

ASSIGNMENT 1

Hazardous Area Monitoring for Industrial Plant powered by IoT

Assignment Date: 2nd November 2022

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OBJECTIVE:

To simulate Smart Home Applications using Tinker cad with 2 sensors, LED, Buzzer in single code and circuit.

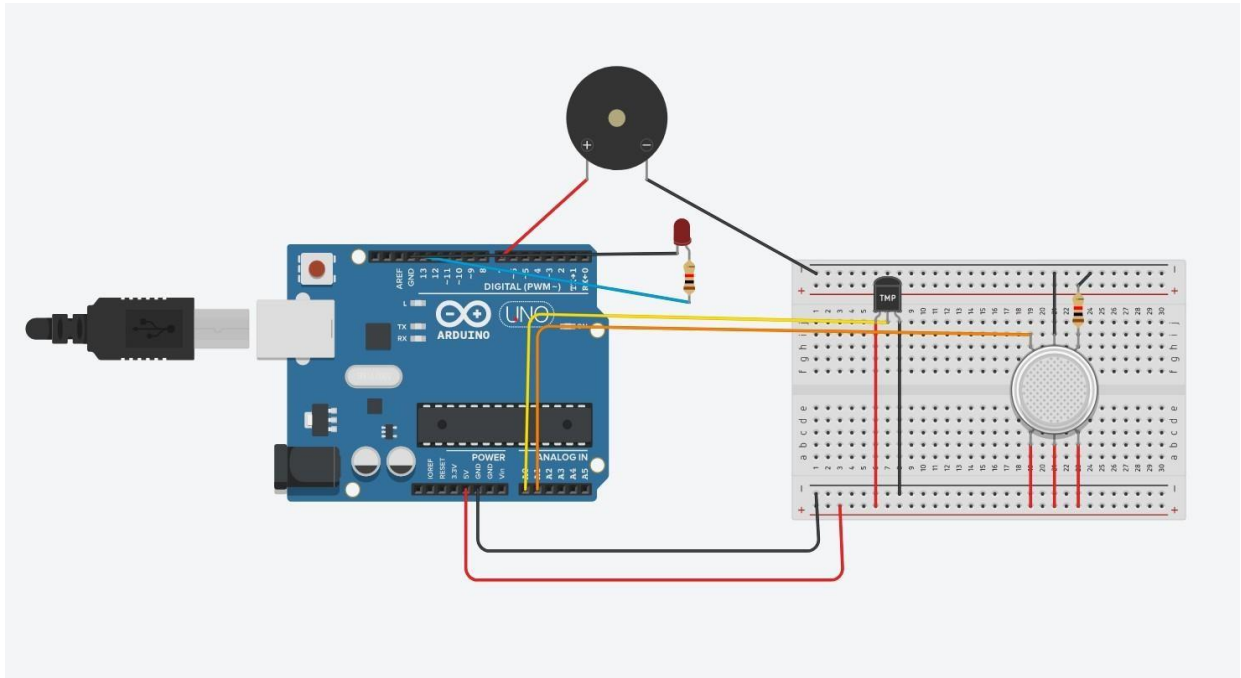
CODE:

```
float temp;
float vout;
float vout1;
int LED = 13;
int
gasSensor;
int piezo = 7;
void setup()
{
  pinMode(A0,INPUT);
  pinMode(A1,INPUT);
  pinMode(LED,OUTPUT);
  pinMode(piezo,OUTPUT
); Serial.begin(9600);
}
void loop()
{
  vout=analogRead(A1);
  vout1=(vout/1023)*500
```

```
0; temp=(vout1-
500)/10;

gasSensor=analogRead(
A0); if (temp>=80)
{ digitalWrite(LED,HIGH);
}
else
{
digitalWrite(LED,LOW);
}
if (gasSensor>=100)
{
digitalWrite(piezo,HIGH);
}
else
{
digitalWrite(piezo,LOW);
}
Serial.print("in DegreeC=
"); Serial.print(" ");
Serial.print(temp);
Serial.print("\t");
Serial.print("GasSensor=
"); Serial.print(" ");
Serial.print(gasSensor);
Serial.println();
delay(1000);
}
```

CIRCUIT DIAGRAM:



Result:

Thus, I have successfully simulated Smart Home Applications using Tinker cad with 2 sensors, LED, Buzzer in single code and circuit.