

```
#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;  
}
```