

IBM ASSIGNMENT 1

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SOURCE 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:

