

CODE:

```
#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);

  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);  
}
```

```
int pir = digitalRead(2);
```

```
if(pir == HIGH)  
{  
    digitalWrite(4,HIGH);  
    delay(1000);  
}  
else if(pir == LOW)  
{  
    digitalWrite(4,LOW);  
}
```

```
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);
}
}

```

```

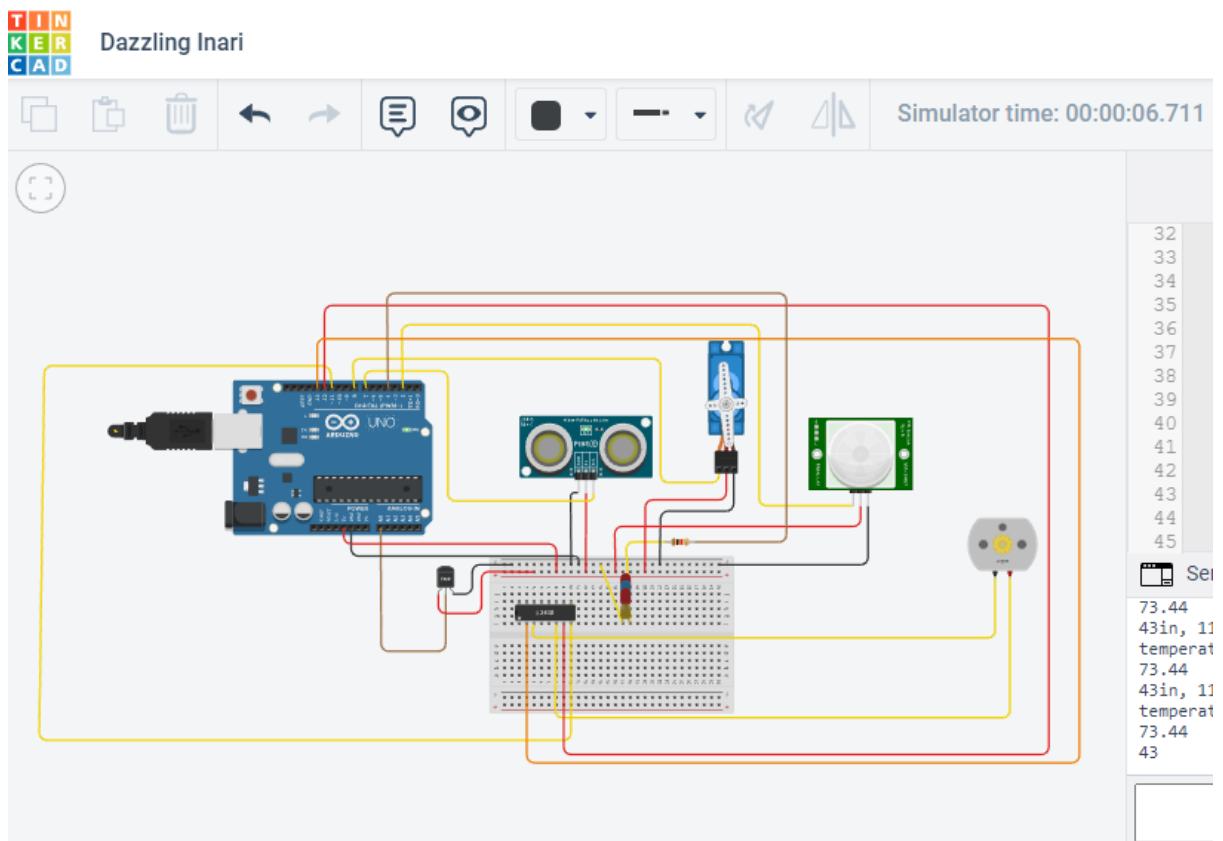
long microsecondsToInches(long microseconds) {
    return microseconds / 74 / 2;
}

