

### **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);
}
}

```

```

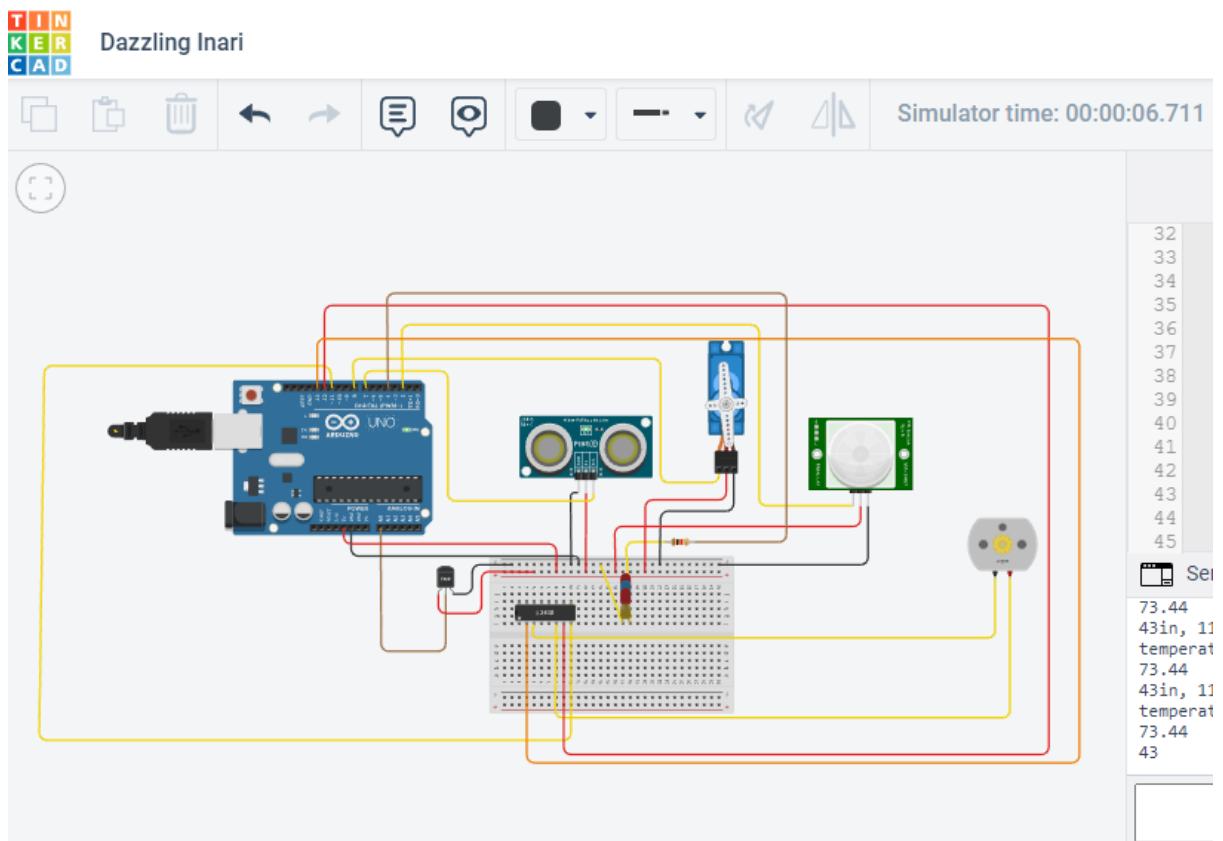
long microsecondsToInches(long microseconds) {
    return microseconds / 74 / 2;
}

```

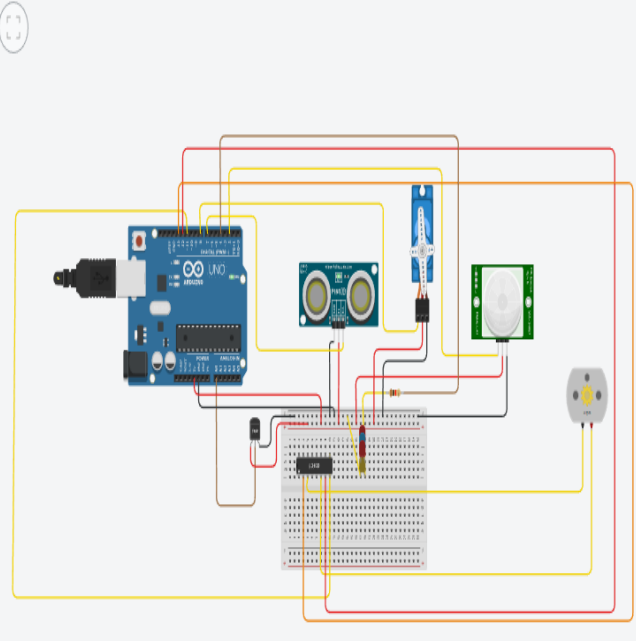
```

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

```



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Simulator time: 00:00:09.007
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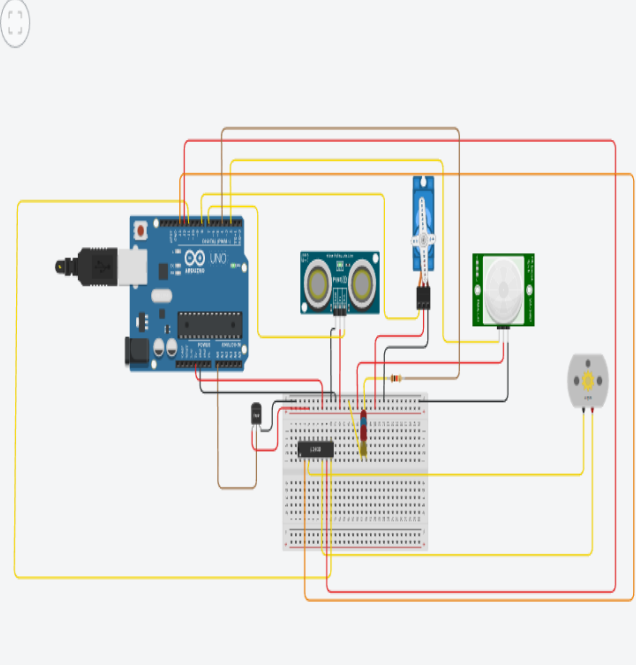
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1 (Arduino Uno R3) ▾

```

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;

```

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Simulator time: 00:00:10.600
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1 (Arduino Uno R3) ▾

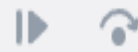
📄 Serial Monitor
▾

```

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

```

📤 Send 🗑️ Clear 📡



1 (Arduino Uno R3) ▾

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2 const int pingPin = 7;
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5 Servo servo1;
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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

