#include <Adafruit\_MLX90614.h>

#include <Servo.h>

#define pump D8

#define Flame\_Sensor\_1 D5

#define Flame\_Sensor\_2 D6

#define LMPositive D3

#define LMNegative D4

#define RMPositive D7

#define RMNegative 3

Servo myservo;

Adafruit\_MLX90614 mlx = Adafruit\_MLX90614();

bool fire = false;

double temp;

int pos = 0;

void Put\_Off\_Fire() {

digitalWrite(LMPositive, LOW);

digitalWrite(LMNegative, LOW);

digitalWrite(RMPositive, LOW);

digitalWrite(RMNegative, LOW);

digitalWrite(pump, HIGH);

for (pos = 50; pos <= 130; pos += 1) {

myservo.write(pos);

delay(10);

}

for (pos = 130; pos >= 50; pos -= 1) {

myservo.write(pos);

delay(10);

}

digitalWrite(pump, LOW);

myservo.write(90);

fire = false;

}

void setup() {

Serial.begin(9600);

pinMode(Flame\_Sensor\_1, INPUT);

pinMode(Flame\_Sensor\_2, INPUT);

pinMode(pump, OUTPUT);

pinMode(LMPositive, OUTPUT);

pinMode(LMNegative, OUTPUT);

pinMode(RMPositive, OUTPUT);

pinMode(RMNegative, OUTPUT);

myservo.attach(D0, 500, 2500);

myservo.write(0);

digitalWrite(pump, LOW);

if (!mlx.begin()) {

Serial.println("Error connecting to MLX sensor. Check wiring.");

while (1);

}

}

void loop() {

temp = mlx.readObjectTempC();

Serial.println(temp);

delay(2000);

int value1 = digitalRead(Flame\_Sensor\_1);

int value2 = digitalRead(Flame\_Sensor\_2);

Serial.print("Sensor 1 value ");

Serial.println(value1);

Serial.print("Sensor 2 value ");

Serial.println(value2);

if (digitalRead(Flame\_Sensor\_1) == HIGH && digitalRead(Flame\_Sensor\_2) == HIGH) {

digitalWrite(LMPositive, HIGH);

digitalWrite(LMNegative, LOW);

digitalWrite(RMPositive, HIGH);

digitalWrite(RMNegative, LOW);

} else if (digitalRead(Flame\_Sensor\_1) == HIGH && digitalRead(Flame\_Sensor\_2) == LOW) {

digitalWrite(LMPositive, LOW);

digitalWrite(LMNegative, HIGH);

digitalWrite(RMPositive, HIGH);

digitalWrite(RMNegative, LOW);

} else if (digitalRead(Flame\_Sensor\_1) == LOW && digitalRead(Flame\_Sensor\_2) == HIGH) {

digitalWrite(LMPositive, HIGH);

digitalWrite(LMNegative, LOW);

digitalWrite(RMPositive, LOW);

digitalWrite(RMNegative, HIGH);

} else {

Serial.println("NOTHING");

}

if (temp > 45 && !fire) {

Put\_Off\_Fire();

}

}