```
#define trigpin 9
#define echopin 10
#define R 6

#define G 5
const int buzzer = 13;
int tone_duration = 1000;




void setup()

 { //serial monitor and pin setup.
  Serial.begin(9600);
  pinMode(trigpin,OUTPUT); //set trigpin as output
   pinMode(echopin,INPUT);//set echopin as input
   pinMode(R,OUTPUT);// set R,G and B as outputs
   pinMode(G,OUTPUT);



  // put your setup code here, to run once:

}

void loop()

{

  //the trigpin sends out a signal, which bounces off an obstacle and comes back,
the
  //echopin recieves this signal and gives out +5v setting the arduino pin on which
it is connected to high.
  //distance= time*speed, but this distnce is divided by 2 because signal sent out
returns
  //so distance= (the time it takes for the signal to leave and return)/2.
  //i.e if the time is 6s the distance = (6s/2) = 3m or cm.

  int duration, distance;//declare distance and duration as integers
  digitalWrite(trigpin,HIGH);// trigin send out signal
  _delay_ms(1000);//coninously for 1000ms
  digitalWrite(trigpin, LOW);// then goes low

  duration=pulseIn(echopin,HIGH); // duration is the pulseIn to the echopin
  distance=(duration/2)/29.1; //  the 29.1 is used to convert the distnce to cm,
the value varies for other units.

  if(distance > 0 && distance <= 10)
    digitalWrite(G,LOW);
```

```
    _delay_ms(100);//delay
   digitalWrite(R,HIGH);//red led is on
  _delay_ms(100);
  digitalWrite(buzzer, HIGH);
  tone(buzzer, 100, tone_duration); // Send 100Hz sound signal...
  }
  else if(distance > 10)
        digitalWrite(R,LOW);//red led is off
         digitalWrite(G,HIGH);//green led is on
         _delay_ms(100);
         digitalWrite(buzzer, LOW);


     }

   Serial.print("cm");
  Serial.println(distance);//print values on serial monitor
  _delay_ms(100);
}
```