

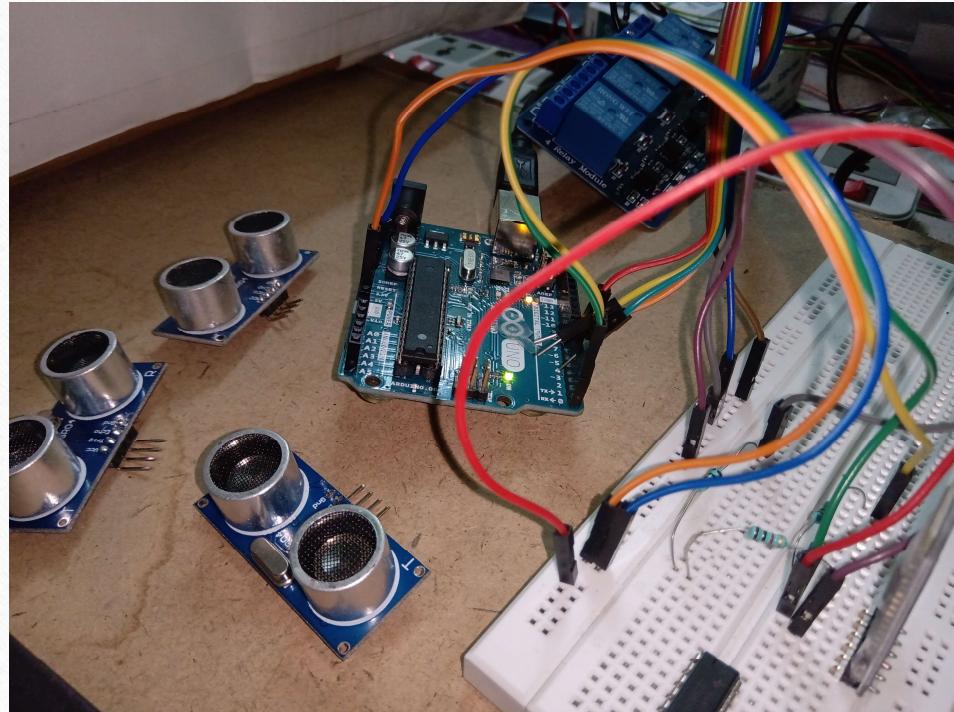
## ***VOICE CONTROLLED AUTOMATIC HOME SYSTEM***

**Project's goal:** After the long tiresome day, people become so tired that they even don't have the energy to go to the switch board and turn on or off those electrical devices. Also there are some bookworms who continue to study for long and fall asleep without turning off the light or fan. This causes them to pay a huge amount of electric bill. So, our aim in this project is to try to omit those problems as much as we can.

## Hardware:

- 1) Arduino kit
- 2) Arduino Charger
- 3) Bulb
- 4) Socket
- 5) Wire ( Normal + male to male for Arduino)
- 6) Ultrasonic sensors
- 7) Bread board
- 8) Bluetooth Module
- 9) 4 channel 5 V Relay circuit Board
- 10) LEDS

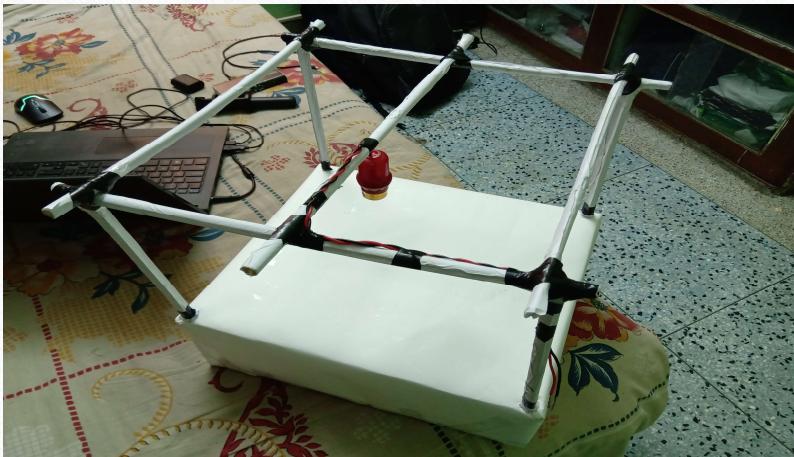
Software: Arduino IDE and M.I.T App Inventor



