Assignment 4

Solution

const int trigpin=3;

const int echopin=4;

const unsigned int maxdist=23200;

void setup(){

pinMode(trigpin,OUTPUT);

digitalWrite(trigpin,LOW);

pinMode(echopin,INPUT);

Serial.begin(9600);

}

void loop(){

unsigned long t1;

unsigned long t2;

unsigned long pulsewidth;

float cm;

float inches;

digitalWrite(trigpin, HIGH);

delayMicroseconds(10);

digitalWrite(trigpin, LOW);

while(digitalRead(echopin)==0);

t1=micros();

while(digitalRead(echopin)==1);

t2=micros();

pulsewidth=t2-t1;

cm=pulsewidth/58;

inches=pulsewidth/148.0;

if(pulsewidth>maxdist){

Serial.println("Out of range");

}else{

Serial.println("Distance in cm: ");

Serial.println(cm);

if(cm<100){

while(true){

Serial.println("Alert");

}

}

}

delay(1000);