

Assignment 1

CODE

```
#define trigPin 5

#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:

