Assignment -1

Smart home circuit connection in Tinkercad

Assignment Date	20 September 2022
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Student Roll Number	960219106038
Maximum Marks	2 Marks

Question-1:

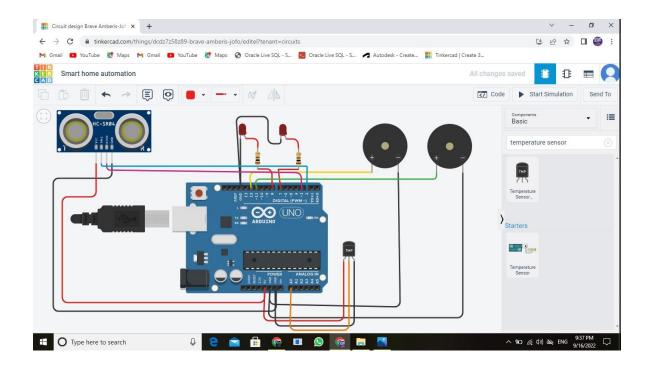
Make a Smart home in Tinkercad, using 2+ sensors, LED, Buzzer in single code and circuit.

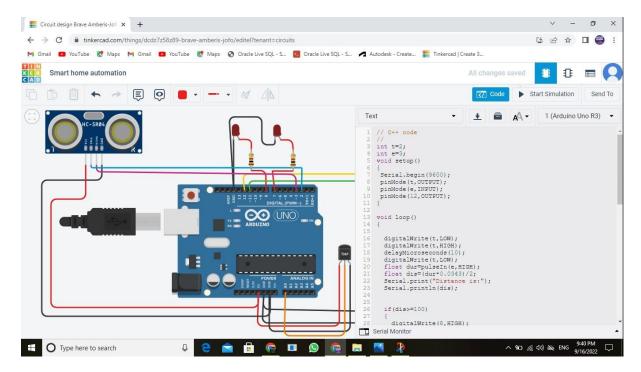
Solution:

```
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/dcdz7z58z89-smart-home-automation