```
//SMARS Demo 3 with ultrasonic sensor
//This sketch makes the robot avoid obstacles.
//you'll need a motor driver https://goo.gl/v8ADzU    and an ultrasonic sensor
https://goo.gl/upDRNi

int lmotorpin1=3;
int lmotorpin2=5;
int rmotorpin1=6;
int rmotorpin2=9;
int distancecm=0;
const int trigPin = 10;
const int echoPin = 11;
// defines variables
long duration;
int distance;
void setup() {
 pinMode(lmotorpin1,OUTPUT);
 pinMode(lmotorpin2,OUTPUT);
 pinMode(rmotorpin1,OUTPUT);
 pinMode(rmotorpin2,OUTPUT);
 pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
pinMode(echoPin, INPUT); // Sets the echoPin as an Input
}

void loop() {
  distancecm=mdistance();
  if(distance<5){
    digitalWrite(lmotorpin1,LOW);
    digitalWrite(lmotorpin2,HIGH);
    digitalWrite(rmotorpin1,LOW);
    digitalWrite(rmotorpin2,HIGH);
    delay(1000);
     digitalWrite(lmotorpin1,LOW);
    digitalWrite(lmotorpin2,HIGH);
    digitalWrite(rmotorpin1,HIGH);
    digitalWrite(rmotorpin2,LOW);
    delay(1000);
  }
  else{
    digitalWrite(rmotorpin1,HIGH);
    digitalWrite(rmotorpin2,LOW);
    digitalWrite(lmotorpin1,HIGH);
    digitalWrite(lmotorpin2,LOW);
  }

}

int mdistance()
```

```arduino
{
/

digitalWrite(trigPin, LOW);
delayMicroseconds(2);
// Sets the trigPin on HIGH state for 10 micro seconds
digitalWrite(trigPin, HIGH);
delayMicroseconds(10);
digitalWrite(trigPin, LOW);
// Reads the echoPin, returns the sound wave travel time in microseconds
duration = pulseIn(echoPin, HIGH);
// Calculating the distance
distance= duration*0.034/2;
// Prints the distance on the Serial Monitor
Serial.print("Distance: ");


}
```