Assignment 1

CODE

```
#define trigPin 3

#define echoPin 4

long duration;

int distance;

const int redPin = 10;

void setup(){

  pinMode(trigPin, OUTPUT);

  pinMode(echoPin, INPUT);

  Serial.begin(9600);

}

void loop(){

  digitalWrite(trigPin, LOW);

  delayMicroseconds(2);

  digitalWrite(trigPin, HIGH);

  delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);
```

```
  distance = duration * 0.034 / 2;



delay(2000);
  Serial.print("Distance: ");
  Serial.print(distance);
  Serial.println(" cm");
  if(distance <= 10){
    analogWrite(redPin,255);
    Serial.println("ON");
    }
    else{
      analogWrite(redPin,64);
      Serial.println("partially ON");
    }
  }
```

CIRCUIT DIAGRAM: