

```
#include <Servo.h> //include the servo motor

#define echo 7 //attach the echo pin at digital pin 7
#define trig 6 //attach the trig pin at digital pin 6
const int in1 = 2; //attach the in1 at digital pin 2
const int in2 = 3; //attach the in2 pin at digital pin 3
const int in3 = 4; //attach the in3 pin at digital pin 4
const int in4 = 5; //attach the in4 pin at digital pin 5
Servo servo; //give at servo motor the name of servo

long duration, distance; //declare duration and distance
long durationn, distancee; //declare durationn and distancee
long durationnn, distanceee; //declare durationnn and distanceee

void setup () {
  pinMode(echo, INPUT); //set the echo pin as Input
  pinMode(trig, OUTPUT); //set the trig pin as Output
  pinMode(in1, OUTPUT); //set the in1 pin as Output
  pinMode(in2, OUTPUT); //set the in2 pin as Output
  pinMode(in3, OUTPUT); //set the in3 pin as Output
  pinMode(in4, OUTPUT); //set the in4 pin as Output
  servo.attach(12); //declare that the servo attach at digital pin 12
  Serial.begin(9600); //declare the serial screen
}

void loop () {
```

```
servo.write(90); //servo turns to 90
digitalWrite(in1, LOW); //FORWARD
digitalWrite(in2, HIGH);
digitalWrite(in3, LOW);
digitalWrite(in4, HIGH);
digitalWrite(trig, LOW);
delayMicroseconds(2); //start of ultrasonic's measuring
digitalWrite(trig, HIGH);
delayMicroseconds(10);
digitalWrite(trig, LOW);
duration=pulseIn(echo, HIGH);
distance=duration/58.2; //end of ultrasonic's measuring
Serial.println(distance);
delay(50);
if(distance<14){
  digitalWrite(in1, LOW); //STOP
  digitalWrite(in2, LOW);
  digitalWrite(in3, LOW);
  digitalWrite(in4, LOW);
  delay(100);
  digitalWrite(in1, HIGH); //BACKWARD
  digitalWrite(in2, LOW);
  digitalWrite(in3, HIGH);
  digitalWrite(in4, LOW);
  delay(600);
  digitalWrite(in1, LOW); //STOP
```

```
digitalWrite(in2, LOW);
digitalWrite(in3, LOW);
digitalWrite(in4, LOW);
servo.write(125);
delay(100);
digitalWrite(trig, LOW); //start of ultrasonic's measuring
delayMicroseconds(2);
digitalWrite(trig, HIGH);
delay(200);
digitalWrite(trig, LOW);
durationn=pulseIn(echo, HIGH);
distancee=durationn/58.2; //end of ultrasonic's measuring
Serial.print("Distancee: ");
Serial.println(distancee);
delay(900);
servo.write(35);
delay(100);
digitalWrite(trig, LOW); //start of ultrasonic's measuring
delayMicroseconds(2);
digitalWrite(trig, HIGH);
delay(200);
digitalWrite(trig, LOW);
durationnn=pulseIn(echo, HIGH);
distanceee=durationnn/58.2; //end of ultrasonic's measuring
Serial.print("Distanceee: ");
Serial.println(distanceee);
delay(400);
```

```
if(distancee>=distanceee){  
  servo.write(90);  
  delay(50);  
  digitalWrite(in1, LOW);//LEFT  
  digitalWrite(in2, HIGH);  
  digitalWrite(in3, HIGH);  
  digitalWrite(in4, LOW);  
  delay(850);  
}else{  
  servo.write(90);  
  delay(50);  
  digitalWrite(in1, HIGH);//RIGHT  
  digitalWrite(in2, LOW);  
  digitalWrite(in3, LOW);  
  digitalWrite(in4, HIGH);  
  delay(850);  
}  
}else{  
  servo.write(90);  
  digitalWrite(in1, LOW);//FORWARD  
  digitalWrite(in2, HIGH);  
  digitalWrite(in3, LOW);  
  digitalWrite(in4, HIGH);  
  digitalWrite(trig, LOW);  
  delayMicroseconds(2);  
  digitalWrite(trig, HIGH); //start of ultrasonic's maisuring  
  delayMicroseconds(10);
```

```
digitalWrite(trig, LOW);  
duration=pulseIn(echo, HIGH);  
distance=duration/58.2; //end of ultrasonic's measuring  
Serial.println(distance);  
delay(50);  
}  
  
}
```