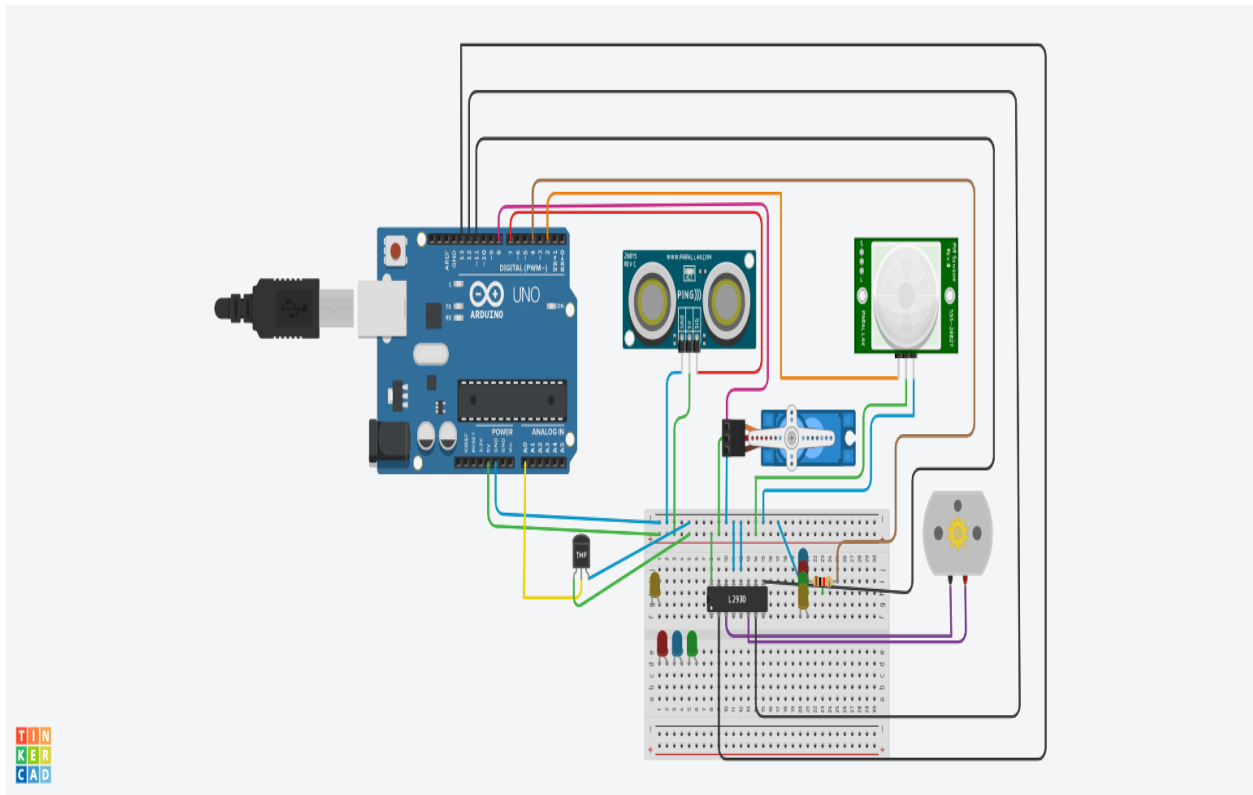


## HOME AUTOMATION



### PROGRAM:

```
#include<Servo.h>

const int pingPin = 7;

int servoPin = 8;

Servo servo1;

void setup() {

  // initialize serial communication:

  Serial.begin(9600);

  servo1.attach(servoPin);

  pinMode(2,INPUT);

  pinMode(4,OUTPUT);

  pinMode(11,OUTPUT);

}
```

```

pinMode(12,OUTPUT);

pinMode(13,OUTPUT);

pinMode(A0,INPUT);

digitalWrite(2,LOW);

digitalWrite(11,HIGH);
}

void loop() {

    long duration, inches, cm;

    pinMode(pingPin, OUTPUT);

    digitalWrite(pingPin, LOW);

    delayMicroseconds(2);

    digitalWrite(pingPin, HIGH);

    delayMicroseconds(5);

    digitalWrite(pingPin, LOW);

    // The same pin is used to read the signal from the PING))) a HIGH pulse

    // whose duration is the time (in microseconds) from the sending of the ping

    // to the reception of its echo off of an object.

    pinMode(pingPin, INPUT);

    duration = pulseIn(pingPin, HIGH);

    // convert the time into a distance

    inches = microsecondsToInches(duration);

    cm = microsecondsToCentimeters(duration);

    //Serial.print(inches);

    //Serial.print("in, ");

    //Serial.print(cm);

    //Serial.print("cm");

    //Serial.println();

    //delay(100);

    servo1.write(0);

```

```
if(cm < 40)
{
    servo1.write(90);
    delay(2000);
}
else
{
    servo1.write(0);
}

// PIR with LED starts
int pir = digitalRead(2);
if(pir == HIGH)
{
    digitalWrite(4,HIGH);
    delay(1000);
}
else if(pir == LOW)
{
    digitalWrite(4,LOW);
}

//temp with fan
float value=analogRead(A0);
float temperature=value*0.48;
Serial.println("temperature");
Serial.println(temperature);
if(temperature > 20)
{
    digitalWrite(12,HIGH);
    digitalWrite(13,LOW);
}
```

```
}  
else  
{  
    digitalWrite(12,LOW);  
    digitalWrite(13,LOW);  
}  
}  
  
long microsecondsToInches(long microseconds) {  
    return microseconds / 74 / 2;  
}  
  
long microsecondsToCentimeters(long microseconds) {  
    return microseconds / 29 / 2;  
}
```