**Gas Leakage Monitoring & Alerting System for Industries**

**IOT Assignment-1**

**Code:**

int trig=2;

int echo=3;

void setup()

{

Serial.begin(9600);

pinMode(trig,OUTPUT);

pinMode(echo,INPUT);

pinMode(12,OUTPUT);

}

void loop()

{

//ultrasonic sensor

digitalWrite(trig,LOW);

digitalWrite(trig,HIGH);

delayMicroseconds(10);

digitalWrite(trig,LOW);

float dur=pulseIn(echo,HIGH);

float dis=(dur\*0.0343)/2;

Serial.print("Distance : ");

Serial.println(dis);

//LED ON

if(dis>=100)

{

digitalWrite(8,HIGH);

digitalWrite(7,HIGH);

}

//Buzzer For ultrasonic Sensor

if(dis>=100)

{

for(int i=0; i<=30000; i=i+100)

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}

//Temperate Sensor

double a= analogRead(A2);

double tem=(((a/1024)\*5)-0.5)\*100;

Serial.print("Temp Value: ");

Serial.println(tem);

delay(1000);

//LED ON

if(tem>=100)

{

digitalWrite(8,HIGH);

digitalWrite(7,HIGH);

}

//Buzzer for Temperature Sensor

if(tem>=100)

{

for(int i=0; i<=30000; i=i+10)

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}

//LED OFF

if(tem<100)

{

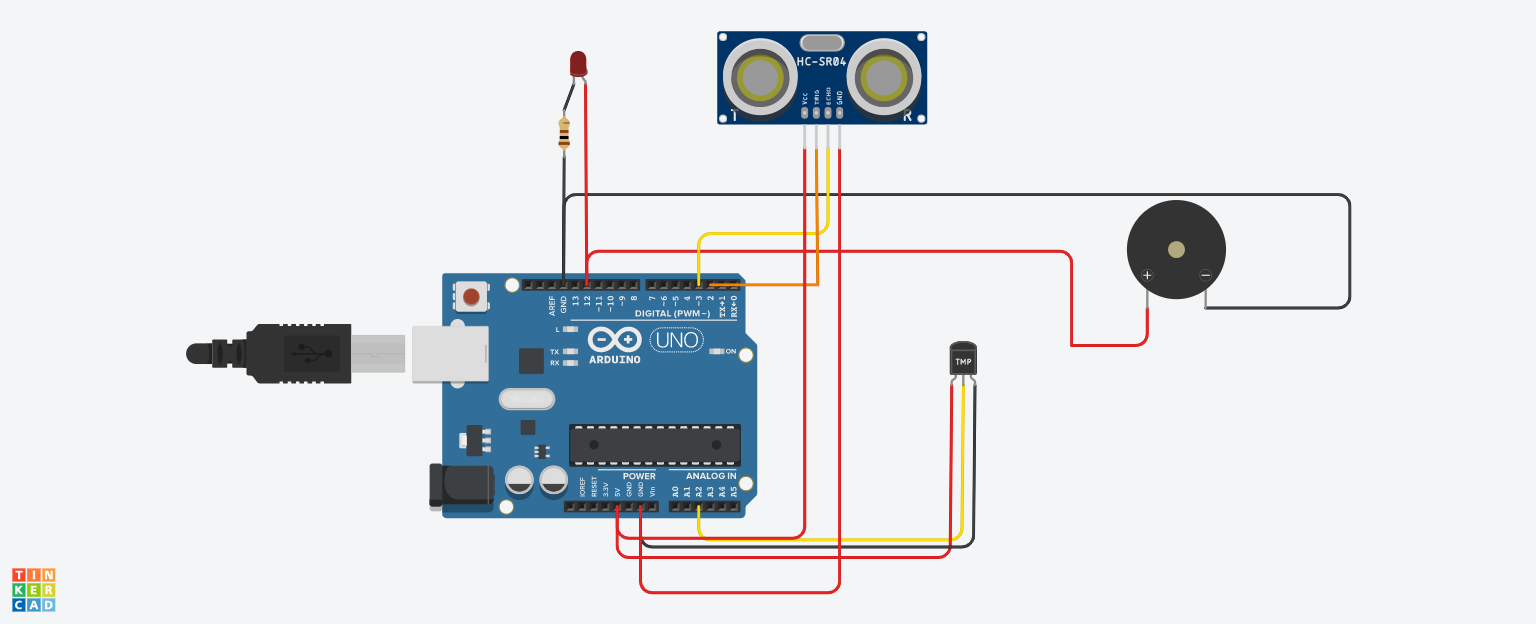
digitalWrite(8,LOW);

digitalWrite(7,LOW);

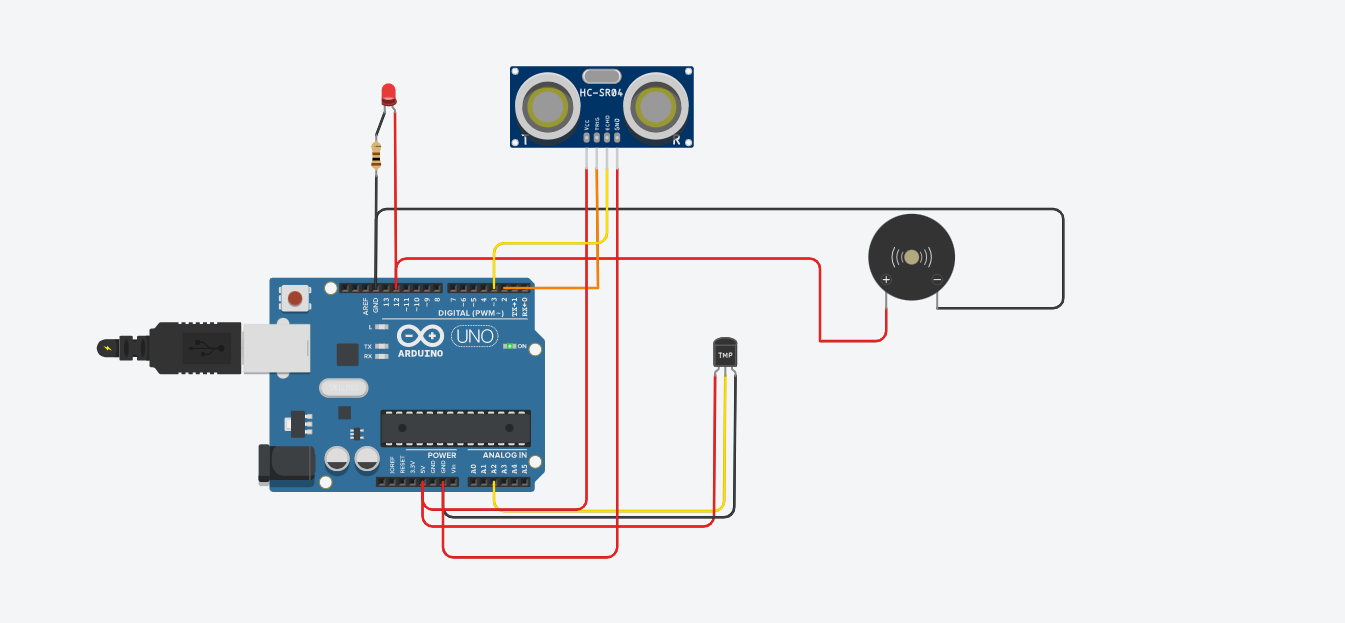
}

}

**Output:**



Before Simulation



After Simulation