

ASSIGNMENT 1

CODE:

```
int t=2;
int e=3;

void setup()
{
    Serial.begin(9600);
    pinMode(t, OUTPUT);
    pinMode(e, INPUT);
    pinMode(12, OUTPUT);
}

void loop()
{
    //ultrasonic sensor
    digitalWrite(t, LOW);
    digitalWrite(t, HIGH);
    delayMicroseconds(10);
    digitalWrite(t, LOW);
    float dur=pulseIn(e, HIGH);
    float dis=(dur*0.0343)/2;
    Serial.print("Distance is: ");
    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+10)
        {
            tone(12, i);
            delay(1000);
            noTone(12);
            delay(1000);
        }
    }

    //Temperate Sensor
    double a= analogRead(A0);
    double t=((a/1024)*5)-0.5)*100;
    Serial.print("Temp Value: ");
    Serial.println(t);
    delay(1000);

    //LED ON
    if(t>=100)
```

```

{
    digitalWrite(8,HIGH);
    digitalWrite(7,HIGH);
}

//Buzzer for Temperature Sensor
if(t>=100)
{
    for(int i=0; i<=30000; i=i+10)
    {
        tone(12,i);
        delay(1000);
        noTone(12);
        delay(1000);
    }
}

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

```

CIRCUIT DIAGRAM:

