

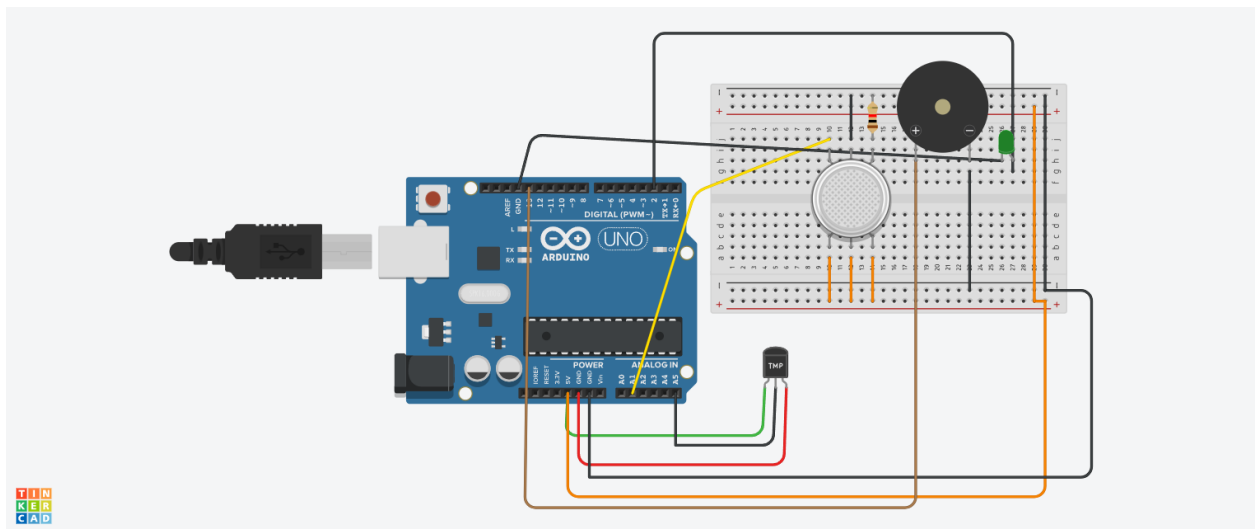
ASSIGNMENT 1

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*Build a smart home in tinkercad use atleast 2 sensor, LED, Buzzer in a circuits
simulate in a single code*

Simulation:



Code:

```
int tmp=A5;

int gasSensor=A1;

int buzzer=13;

int led=2;

void setup()
{
    pinMode(tmp, INPUT);

    pinMode(A1, INPUT);

    pinMode(buzzer, OUTPUT);

    pinMode(led, OUTPUT);

    Serial.begin(9600);
}

void loop()
{
    tmp=analogRead(tmp);

    tmp=tmp*0.488;

    Serial.print("Tmp:");

    Serial.println(tmp);

    int sensorValue=analogRead(gasSensor);

    Serial.print("GAS LEVEL:");

    Serial.println(sensorValue);

    delay(1000);

    if(sensorValue>250)
    {
```

```

digitalWrite(buzzer, HIGH);

digitalWrite(led, HIGH);

}

else

{

digitalWrite(buzzer, LOW);

digitalWrite(led, LOW);

}

}

```

OUTPUT:

The screenshot displays the Tinkercad web interface for a circuit simulation. The circuit consists of an Arduino Uno microcontroller board connected to a breadboard. On the breadboard, there is a buzzer, an LED, and a gas sensor module. The gas sensor is connected to the Arduino's analog input pin A5. The buzzer is connected to digital pin 13, and the LED is connected to digital pin 2. The code editor on the right shows the following Arduino sketch:

```

1 int tmp=A5;
2 int gasSensor=A1;
3 int buzzer=13;
4 int led=2;
5 void setup()
6 {
7   pinMode(tmp, INPUT);
8   pinMode(A1, INPUT);
9   pinMode(buzzer,OUTPUT);
10  pinMode(led,OUTPUT);
11  Serial.begin(9600);
12 }
13 void loop()
14 {
15   tmp=analogRead(tmp);
16   tmp=tmp*0.488;
17   Serial.print("Tmp:");
18   Serial.println(tmp);
19   int sensorValue=analogRead(gasSensor);
20   Serial.print("GAS LEVEL:");
21   Serial.println(sensorValue);
22   delay(1000);
23   if(sensorValue>250)
24   {
25     digitalWrite(buzzer, HIGH);
26     digitalWrite(led, HIGH);
27   }
28   else
29   {
30     digitalWrite(buzzer, LOW);
31     digitalWrite(led, LOW);
32   }
33 }

```

The serial monitor at the bottom shows the output of the simulation:

```

Tmp:118
GAS LEVEL:366
Tmp:293
GAS LEVEL:366
Tmp:120
GAS LEVEL:366
Tmp:22
GAS LEVEL:366

```