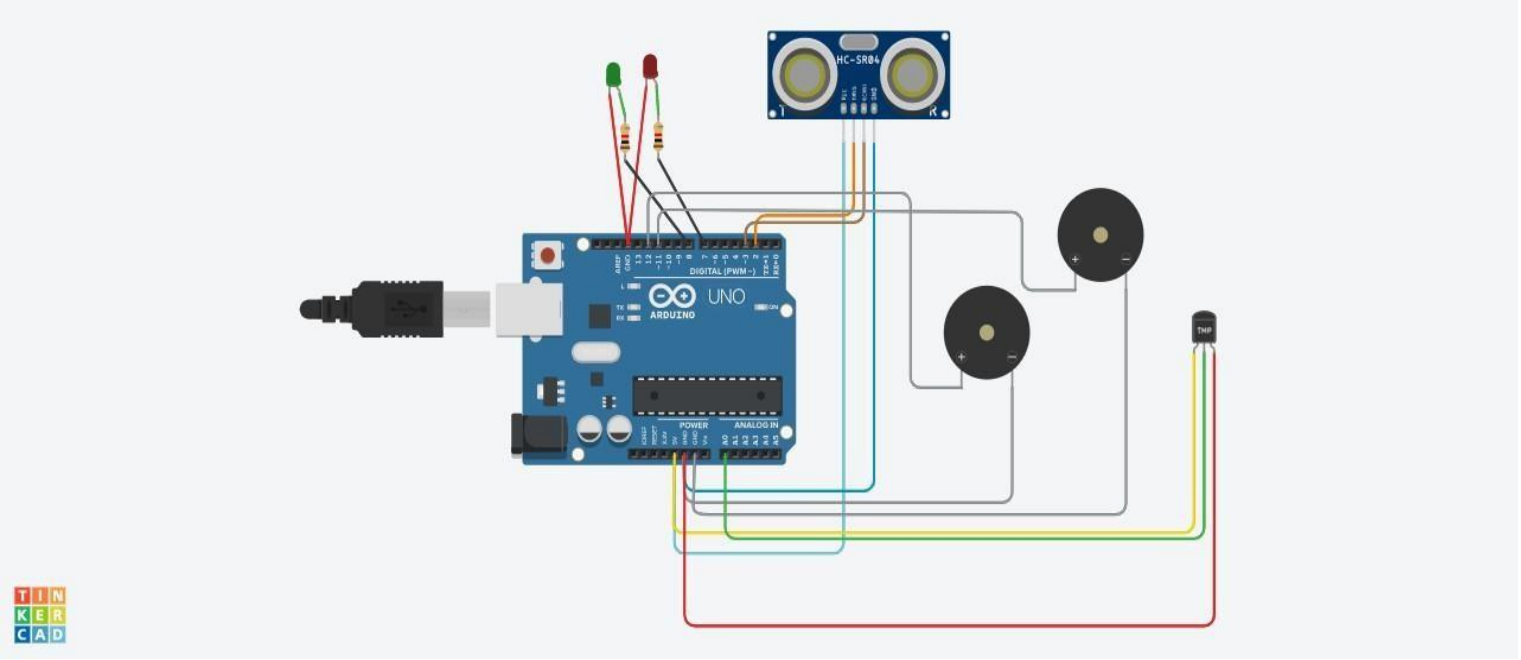
ASSIGNMENT 1

ASSIGNMENT DATE	24-SEP-2022
STUDENT NAME	L.Vishnu Prakash
STUDENT ROLL NUMBER	111519104174
MAXIMUM MARK	2MARK

QUESTION:

Build a smart home in tinker cad use atleast 2sensors,led,buzzer in a circuit.simulate in a single code.

SMART Home Circuit Connection:



COMPONENTS

Quantity	Component
1	Arduino Uno R3
1	Red LED
1	Green LED
1	Temperature Sensor [TMP36]
1	Ultrasonic Distance Sensor
2	1 kΩ Resistor
2	Piezo

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);
    }
}
```