# Requirements

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Bed Room



Front View of some Hardware



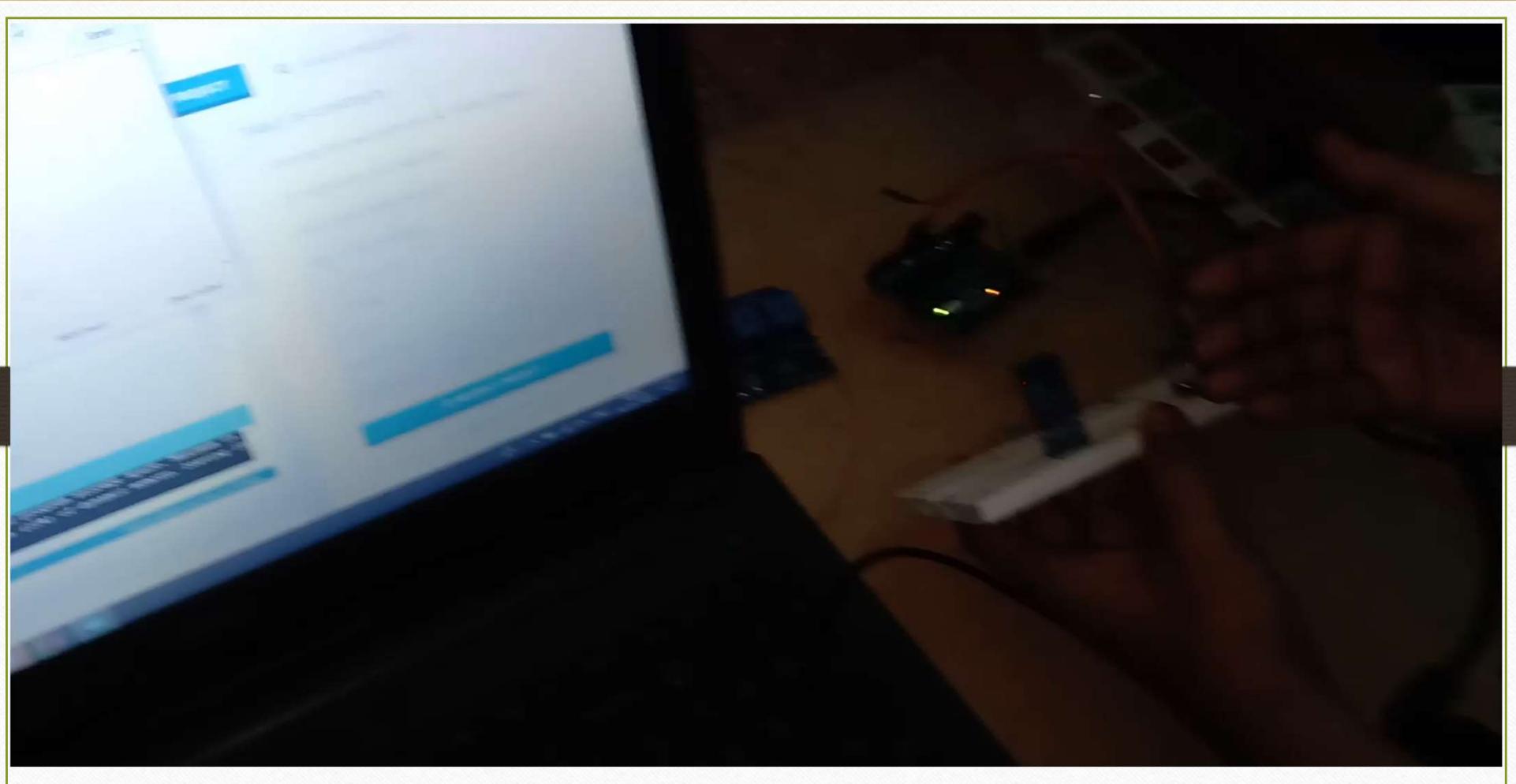
## Mechanism:

