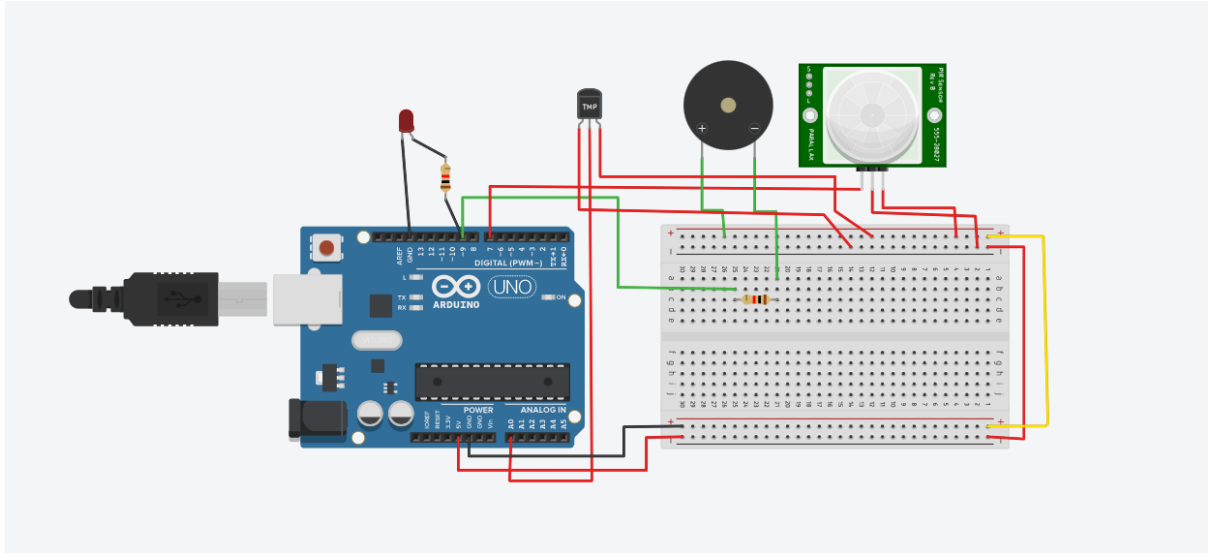# GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

ASSIGNMENT 1

CIRCUIT;

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)
```

```arduino
 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 output:

```
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Motion DetectedCurrent Temperature: 24.71
Motion DetectedCurrent Temperature: 24.71
Current Temperature: 24.71
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Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 24.71
Current Temperature: 77.93
Current Temperature: 77.93
Current Temperature: 77.93
```