

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
```

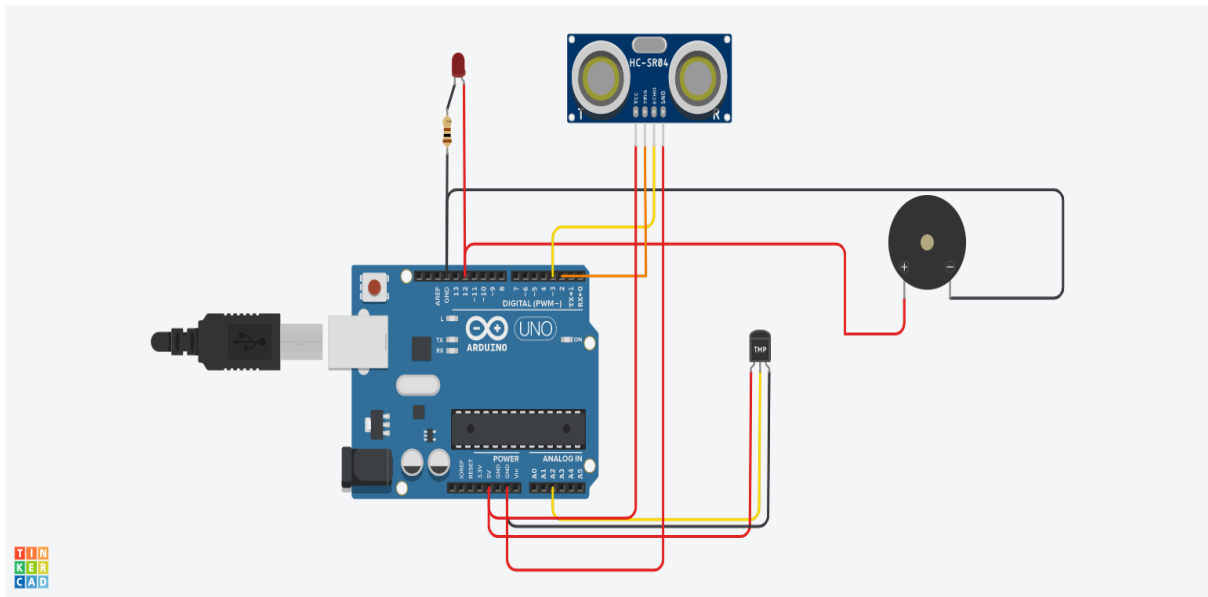
```
double a= analogRead(A2);
double tem=((a/1024)*5)-0.5)*100;
Serial.print("Temp Value: ");
Serial.println(tem);
delay(1000);
//LED ON
if(tem>=100)
{
    digitalWrite(8,HIGH);
    digitalWrite(7,HIGH);
}
```

```
//Buzzer for Temperature Sensor
```

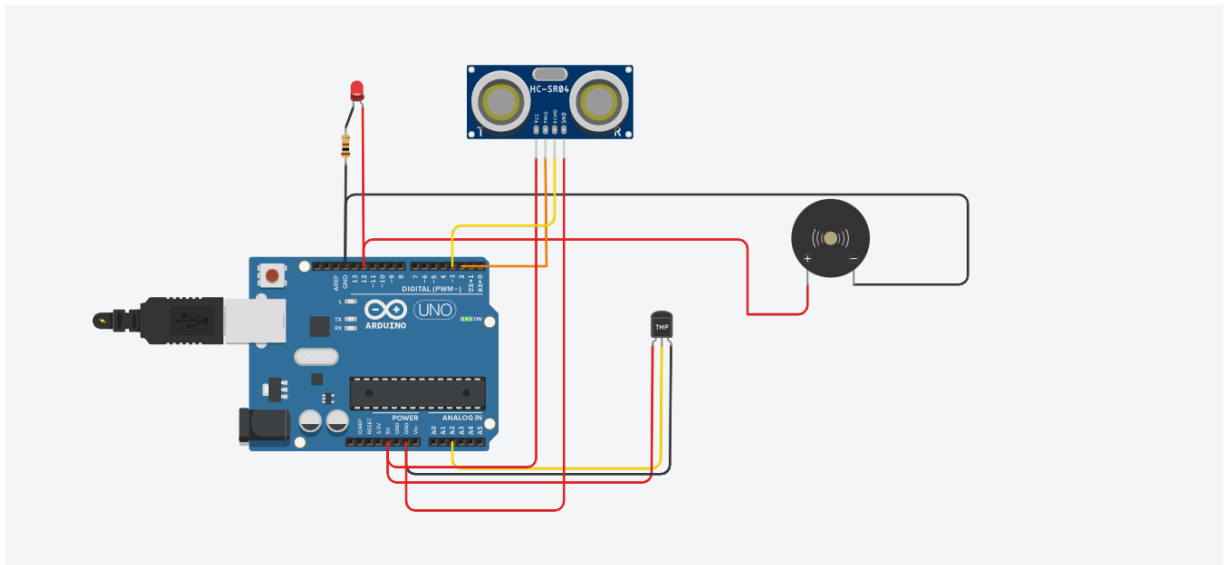
```
if(tem>=100)
{
for(int i=0; i<=30000; i=i+10)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}
```

```
//LED OFF
if(tem<100)
{
digitalWrite(8,LOW);
digitalWrite(7,LOW);
}
}
```

Output:



Before Simulation



After Simulation