

ASSIGNMENT – 1

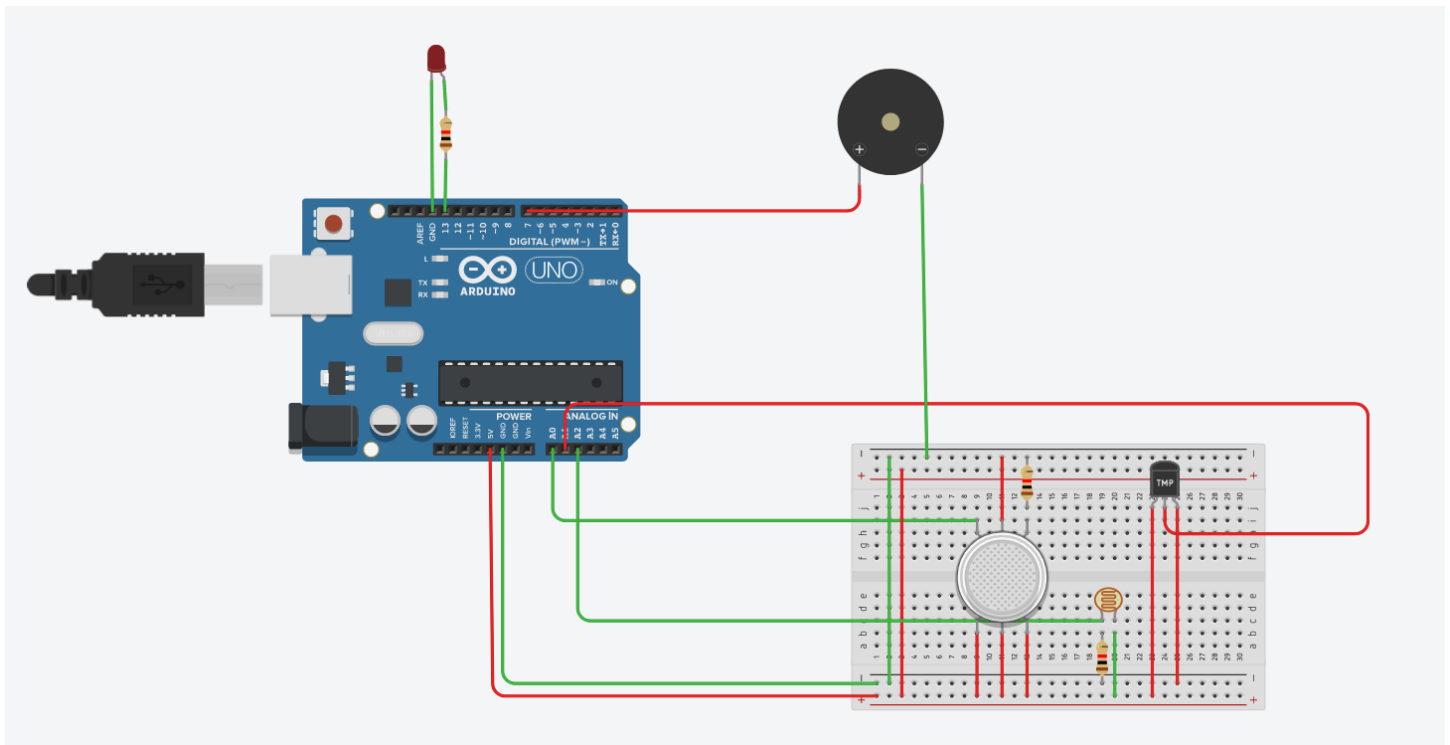
SMART HOME AUTOMATION

(FIRE ALARM SYSTEM)

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CIRCUIT DIAGRAM:



CODE:

```
float temp;  
float vout;  
float vout1;  
int LED = 13;
```

```
int gas_sensor;

int ldr;

int piezo = 7;

void setup()

{

pinMode(A0,INPUT);

pinMode(A1,INPUT);

pinMode(A2,INPUT);

pinMode(LED,OUTPUT);

pinMode(piezo,OUTPUT);

Serial.begin(9600);

}

void loop()

{

vout = analogRead(A1);

vout1 = (vout/1023)*5000;

temp = (vout1-500)/10;

gas_sensor = analogRead(A0);

ldr= analogRead(A2);

if (temp >= 80)

{

digitalWrite(LED,HIGH);
```

```
}  
  
else  
  
{  
digitalWrite(LED,LOW);  
}  
  
if (ldr <= 500){  
digitalWrite(LED,HIGH);  
}  
  
else  
  
{  
digitalWrite(LED,LOW);  
}  
  
if (gas_sensor >= 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(gas_sensor);

Serial.print("\t");

Serial.print("LDRSensor = ");

Serial.print(" ");

Serial.print(ldr);

Serial.println();

delay(1000);

}

```

OUTPUT:

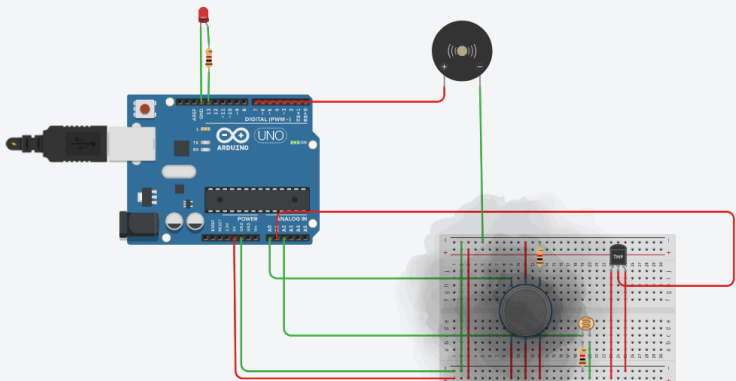
TINKERCAD IBM Assignment 1

Simulator time: 00:00:52

1 (Arduino Uno R3)

Code Stop Simulation Send To

Gas Sensor Name 1



```

28 else
29 {
30 digitalWrite(LED,LOW);
31 }
32 if (ldr <= 500)
33 {
34 digitalWrite(LED,HIGH);
35 }
36 else
37 {
38 digitalWrite(LED,LOW);
39 }
40 if (gas_sensor >= 100)
41 {
42 digitalWrite(piezo,HIGH);
43 }
44 else
45 {
46 digitalWrite(piezo,LOW);
47 }
48 Serial.print("in DegreeC = ");
49 Serial.print(" ");
50 Serial.print(temp);
51 Serial.println("\t");
52

```

Serial Monitor

in DegreeC = 24.78	GasSensor = 361	LDRSensor = 6
in DegreeC = 24.78	GasSensor = 361	LDRSensor = 6
in DegreeC = 24.78	GasSensor = 361	LDRSensor = 6
in DegreeC = 24.78	GasSensor = 361	LDRSensor = 6
in DegreeC = 24.78	GasSensor = 361	LDRSensor = 6
in DegreeC = 24.78	GasSensor = 361	LDRSensor = 6
in DegreeC = 24.78	GasSensor = 361	LDRSensor = 6

Send Clear

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