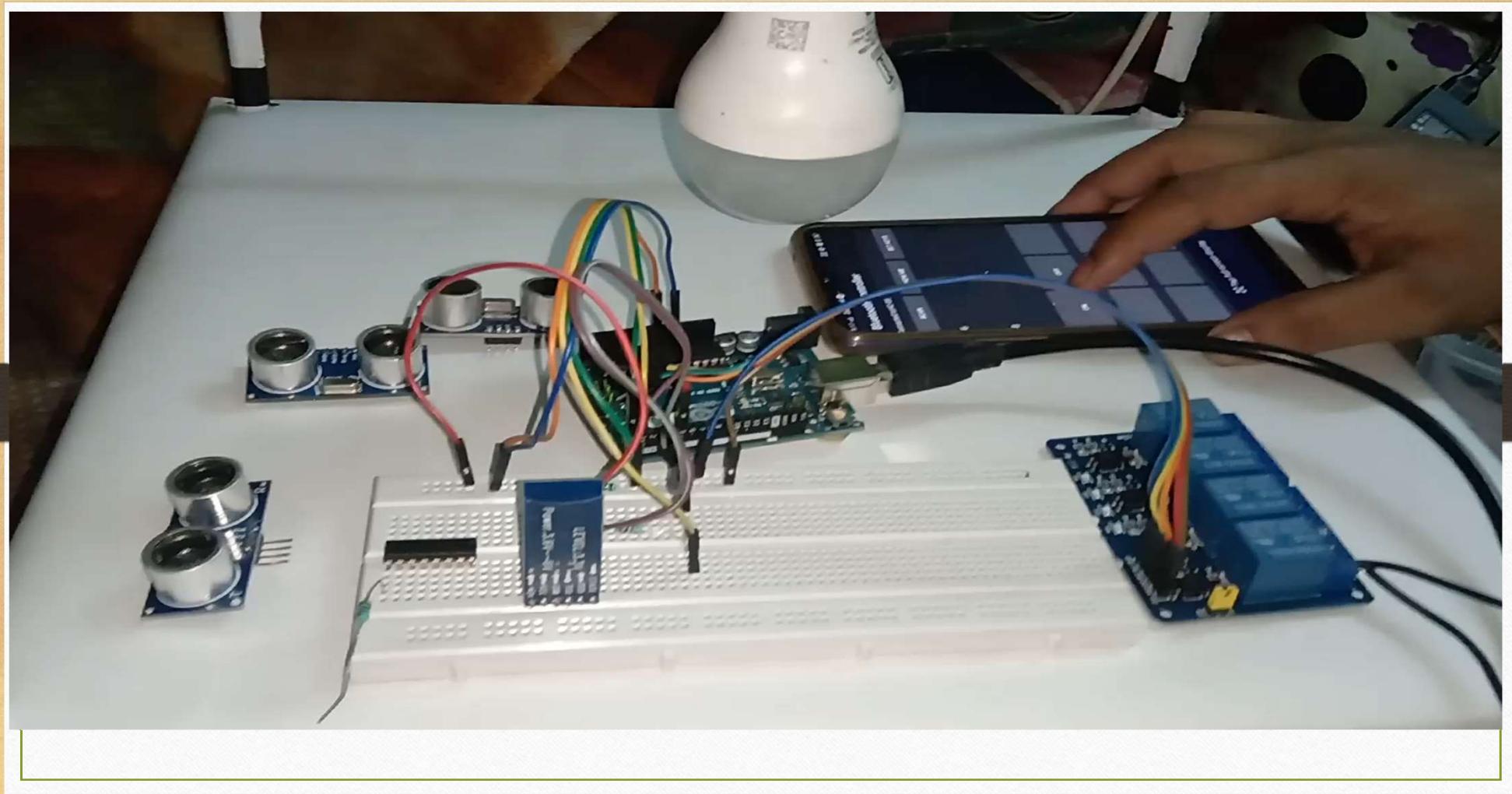
Let's consider that a person has entered the room and he/she is so tired that he doesn't want to turn on the lights/ fans /AC etc. So from outside or just before entering the room, he can turn on or off every electrical devices as per his wish. Now suppose he is so tired that he eventually fell asleep and couldn't turn off the lights. Same thing is applicable for children or bookworm people too. In this case, we are using some sensors that will detect if the person is moving or has stopped moving.

