ASSIGNMENT- 4

```
#define trigPin 12
#define echoPin 13
int Buzzer = 8; // Connect buzzer pin to 8
int ledPin= 6;  //Connect LEd pin to 6
int duration, distance; //to measure the distance and time taken

void setup() {
    Serial.begin (9600);
    //Define the output and input objects(devices)
    pinMode(trigPin, OUTPUT);
    pinMode(echoPin, INPUT);
    pinMode(Buzzer, OUTPUT);
    pinMode(ledPin, OUTPUT);
}

void loop() {

  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  distance = (duration/2) / 29.1;
  //when distance is greater than or equal to 200 OR less than or equal to 0,the buzzer and
LED are off
  if (distance < 100)
      {
      Serial.println("alert");
      digitalWrite(Buzzer,LOW);
      digitalWrite(ledPin,LOW);
      }
  else {
      Serial.println("object detected \n");
      Serial.print("distance= ");
      Serial.print(distance);        //prints the distance if it is between the range 0 to 200
      tone(Buzzer,400);              // play tone of 400Hz for 500 ms
      digitalWrite(ledPin,HIGH);
  }
}
```