#include <LiquidCrystal.h>

#include<Servo.h>

const int rs = 8, en = 9, d4 = 10, d5 = 11, d6 = 12, d7 = 13;

LiquidCrystal lcd(rs, en, d4, d5, d6, d7);

Servo door;

int buz=A3;

int sts=0;

int gs=A0;

int fs=A1;

int spr=A4;

void setup(void)

{

Serial.begin(9600);

lcd.begin(16,2);

lcd.print(" WELCOME ");

pinMode(buz, OUTPUT);

pinMode(spr, OUTPUT);

pinMode(gs, INPUT);

pinMode(fs, INPUT);

digitalWrite(spr,1);

door.attach(A2);

door.write(0);

}

void loop(void)

{

int gval=analogRead(gs);

int fval=1-digitalRead(fs);

lcd.clear();

lcd.print("GAS:"+String(gval));

lcd.setCursor(0,1);

lcd.print("FIRE:"+String(fval));

sts=0;

if(gval>300)

{

digitalWrite(buz,1);

door.write(90);

delay(500);

digitalWrite(buz,0);

sts=1;

}

if(fval>0)

{

digitalWrite(buz,1);

digitalWrite(spr,0);

delay(500);

digitalWrite(buz,0);

sts=2;

}

if(sts>0)

{

if(sts==1)

Serial.print("GAS Leakage Detected,"+String(gval)+ ","+String(fval)+"^0\n");

if(sts==2)

Serial.print("Fire Detected,"+String(gval)+ ","+String(fval)+"^0\n");

delay(10000);

}

delay(300);

}