```

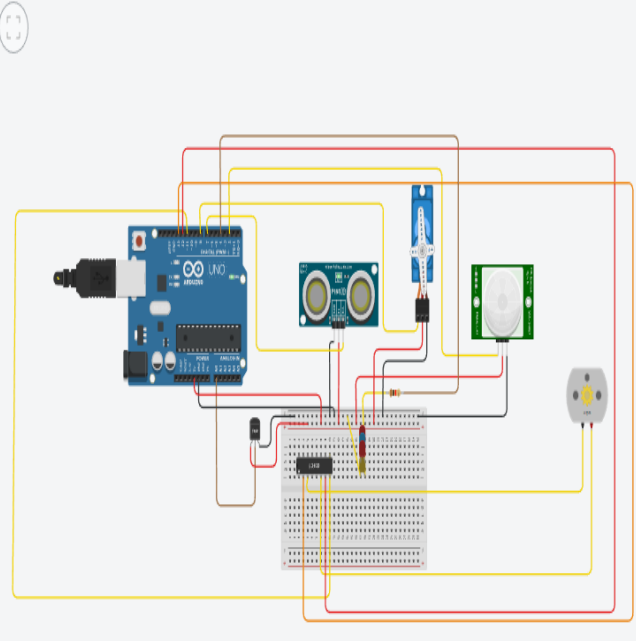
```

long microsecondsToCentimeters(long microseconds) {
    return microseconds / 29 / 2;
}

```



📄 🗑️ ↶️ ↷️ 💬 🗨️ 🔍 ⚙️
Simulator time: 00:00:09.007
📄 Code ⏹ Stop Simulation 📤 Send To

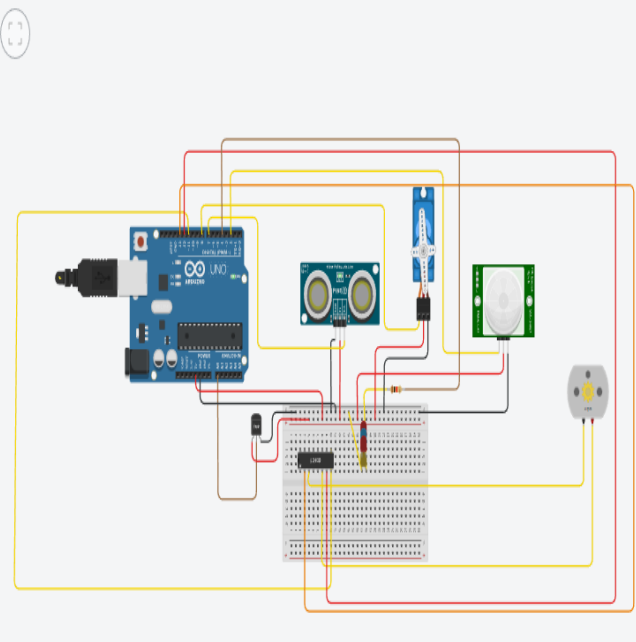


▶️ 🔊
1 (Arduino Uno R3) ▾

```

1 #include<Servo.h>
2 const int pingPin = 7;
3 int servoPin = 8;
4
5 Servo serv1;
6
7 void setup() {
8   // initialize serial communication:
9   Serial.begin(9600);
10  serv1.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
20 }
21
22 void loop() {
23
24   long duration, inches, cm;
                
```

📄 🗑️ ↶️ ↷️ 💬 🗨️ 🔍 ⚙️
Simulator time: 00:00:10.600
📄 Code ⏹ Stop Simulation 📤 Send To



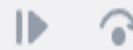
▶️ 🔊
1 (Arduino Uno R3) ▾

📄 Serial Monitor
▾

```

temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 111cm
                
```

📤 Send 🗑️ Clear 📡



1 (Arduino Uno R3) ▾

```
1 #include<Servo.h>
2 const int pingPin = 7;
3 int servoPin = 8;
4
5 Servo servo1;
6
7 void setup() {
8   // initialize serial communication:
9   Serial.begin(9600);
10  servo1.attach(servoPin);
11 }
```



Serial Monitor ▾

43in, 110cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 110cm
temperature
73.44
43in, 111cm
temperature
73.44
43in, 110cm

Send

Clear

