



```

1  #include<Servo.h>
2  const int pingPin = 7;
3  int servoPin = 8;
4
5  Servo servol;
6
7  void setup() {
8      // initialize serial communication:
9      Serial.begin(9600);
10     servol.attach(servoPin);
11     pinMode(2,INPUT);
12     pinMode(4,OUTPUT);
13     pinMode(11,OUTPUT);
14     pinMode(12,OUTPUT);
15     pinMode(13,OUTPUT);
16     pinMode(A0,INPUT);
17     digitalWrite(2,LOW);
18     digitalWrite(11,HIGH);
19     pinMode(2, INPUT);
20     pinMode(10,OUTPUT);
21 }
22
23 void loop() {
24
25     long duration, inches, cm;
26
27     pinMode(pingPin, OUTPUT);
28     digitalWrite(pingPin, LOW);
29     delayMicroseconds(2);
30     digitalWrite(pingPin, HIGH);
31     delayMicroseconds(5);
32     digitalWrite(pingPin, LOW);
33
34     // The same pin is used to read the signal from the PING))) a H
35     // whose duration is the time (in microseconds) from the sending
36     // to the reception of its echo off of an object.
37     pinMode(pingPin, INPUT);
38     duration = pulseIn(pingPin, HIGH);
39
40     // convert the time into a distance
41     inches = microsecondsToInches(duration);
42     cm = microsecondsToCentimeters(duration);
43
44     //Serial.print(inches);
45     //Serial.print("in. ");
46     //Serial.print(cm);
47     //Serial.print("cm");
48     //Serial.println();
49     //delay(100);
50
51     servol.write(0);
52
53     if(cm < 40)
54     {
55         servol.write(90);
56         delay(2000);
57     }
58     else
59     {
60         servol.write(0);
61     }
62
63     // FIR with LED starts
64     int pir = digitalRead(2);
65
66     if(pir == HIGH)
67     {
68         digitalWrite(4,HIGH);
69         delay(1000);
70     }
71     else if(pir == LOW)
72     {
73         digitalWrite(4,LOW);
74     }
75     //burglar alarm
76     Serial.println(digitalRead(2));
77     if (digitalRead(2) == 1) {
78         digitalWrite(10, HIGH);
79     } else {
80         digitalWrite(10, LOW);
81     }
82     delay(10);
83
84     //temp with fan
85     float value=analogRead(A0);
86     float temperature=value*0.48;
87
88     Serial.println("temperature");
89     Serial.println(temperature);
90
91     if(temperature > 20)
92     {
93         digitalWrite(12,HIGH);
94         digitalWrite(13,LOW);
95     }
96     else
97     {
98         digitalWrite(12,LOW);
99         digitalWrite(13,LOW);
100 }

```