



```
#include <Servo.h>
```

```
int pos = 0;
```

```
Servo servo1;
```

```
int a1=2;
```

```
int b1 = 3;
```

```
int a2 = 6;
```

```
int b2 = 5;
```

```
void setup() {
```

```
  Serial.begin (9600);
```

```
  pinMode(a1, OUTPUT);
```

```
  pinMode(b1, INPUT);
```

```
  pinMode(a2, OUTPUT);
```

```
  pinMode(b2, INPUT);
```

```
  pinMode(9, OUTPUT);
```

```
  servo1.attach(9);
```

```
}
```

```
void loop(){  
    ultra();  
    int duration, distance;  
    digitalWrite (a, HIGH);  
    delayMicroseconds (1);  
    digitalWrite (a, LOW);  
    duration = pulseIn(b, HIGH);  
    distance = (duration/2)/29.1;
```

```
    Serial.print(distance);  
    Serial.print("cm");  
    Serial.println();
```

```
    if(distance > 100) {  
        digitalWrite (9, HIGH);  
    }  
    else {  
        digitalWrite (9, LOW);  
    }
```

```
    int duration2, distance2;  
    digitalWrite (a2, HIGH);  
    delayMicroseconds (1);  
    digitalWrite (a2, LOW);  
    duration = pulseIn(b2, HIGH);  
    distance2 = (duration/2)/29.1;
```

```
    Serial.print(distance2);  
    Serial.print("cm");  
    Serial.println();
```

```
if(distance > 100) {  
  digitalWrite (9, HIGH);  
}  
else {  
  digitalWrite (9, LOW);  
}  
}  
  
void ultra(){  
  
  for (pos = 0; pos <= 90; pos += 1) {  
  
    servo1.write(pos);  
  
    delay(15);  
  }  
  
  delay (1000);  
  
  for (pos = 90; pos >= 0; pos -= 1) {  
  
    servo1.write(pos);  
  
    delay(15);  
  }  
  delay (800);  
}
```