#include <Servo.h>

#define sensorPin A1

int trigPin = 12;

int echoPin = 13;

int servoPin = 11;

int ledPin=10;

Servo servo;

long duration;

int distance;

void setup()

{

pinMode(trigPin,OUTPUT);

pinMode(echoPin,INPUT);

pinMode(servoPin,OUTPUT);

pinMode(5,OUTPUT);

pinMode(6,OUTPUT);

pinMode(7,OUTPUT);

servo.attach(servoPin);

pinMode(ledPin,OUTPUT);

Serial.begin(9600);

}

void loop()

{

// smart door

digitalWrite(trigPin,LOW);

delayMicroseconds(2);

digitalWrite(trigPin,HIGH);

delayMicroseconds(10);

digitalWrite(trigPin,LOW);

duration = pulseIn(echoPin,HIGH);

distance= duration\*0.034/2;

if(distance<100)

{

servo.write(90);

}

else

{

servo.write(0);

}

// smart light

int value = analogRead(A0);

Serial.println(value);

if(value<400)

{

digitalWrite(ledPin,HIGH);

}

else

{

digitalWrite(ledPin,LOW);

}

// smart temp alert

int reading = analogRead(sensorPin);

float voltage = reading \* (5.0 / 1024.0);

float temperatureC = voltage \* 100;

if(temperatureC<25.00)

{

digitalWrite(5,HIGH);

digitalWrite(6,LOW);

digitalWrite(7,LOW);

}

if(25.00<temperatureC && temperatureC<30.00)

{

digitalWrite(5,LOW);

digitalWrite(6,HIGH);

digitalWrite(7,LOW);

}

if(30.0<temperatureC)

{

digitalWrite(5,LOW);

digitalWrite(6,LOW);

digitalWrite(7,HIGH);

}

Serial.println(temperatureC);

// delay

delay(500);

}