

# ASSIGNMENT-1:

## *SMART HOME AUTOMATION*

Done by

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### **ASSIGNMENT THEME:**

**Build a Smart Home in Wokwi with minimum 2 Sensors, LED and Buzzer.**

**Ex: PIR Sensor for home security and Servo motor for Door Lock System.**

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### **PROJECT DESCRIPTION:**

**To build a Smart Home, here in my assignment I Use one sensor namely PIR Sensor. Using these sensor, I design my Smart home for home detecting Sensing Process.**

### **CASE-1: (HOME DETECTING PROCESS)**

**In this we have used PIR sensor that sense the human motion. When the human enter into the room the sensor sense the human motion and automatically turn ON and OFF the electrical components such as fan, light etc.**

### **APPARATUS REQUIRED:**

The following are the apparatus required for building this assignment.  
Such as

- Wokwi Software
- Arduino UNO
- Ultrasonic Sensor
- PIR Sensor
- LED-2
- Buzzer

### **CODING:**

```
#define ledPin 2
#define inputPin 4
#define speakerPin 12
int pirState=LOW;
int val=0;

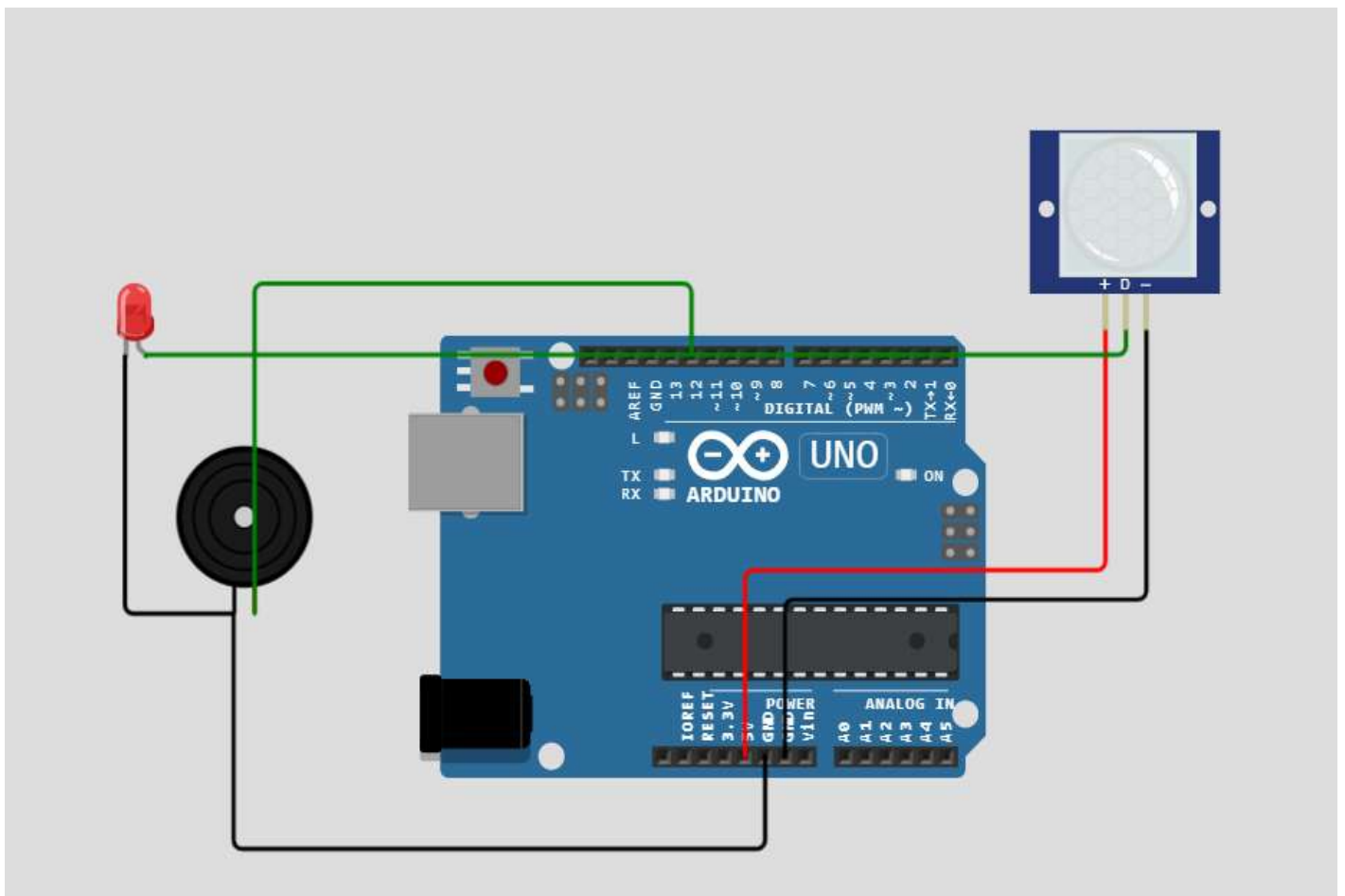
void setup() {
  pinMode(ledPin, OUTPUT);
  pinMode(speakerPin, OUTPUT);
  Serial.begin(9600);
}
```

```
void loop() {  
  val=digitalRead(inputPin);  
  if(val==HIGH){  
    digitalWrite(ledPin,HIGH);  
    digitalWrite(speakerPin,HIGH);  
    if(pirState==LOW){  
      Serial.println("Motion Detected");  
      pirState=HIGH;  
    }  
  }  
  else{  
    digitalWrite(ledPin,LOW);  
    digitalWrite(speakerPin,LOW);  
    if(pirState==HIGH){  
      Serial.println("Motion ended");  
      pirState=LOW;  
    }  
  }  
}
```

This is the source Code of my assignment. Here Both the case ie., (Human detection sensing process) Codes are integrate into a Single code as shown above.

