# ASSIGNMENT 1

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| ASSIGNMENT DATE | 24-SEP-2022 |
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| STUDENT ROLL NUMBER | 111519104173 |
| 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:
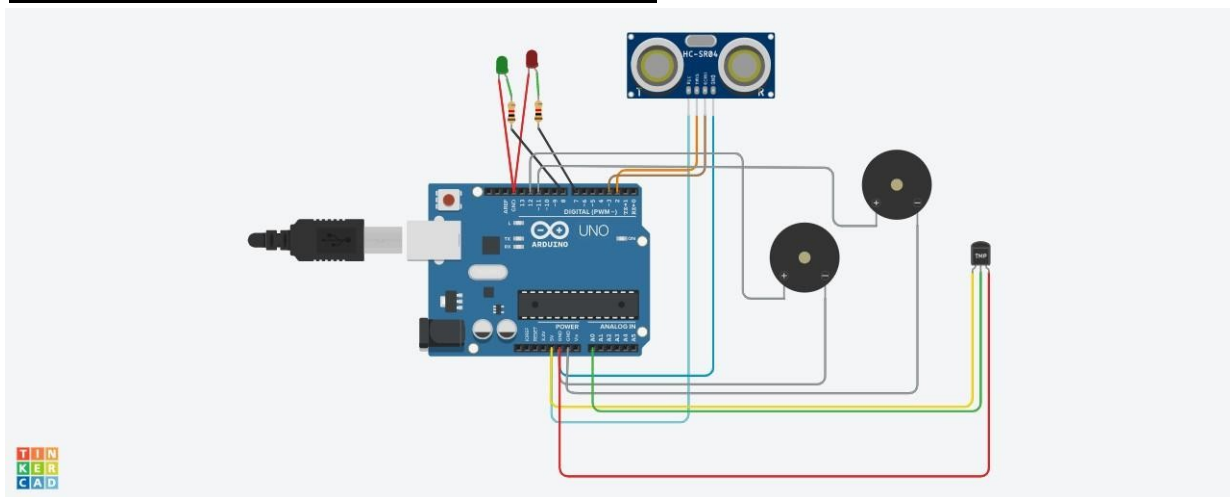


## COMPONENTS

| 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);
}
```

```arduino
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);
    }
}
```