SMART HOME AUTOMATION

REQUIREMENTS:

Ardunio Uno R3, LED, Resistor, Piezo, Gas sensor, Temperature sensor, Breadboard small.

SOFTWARE REQUIRED:

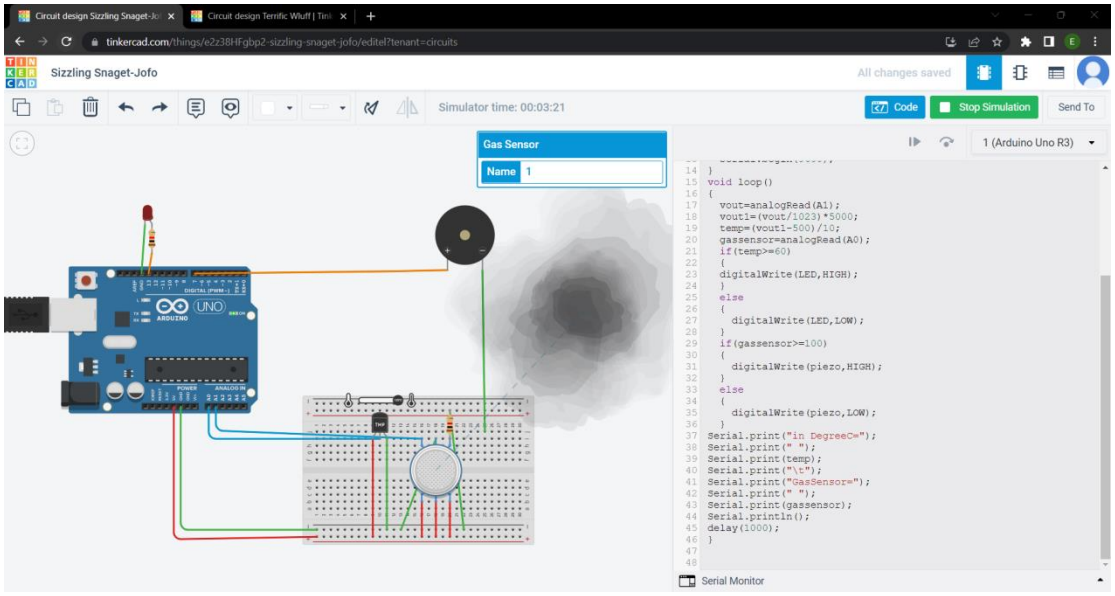
Tinkercad software.

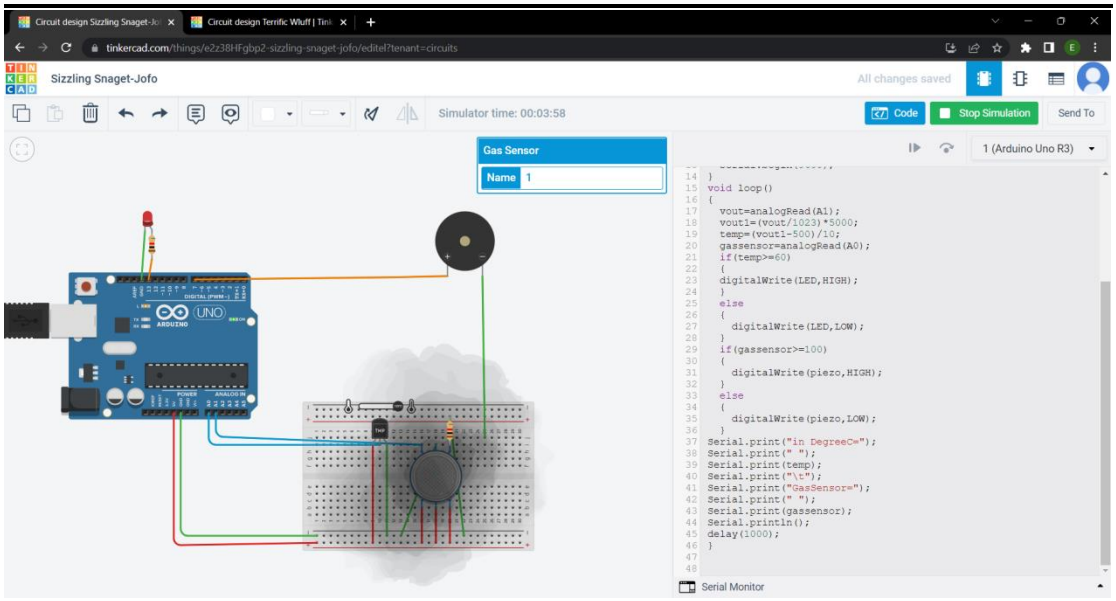
CODE:

