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 Tinkercad with 2 sensors, LED, Buzzer in single code and circuit.
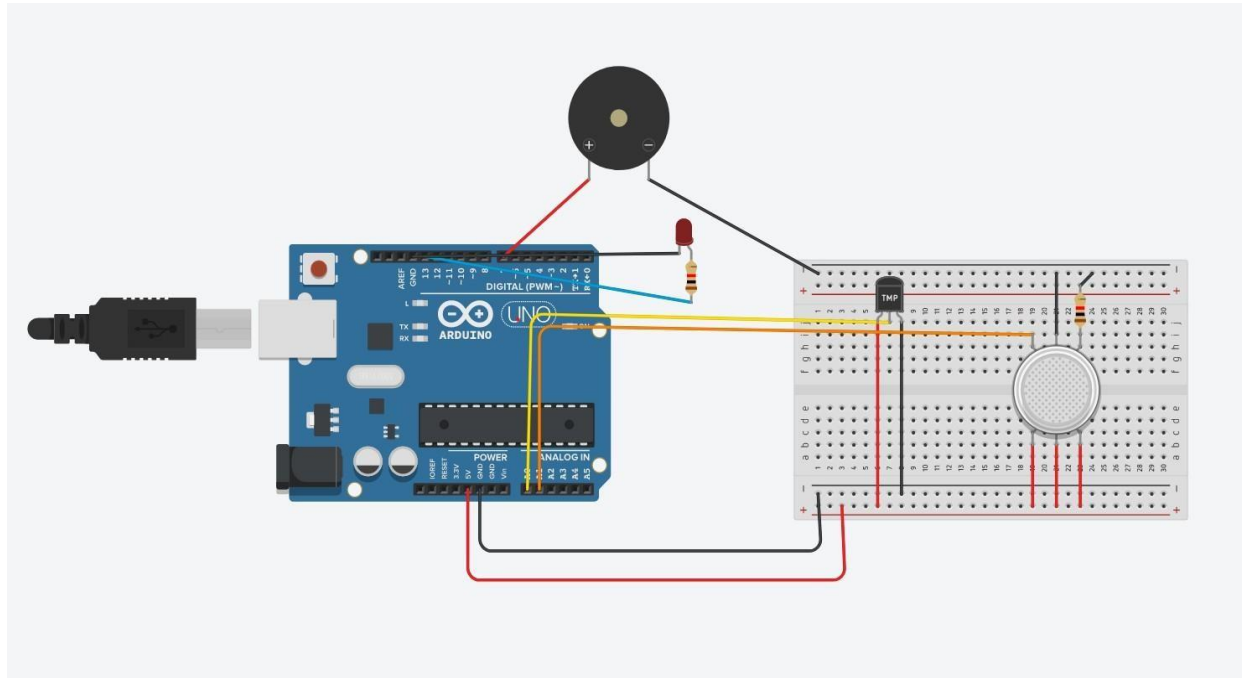
CODE:

```
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.