

ASSIGNMENT 4

```
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);
}
```

