

**ASSINGMENT NO:1**

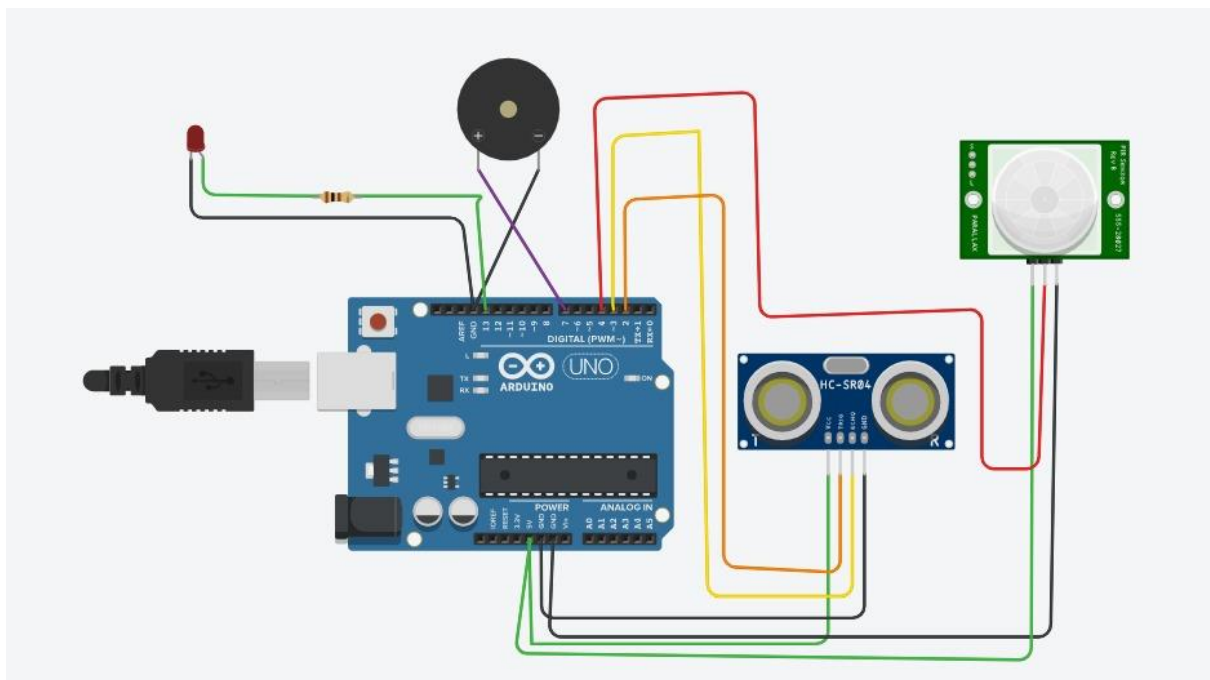
**IBM(NALAIYA THIRAN)**

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**TOPIC : SMART HOME**



**TINKER CAD IMAGE**

**CODE:**

```
// C++ code  
//  
int trigger_pin=2;  
int echo_pin=3;
```

```
int buzzer_pin=7;

int time;

int distance;


void setup()
{
  Serial.begin(9600);
  pinMode(trigger_pin,OUTPUT);
  pinMode(echo_pin,INPUT);
  pinMode(4,INPUT);
  pinMode(13,OUTPUT);
  pinMode(buzzer_pin,OUTPUT);
  // pinMode(2,INPUT);
  pinMode(7,OUTPUT);
}


void loop()
{
  digitalWrite(trigger_pin,HIGH);
  delayMicroseconds(10);
  digitalWrite(trigger_pin,LOW);
  time=pulseIn(echo_pin,HIGH);
  distance=(time*0.034)/2;

  if(distance<10){
```

```
Serial.println("DOOR OPEN");
Serial.print("Distance:");
Serial.println(distance);
digitalWrite(7,HIGH);
delay(10);
}
else{
    Serial.println("DOOR CLOSED");
    Serial.print("Distance:");
    Serial.println(distance);
    digitalWrite(7,LOW);
    delay(10);
int p=digitalRead(4);
    if(p){
        digitalWrite(13,HIGH);
        digitalWrite(7,HIGH);
        Serial.println("MOTION DETECTED");

    }
    else{
        digitalWrite(13,LOW);
        digitalWrite(7,LOW);
        Serial.println("not dected");
    }
}
```

}