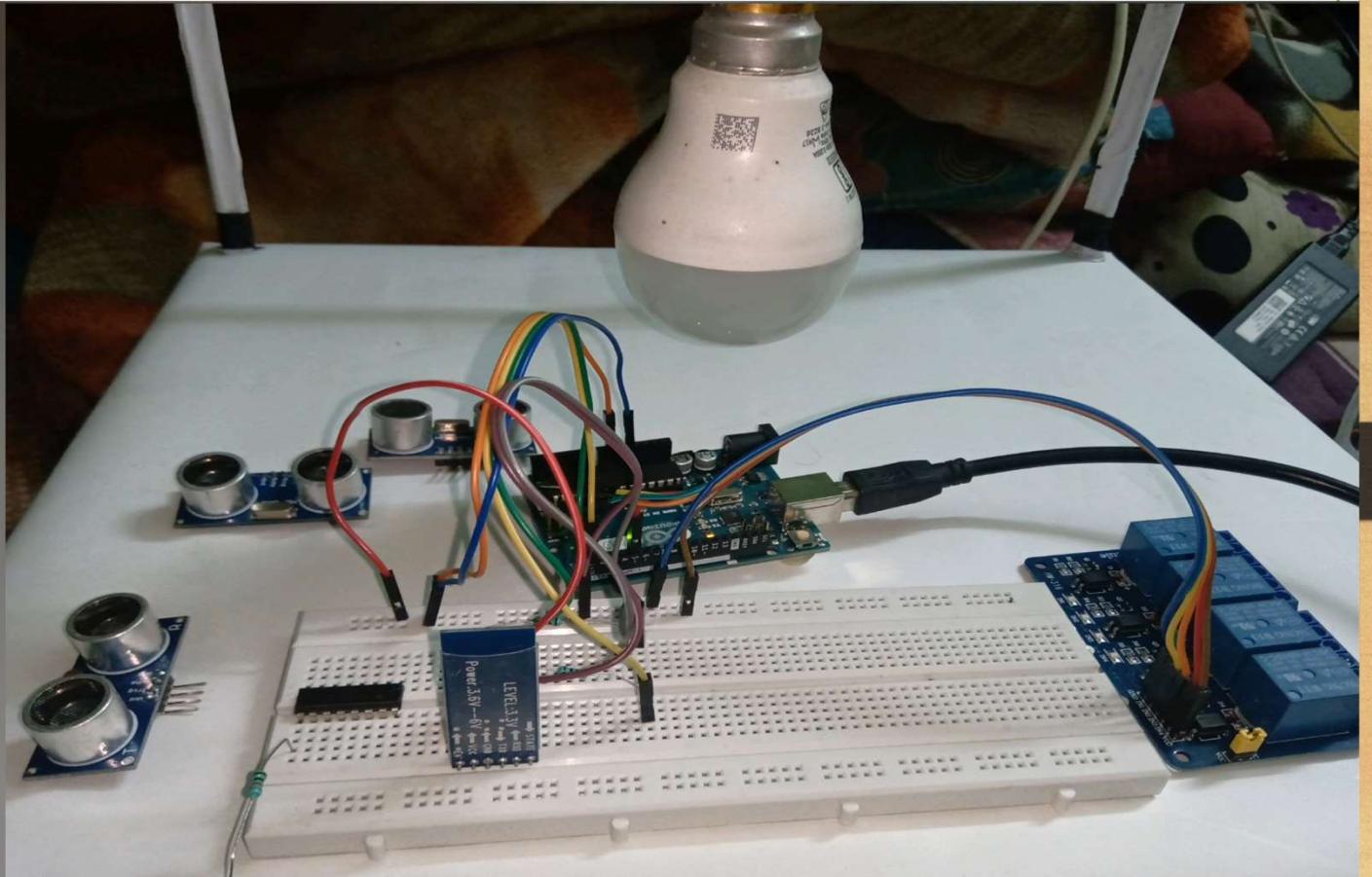
*Here our assumptions are these-*

- 1) *When a person falls asleep, that's the state of deep sleep, in which, he doesn't even move. So if our sensors observe that there is no movement in any direction, it will turn off those lights.*
- 2) *Suppose the person falls asleep and he starts some movement like turning his back upside or stretching hands or legs or other activities. Our proposal is that, these are his activities in subconscious mind. If he is fully conscious, he will be able to provide voice command or turn the lights on by using the app we are going to make.*
- 3) *Ultrasonic sensors detect any motion, it doesn't consider a fan rotating at a fixed distance from it. So A Static table fan or Rotating Ceiling fan will cause no harm or produce absurd results to our system*

*So, We have a relay switch, which can turn on or off devices according to app instructions or our voice commands and there is provision of ultrasonic output as reset key ( Set//Reset key is a key used in Flip-flop or other digital devices as a master switch.*







# Project Members

**1 = Debasish Kumar  
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**2 = Tarak Naskar**

**3 = Kiranmoy Hazari**

**4 = Biswajit Gantait**

