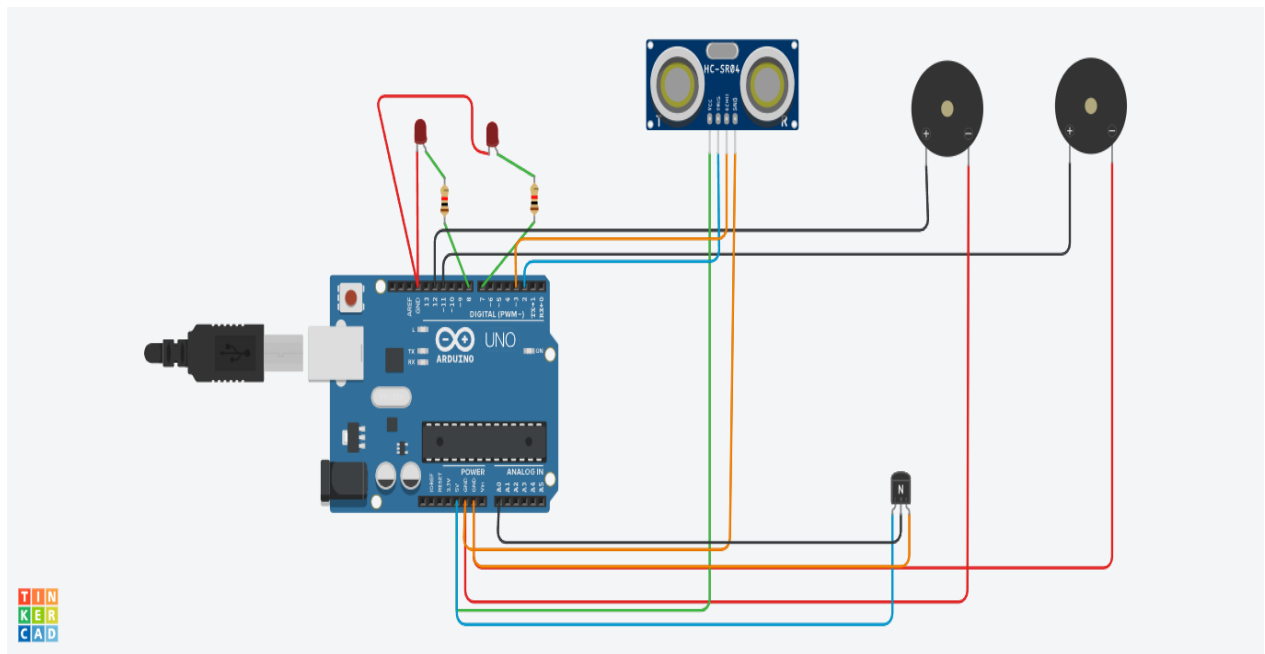


**IBM – NALLAIYA THIRAN PROJECT**  
**ASSIGNMENT 1**  
**SMART HOME**

**Arjitha.S**

**960219106034**

**CIRCUIT DIAGRAM:**



**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);
}

```

## TINKERCAD LINK:

<https://www.tinkercad.com/things/cln7oBIDOHA-terrific-lappi-wolt/editel?tenant=circuits>

## OUTPUT:



### Serial Monitor

```
Distance is: 178.69
Distance is: 83.23
Temp Value: -49.51
Distance is: 83.42
Temp Value: -49.51
Distance is: 83.23
Temp Value: -49.51
Distance is: 83.42
Temp Value: -49.51
Distance is: 83.23
Temp Value: -49.51
Distance is: 83.23
Temp Value: -49.51
Distance is: 83.42
Temp Value: -49.51
Distance is: 155.31
```

Send

Clear

