ASSIGNMENT – 1

Build A Smart Home In Thinkercad With 2
Sensors, An LED, Buzzer And Submit It

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Maximum Marks	2 Marks

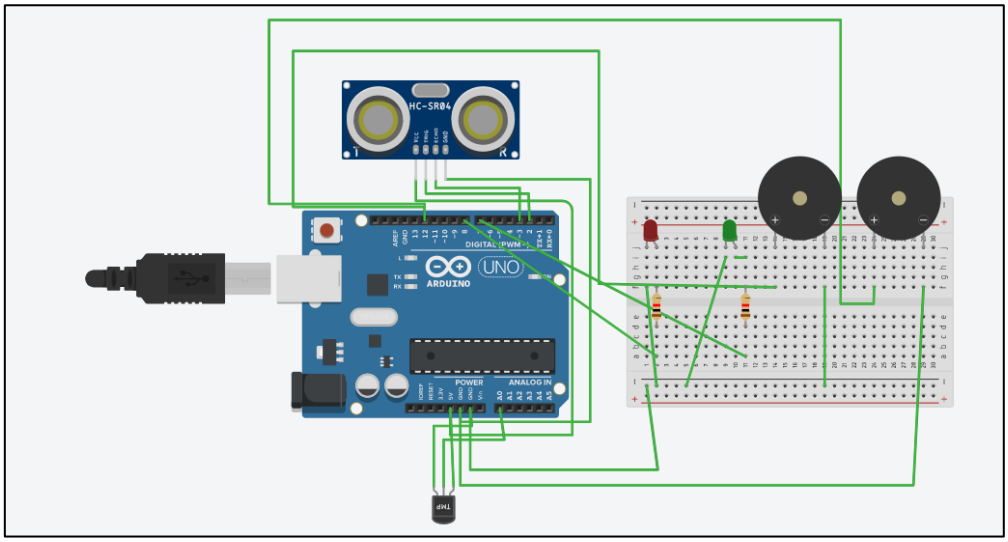
CODE:

```
int t=2;
int e=3;
void setup()
{
  Serial.begin(9600);
  pinMode(t,OUTPUT);
  pinMode(e,INPUT);
  pinMode(12,OUTPUT);
}

void loop()
{
  //ultrasonic sensor Code
  digitalWrite(t,LOW);
  digitalWrite(t,HIGH);
  delayMicroseconds(10);
  digitalWrite(t,LOW);
  float dur=pulseIn(e,HIGH);
  int dis = dur * 0.034 / 2;
  Serial.print("Distance is: ");
  Serial.print(dis);

    //LED ON Code
  if(dis<=10)
  {
    digitalWrite(8,HIGH);

  }
  else{
    digitalWrite(7,HIGH);
  }
```

```
//Buzzer For ultrasonic Sensor Code
if(dis<=30)
{
for(int i=0; i<=40; i=i+10)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}

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

//LED ON Code
if(t>=38)
{
  digitalWrite(8,HIGH);

}
else
{
  digitalWrite(7,HIGH);
}

//Buzzer for Temperature Sensor Code
if(tem>=38)
{
  digitalWrite(7,LOW);
  digitalWrite(8,HIGH);
for(int i=0; i<=30; i=i+10)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}
```

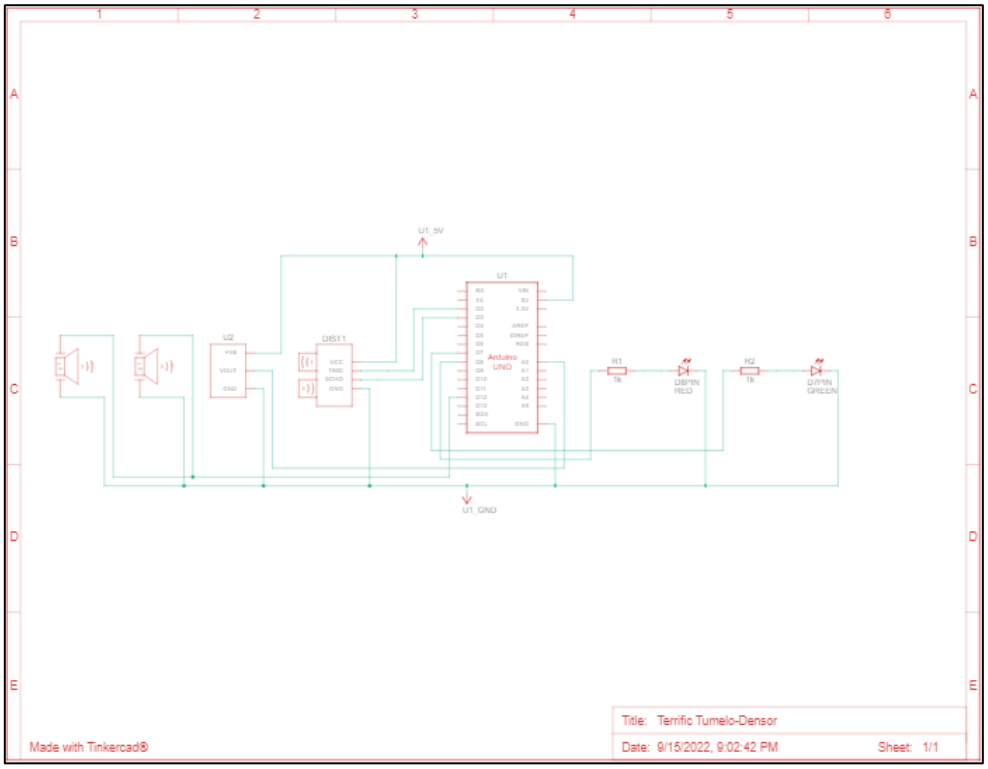
```
  //LED OFF Code
 if(t<38)
 {
  digitalWrite(8,LOW);
  digitalWrite(7,HIGH);
 }
 else
 {
  digitalWrite(8,HIGH);
  digitalWrite(7,LOW);
 }
}
```

CIRCUIT DIAGRAM WITH OUTPUT:



Circuit Diagram To Build A Smart Home In Thinkercad With 2 Sensors, An LED, Buzzer.

SCHEMATIC VIEW :



Schematic View To Build A Smart Home In Thinkercad With 2 Sensors, An LED, Buzzer.