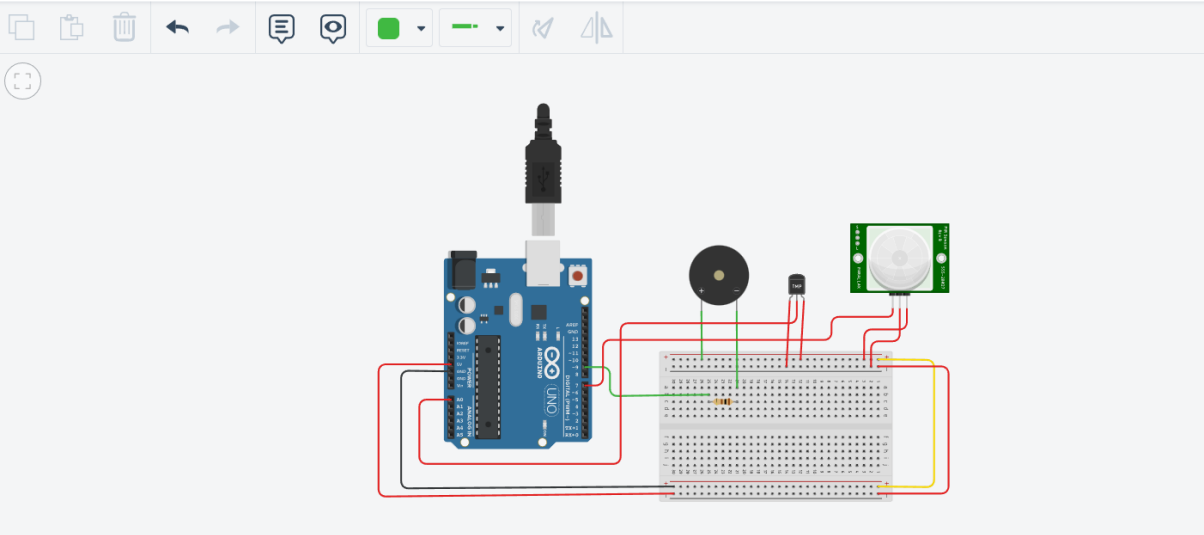
GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

Assignment 1

Circuit Diagram:

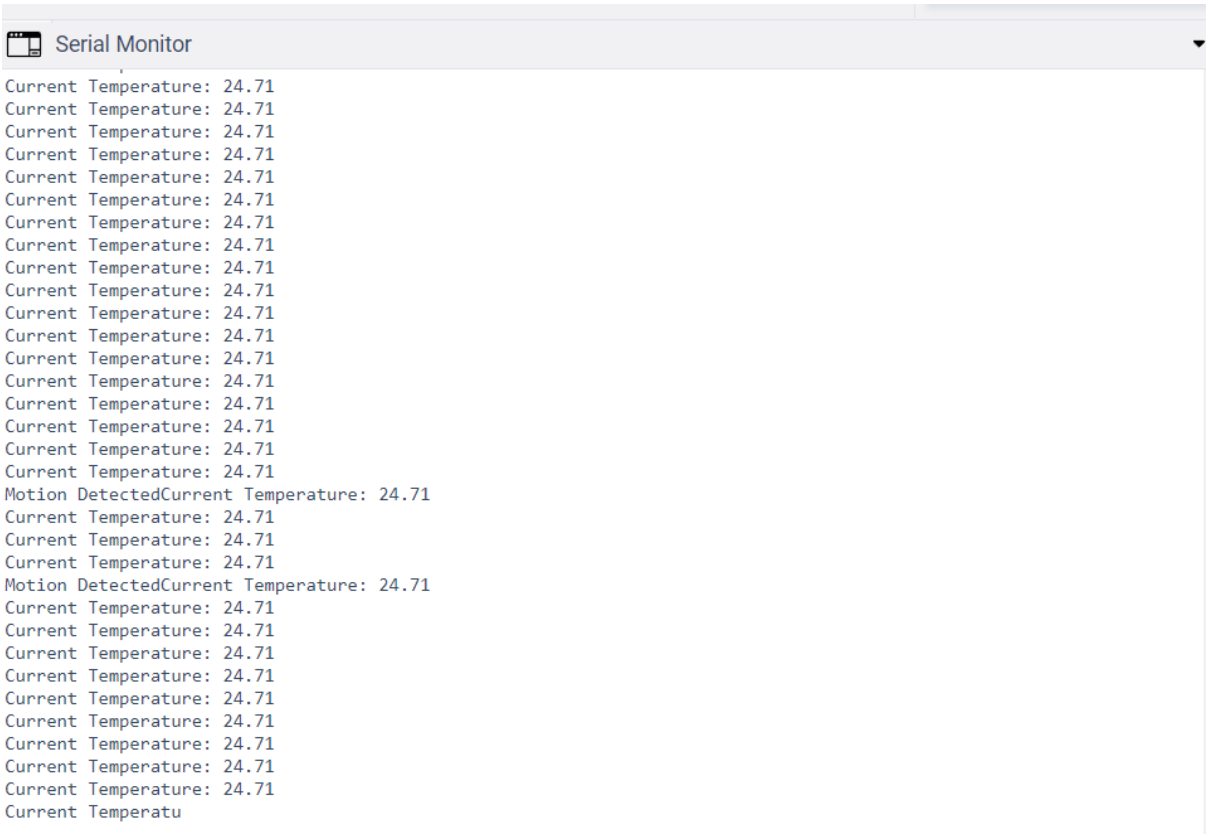


Code:

```
const int buzzer = 9; //buzzer to arduino pin 9
int sensePin = A0; //This is the Arduino Pin that will read the sensor output
int sensorInput; //The variable we will use to store the sensor input
double temp; //The variable we will use to store temperature in degrees.
#define pirPin 7
int calibrationTime = 30;
long unsigned int lowIn;
long unsigned int pause = 5000;
boolean lockLow = true;
boolean takeLowTime;
int PIRValue = 0;
```

```
void setup(){
  Serial.begin(9600); //Start the Serial Port at 9600 baud (default)
  pinMode(pirPin, INPUT);
  pinMode(buzzer, OUTPUT); // Set buzzer - pin 9 as an output
}
void loop(){
sensorInput = analogRead(A0); //read the analog sensor and store it
temp = (double)sensorInput / 1024; //find percentage of input reading
temp = temp * 5; //multiply by 5V to get voltage
temp = temp-0.5 ; //Subtract the offset
temp = temp * 100; //Convert to degrees
if(temp > 60){
  tone(buzzer, 1000); // Send 1KHz sound signal...
  delay(1000);        // ...for 1 sec
  noTone(buzzer);     // Stop sound...
  delay(1000);}       // ...for 1sec
Serial.print("Current Temperature: ");
Serial.println(temp);
  PIRSensor();
}
void PIRSensor() {
   if(digitalRead(pirPin) == HIGH) {
            Serial.print("Motion Detected");
        tone(buzzer, 2000); // Send 1KHz sound signal...
        delay(1000);        // ...for 1 sec
        noTone(buzzer);     // Stop sound...
        delay(1000);}       // ...for 1sec
      }
```

Output:


Serial Monitor
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