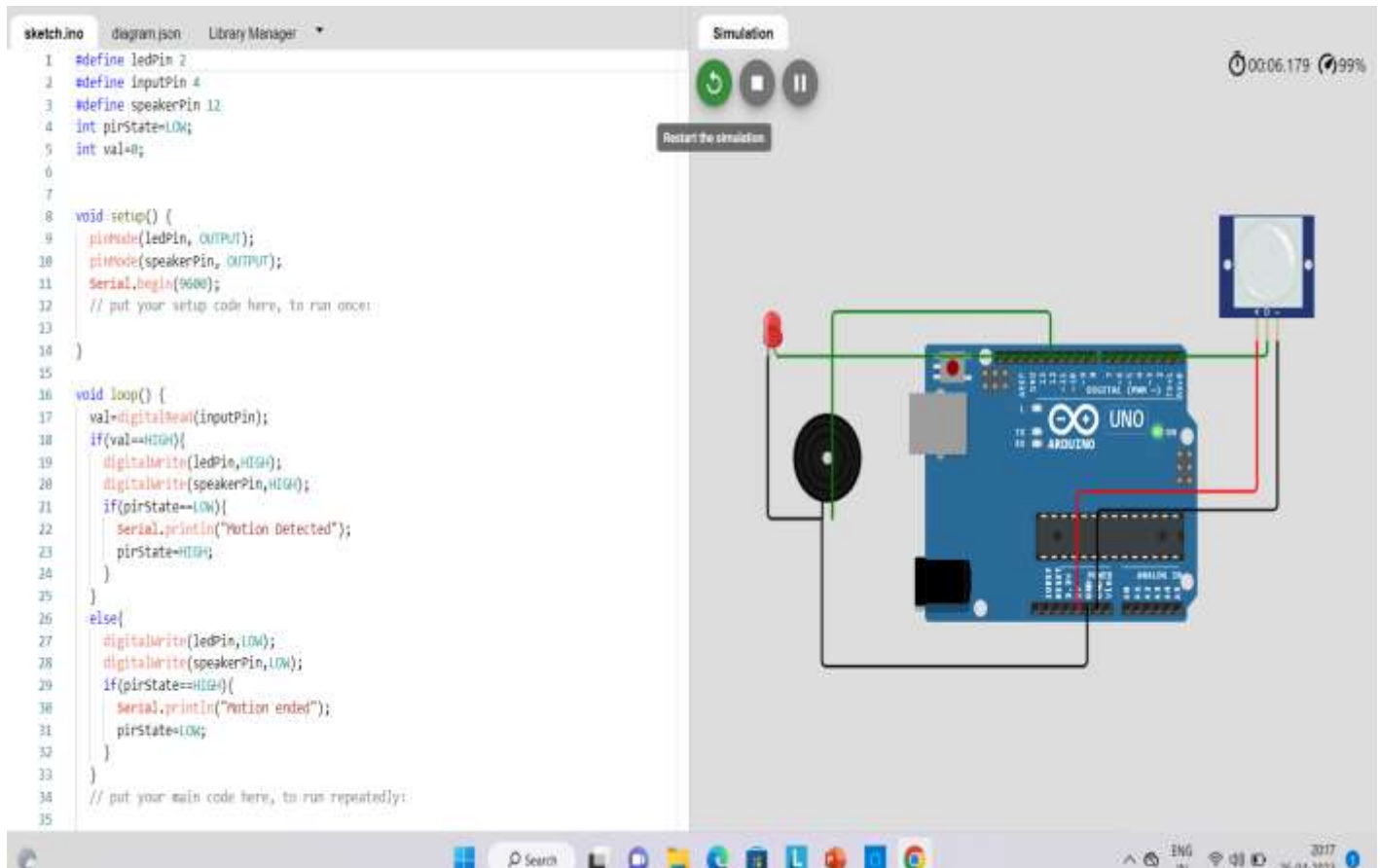
### **CONNECTIONS:**

The Circuit Connections which I made for this assignment are shown in figure below.



## **OUTPUT:**

The output of our assignment “SMART HOME AUTOMATION” using 1 sensors, LED and Buzzers are shown below.



## **REFERENCE:**

For your reference, I attached the link of my assignment here.

<https://wokwi.com/projects/352970398602687489>

## **RESULT:**

I have successfully completed my assignment “ SMART HOME AUTOMATION” in Wokwi platform using 1 Sensor, LED’s and Buzzers.