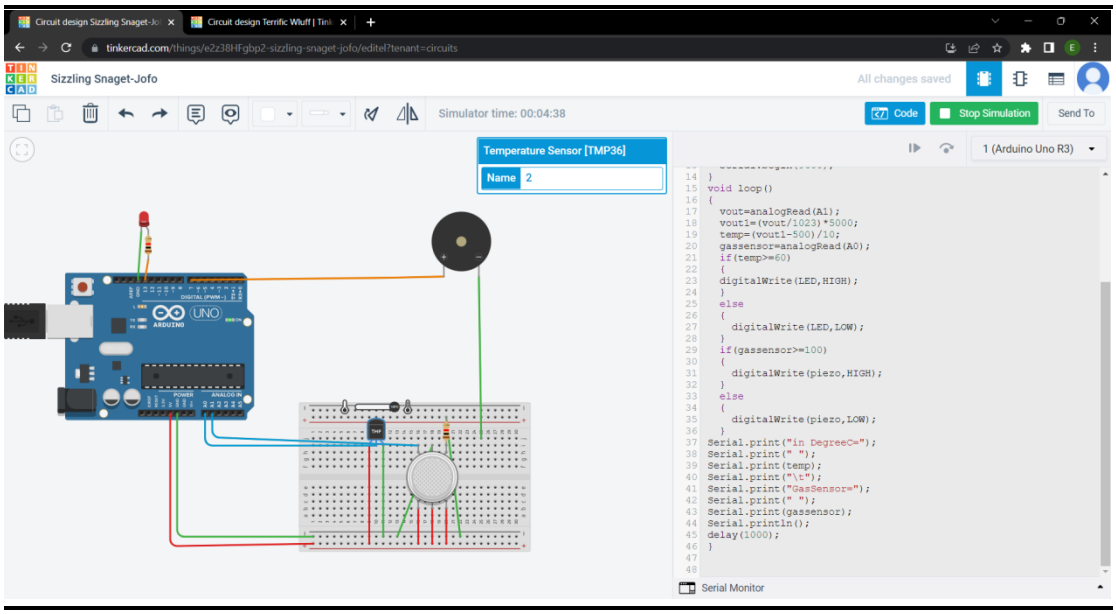
```
float temp;
float vout;
float vout1;
int LED=13;
int gassensor;
int piezo=7;
void setup()
{
  pinMode(A0,INPUT);
  pinMode(A1,INPUT);
  pinMode(LED,OUTPUT);
  pinMode(piezo,OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  vout=analogRead(A1);
  vout1=(vout/1023)*5000;
  temp=(vout1-500)/10;
  gassensor=analogRead(A0);
  if(temp>=60)
  {
  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);
}
```

