#define signalPin 7

#define LEDlampRed 10

#define LEDlampYellow 11

#define LEDlampGreen 12

#define soundbuzzer 4

int sound = 500;

void setup() {

Serial.begin(9600);

pinMode(signalPin, OUTPUT);

pinMode(LEDlampRed, OUTPUT);

pinMode(LEDlampYellow, OUTPUT);

pinMode(LEDlampGreen, OUTPUT);

pinMode(soundbuzzer, OUTPUT);

}

void loop() {

long int durationindigit, distanceincm;

pinMode(signalPin, OUTPUT);

digitalWrite(signalPin, LOW);

delayMicroseconds(2);

digitalWrite(signalPin, HIGH);

delayMicroseconds(10);

digitalWrite(signalPin, LOW);

pinMode(signalPin, INPUT);

durationindigit = pulseIn(signalPin, HIGH);

distanceincm = (durationindigit / 5) / 29.1;

digitalWrite(LEDlampGreen, LOW);

digitalWrite(LEDlampYellow, LOW);

digitalWrite(LEDlampRed, LOW);

noTone(soundbuzzer);

if (distanceincm < 5) {

digitalWrite(LEDlampRed, HIGH);

sound = 1000;

tone(soundbuzzer, sound);

}

else if (distanceincm < 20) {

digitalWrite(LEDlampYellow, HIGH);

}

else if (distanceincm < 50) {

digitalWrite(LEDlampGreen, HIGH);

}

Serial.print("Distance: ");

Serial.print(distanceincm);

Serial.println(" cm");

delay(100);

}