ASSIGNMENT 1

ASSIGNMENT DATE	24-SEP-2022
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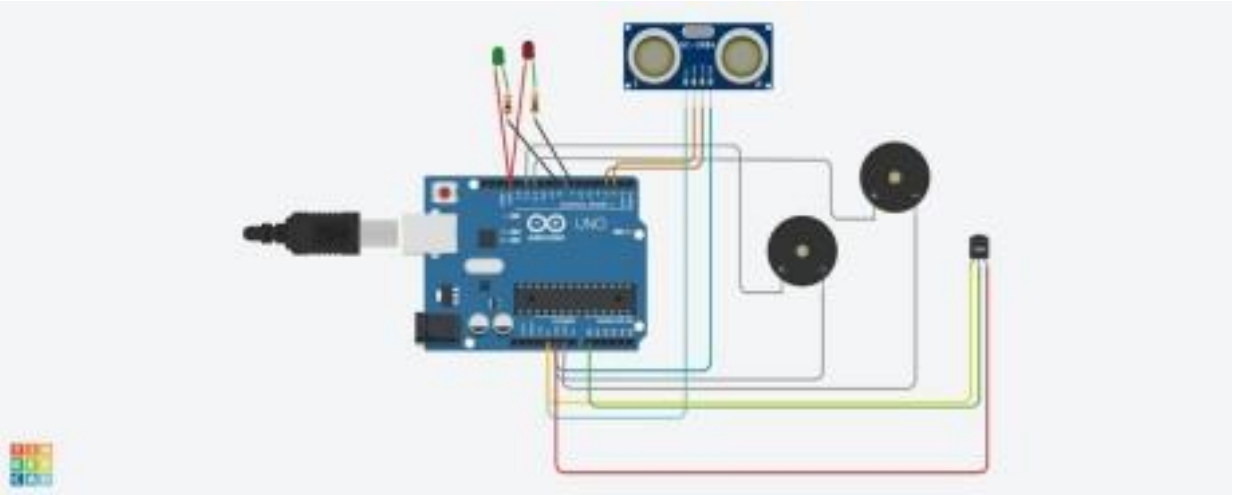
MAXIMUM MARK	2MARK

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);
 }
}
```