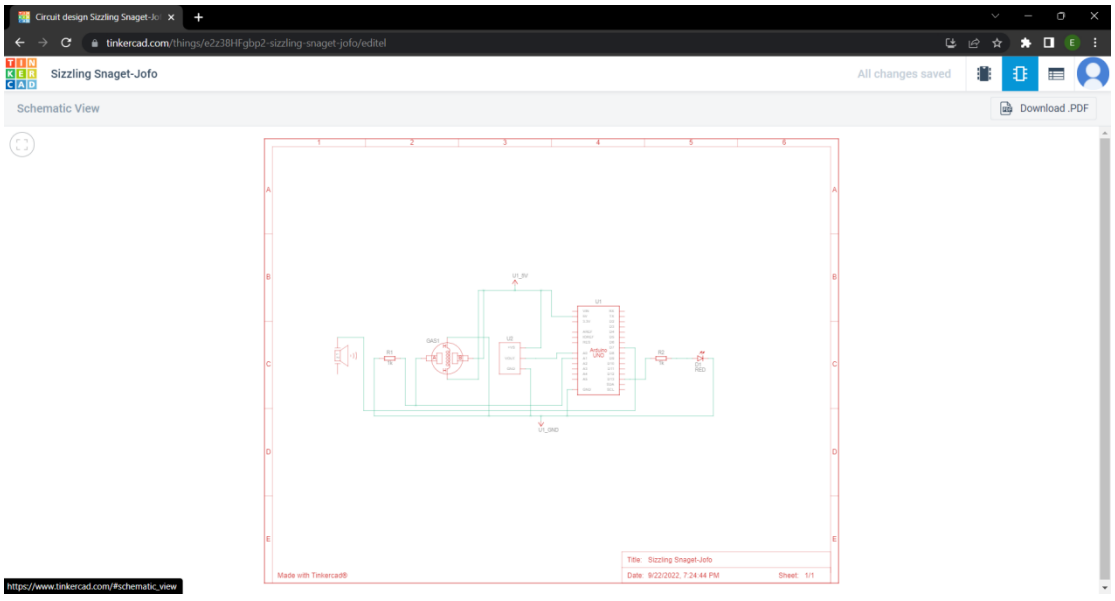
CIRCUIT DIAGRAM:


Circuit design Sizzling Snaget-Jo
Circuit design Terrific Wluff | Tink
tinkercad.com/things/e2z38HFgbp2-sizzling-snaget-jofo/editel?tenant=circuits
Sizzling Snaget-Jofo
All changes saved
Simulator time: 00:03:21
Code
Stop Simulation
Send To
Gas Sensor
Name 1
1 (Arduino Uno R3)
void loop()
{
vout=analogRead(A1);
vout1=(vout/1023)*5000;
temp=(vout1-500)/10;
gassensor=analogRead(A0);
if(temp>=60)
{
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);
}
Serial Monitor


Circuit design Sizzling Snaget-Jo
Circuit design Terrific Wluff | Tink
tinkercad.com/things/e2z38HFgbp2-sizzling-snaget-jofo/editel?tenant=circuits
Sizzling Snaget-Jofo
All changes saved
Simulator time: 00:03:58
Code
Stop Simulation
Send To
Gas Sensor
Name 1
1 (Arduino Uno R3)
void loop()
{
vout=analogRead(A1);
vout1=(vout/1023)*5000;
temp=(vout1-500)/10;
gassensor=analogRead(A0);
if(temp>=60)
{
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);
}
Serial Monitor


Circuit design Sizzling Snaget-Jo
Circuit design Terrific Wluff | Tink
tinkercad.com/things/e2z38HFgbp2-sizzling-snaget-jofo/editel?tenant=circuits
Sizzling Snaget-Jofo
All changes saved
Simulator time: 00:04:38
Code
Stop Simulation
Send To
Temperature Sensor [TMP36]
Name 2
1 (Arduino Uno R3)
void loop()
{
vout=analogRead(A1);
vout1=(vout/1023)*5000;
temp=(vout1-500)/10;
gassensor=analogRead(A0);
if(temp>=60)
{
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);
}
Serial Monitor

SCHEMATIC DIAGRAM:



DEMO LINK:

https://www.tinkercad.com/things/e2z38HFgbp2-sizzling-snaget-jofo/editel?sharecode=jHjo8G3a_GklOI4aB_Y-43FNpVFoJvKNYoyTA3JK3Ts