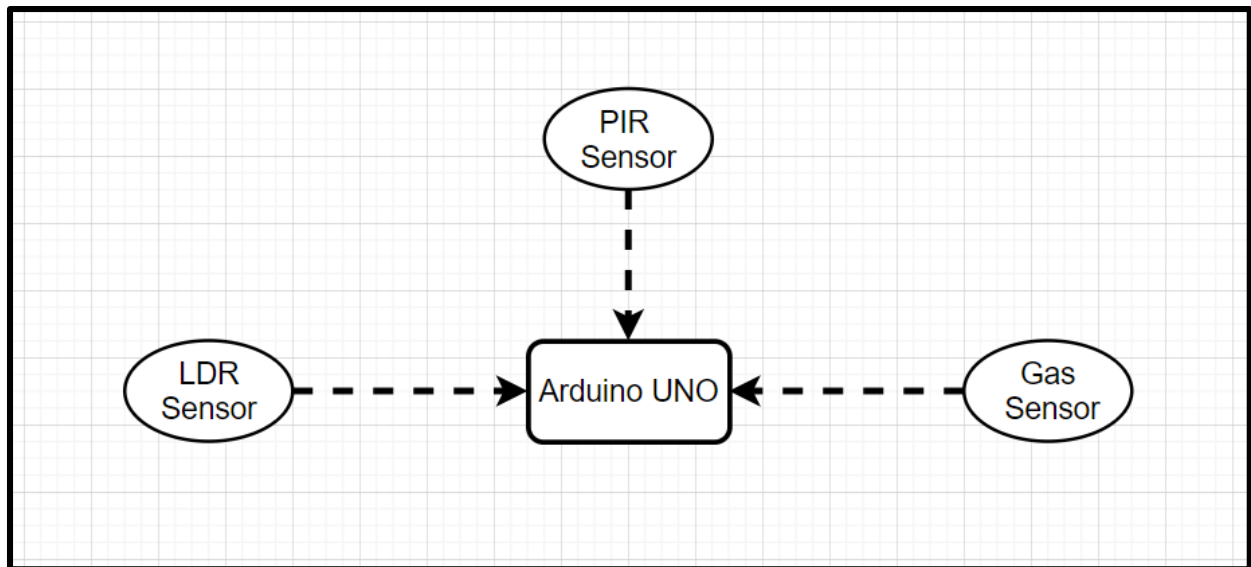
## Block Diagram



## Controlling Home Appliances through Smartphone:

Bluetooth Module help us to make connection between Arduino and Smartphone. Here I used Bluetooth Controller App in Smartphone. Arduino Board Connect with Bluetooth module through which we can communicate with Smartphone App via Bluetooth Signals.

Home Appliances which we have to control are connected with the Relay Module and that Relay module control by the Arduino over user input from the smartphone.



### **PIR Sensor: Passive Infra-Red Sensor**

I used this sensor at stare-case to control the stare-case bulb. When someone want to use stare-case at that time only stare-case must turn on. When this sensor find moment near to it, Sensor send signal to arduino and arduino turn ON the bulb through the relay module.

### **LDR Sensor: Light Dependant Resister**

I used this sensor to control the Post-Lamp near to gate. This make the lamps automatics, mean it will turn on at night time and it will turn off at day time. LDR sensor send the sunlight intensity value depend on the Arduino will decide the action on lamp.

### **Gas Sensor: MQ6 (Butane Sensor)**

I used this sensor of the kitchen safety purpose. This sensor will find the leakage in the LPG gas pipe. If there is any gas find, it will make alert through Arduino

## **Further Implementations**

There are various techniques to control home appliances such as IOT based home automation over the cloud, home automation under Wi-Fi through android apps from any smartphone.

---