ASSIGNMENT – 1

SMART HOME AUTOMATION

(FIRE ALARM SYSTEM)

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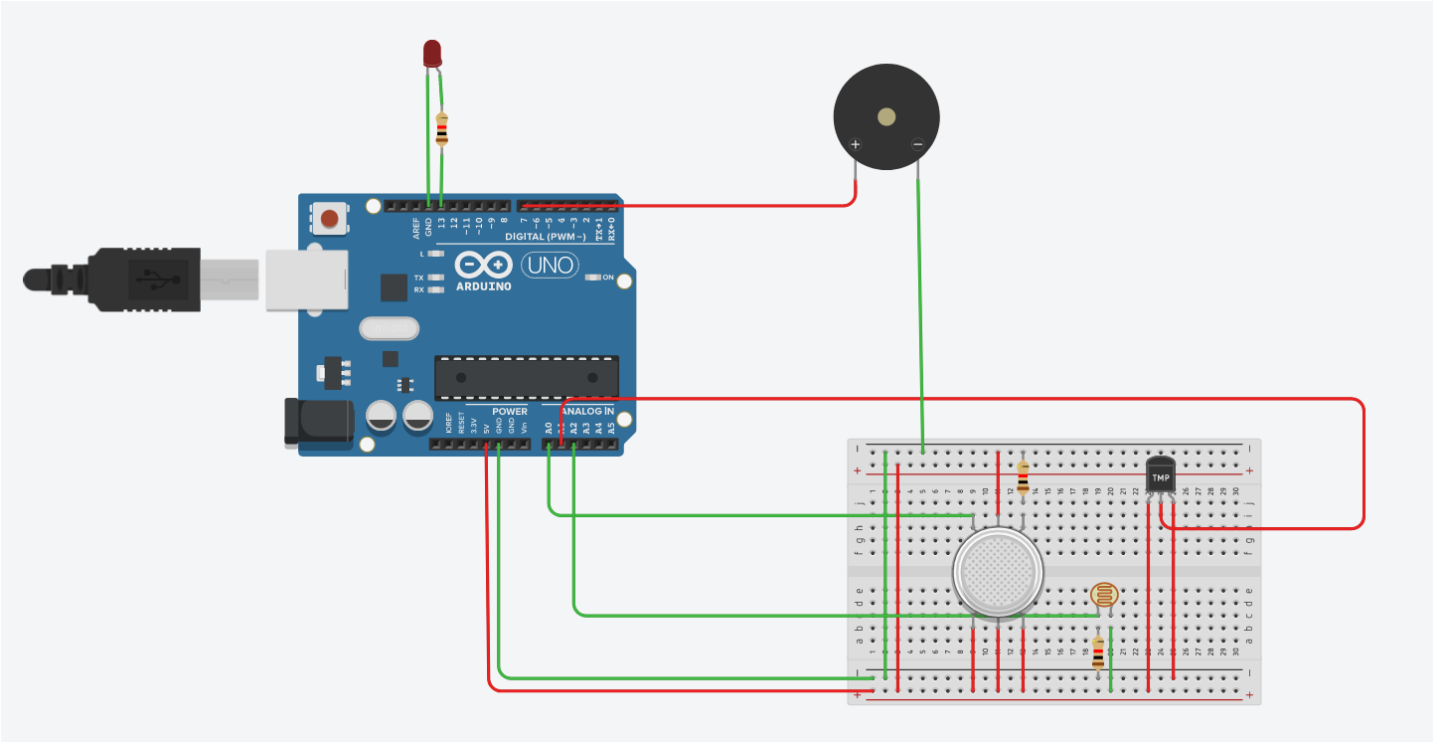
CIRCUIT DIAGRAM:



CODE:

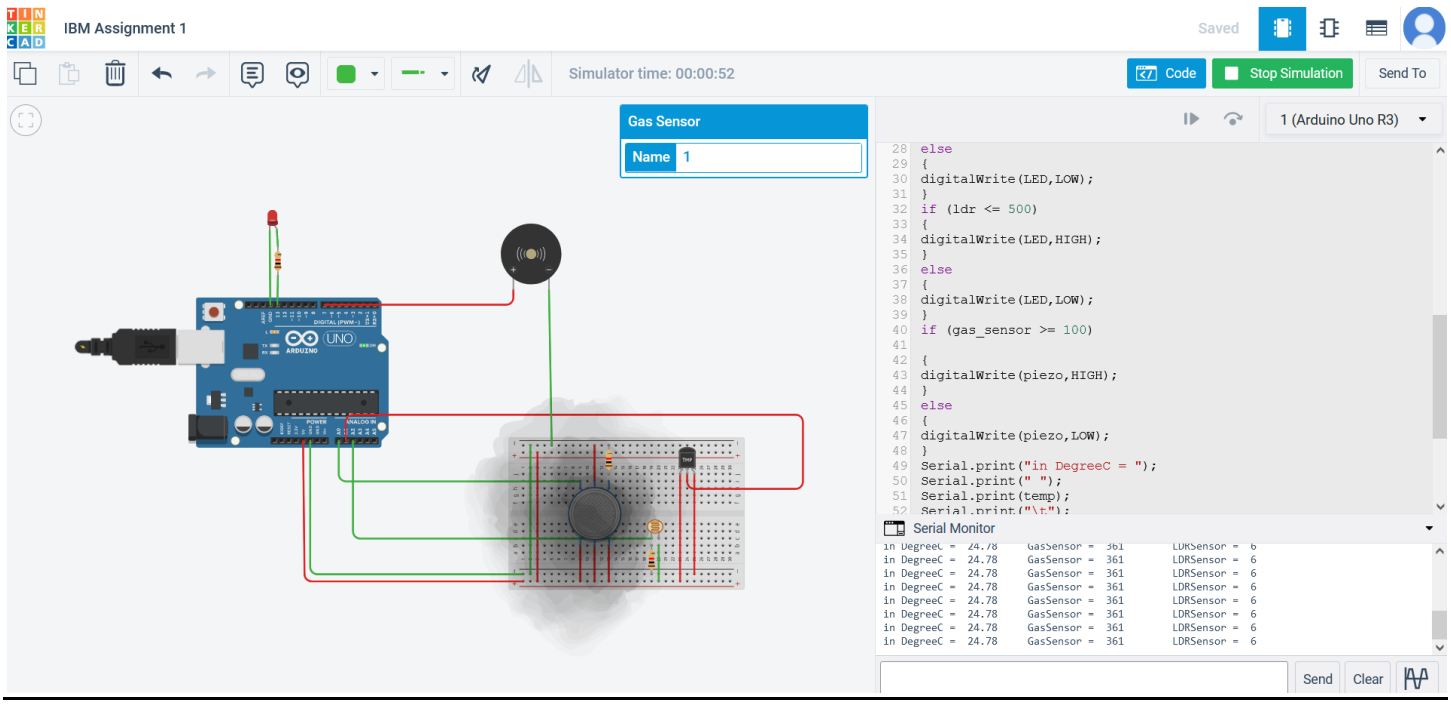
```
float temp;

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 LINK: [Circuit design IBM Assignment 1 | Tinkercad]