#include <SoftwareSerial.h>

#include <LiquidCrystal.h>

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

SoftwareSerial mySerial(9, 10);

int sensor=7;

int speaker=8;

int gas\_value,Gas\_alert\_val, Gas\_shut\_val;

int Gas\_Leak\_Status;

int sms\_count=0;

void setup()

{

pinMode(sensor,INPUT);

pinMode(speaker,OUTPUT);

mySerial.begin(9600);

Serial.begin(9600);

lcd.begin(16,2);

delay(500);

}

void loop()

{

CheckGas();

CheckShutDown();

}

void CheckGas()

{

lcd.setCursor(0,0);

lcd.print("Gas Scan - ON");

Gas\_alert\_val=ScanGasLevel();

if(Gas\_alert\_val==LOW)

{

SetAlert(); // Function to send SMS Alerts

}}

int ScanGasLevel()

{

gas\_value=digitalRead(sensor); // reads the sensor output (Vout of LM35)

return gas\_value; // returns temperature value in degree celsius

}

void SetAlert()

{

digitalWrite(speaker,HIGH);

while(sms\_count<3) //Number of SMS Alerts to be sent

{

SendTextMessage(); // Function to send AT Commands to GSM module

}

Gas\_Leak\_Status=1;

lcd.setCursor(0,1);

lcd.print("Gas Alert! SMS Sent!");

}

void CheckShutDown()

{

if(Gas\_Leak\_Status==1)

{

Gas\_shut\_val=ScanGasLevel();

if(Gas\_shut\_val==HIGH)

{

lcd.setCursor(0,1);

lcd.print("No Gas Leaking");

digitalWrite(speaker,LOW);

sms\_count=0;

Gas\_Leak\_Status=0;

}}}

void SendTextMessage()

{

mySerial.println("AT+CMGF=1"); //To send SMS in Text Mode

delay(1000);

mySerial.println("AT+CMGS=\"+919495xxxxxx\"\r"); // change to the phone number you using

delay(1000);

mySerial.println("Gas Leaking!");//the content of the message

delay(200);

mySerial.println((char)26);//the stopping character

delay(1000);

mySerial.println("AT+CMGS=\"+918113xxxxxx\"\r"); // change to the phone number you using

delay(1000);

mySerial.println("Gas Leaking!");//the content of the message

delay(200);

mySerial.println((char)26);//the message stopping character

delay(1000);

sms\_count++;

}