// C++ code

//

#include <Servo.h>

int potD = 0;

int potE = 0;

int led1 = 0;

int led2 = 0;

int led3 = 0;

int i = 0;

int PDsup = 0;

int PDinf = 0;

int PEsup = 0;

int PEinf = 0;

int j = 0;

int k = 0;

int ACESSO = 0;

int unnamed = 0;

int q = 0;

Servo servo\_12;

int counter;

int counter2;

int counter3;

int counter4;

void setup()

{

servo\_12.attach(12, 500, 2500);

pinMode(9, OUTPUT);

pinMode(10, OUTPUT);

pinMode(11, OUTPUT);

pinMode(A0, INPUT);

pinMode(A1, INPUT);

Serial.begin(9600);

servo\_12.write(0);

for (counter = 0; counter < 5; ++counter) {

analogWrite(9, 0);

analogWrite(10, 0);

analogWrite(11, 0);

delay(100); // Wait for 100 millisecond(s)

analogWrite(9, 255);

analogWrite(10, 255);

analogWrite(11, 255);

delay(100); // Wait for 100 millisecond(s)

}

PDsup = 131;

PDinf = 126;

PEsup = 68;

PEinf = 63;

led3 = 1;

ACESSO = LOW;

j = 0;

k = 180;

}

void loop()

{

j = j;

k = k;

potD = map(analogRead(A0), 0, 1023, j, k);

potE = map(analogRead(A1), 0, 1023, j, k);

Serial.print("potD: ");

Serial.print(potD);

Serial.print(" potE: ");

Serial.println(potE);

ACESSO = ACESSO;

if (potD >= PDinf && potD <= PDsup) {

digitalWrite(11, HIGH);

led1 = led3;

} else {

analogWrite(11, ACESSO);

led1 = 0;

}

if (potE >= PEinf && potE <= PEsup) {

digitalWrite(9, HIGH);

led2 = led3;

} else {

analogWrite(9, ACESSO);

led2 = 0;

}

if (led1 == 1 && led2 == 1) {

PEsup = 7;

PEinf = 0;

PDsup = 7;

PDinf = 0;

led3 = 2;

digitalWrite(9, LOW);

digitalWrite(11, LOW);

digitalWrite(10, LOW);

delay(500); // Wait for 500 millisecond(s)

for (i = 0; i <= 255; i += 5) {

analogWrite(10, i);

delay(10); // Wait for 10 millisecond(s)

}

delay(500); // Wait for 500 millisecond(s)

for (i = 255; i >= 0; i -= 5) {

analogWrite(10, i);

delay(10); // Wait for 10 millisecond(s)

}

}

if (led1 == 2 && led2 == 2) {

PEsup = 7;

PEinf = 0;

PDsup = 180;

PDinf = 173;

led3 = 3;

for (counter2 = 0; counter2 < 5; ++counter2) {

digitalWrite(9, HIGH);

digitalWrite(11, HIGH);

delay(200); // Wait for 200 millisecond(s)

digitalWrite(9, LOW);

digitalWrite(11, LOW);

delay(200); // Wait for 200 millisecond(s)

}

digitalWrite(10, HIGH);

}

if (led1 == 3 && led2 == 3) {

for (counter3 = 0; counter3 < 10; ++counter3) {

digitalWrite(10, HIGH);

delay(100); // Wait for 100 millisecond(s)

digitalWrite(10, LOW);

delay(100); // Wait for 100 millisecond(s)

}

led3 = 4;

PEsup = 160;

PEinf = 153;

PDsup = 30;

PDinf = 23;

}

if (led1 == 4 && led2 == 4) {

led3 = 5;

PEsup = 93;

PEinf = 85;

PDsup = 7;

PDinf = 0;

for (counter4 = 0; counter4 < 5; ++counter4) {

digitalWrite(9, LOW);

digitalWrite(10, HIGH);

digitalWrite(11, LOW);

delay(200); // Wait for 200 millisecond(s)

digitalWrite(9, HIGH);

digitalWrite(10, LOW);

digitalWrite(11, HIGH);

delay(200); // Wait for 200 millisecond(s)

}

}

if (led1 == 5 && led2 == 5) {

ACESSO = HIGH;

PEsup = 180;

PEinf = 0;

PDsup = 180;

PDinf = 0;

j = 0;

k = 90;

digitalWrite(10, HIGH);

potD = map(analogRead(A0), 0, 1023, j, k);

potE = map(analogRead(A1), 0, 1023, j, k);

Serial.println("ABERTO/OPEN");

Serial.println("GIRE/ TURN");

servo\_12.write(potD);

if (potE >= 0 && potE <= 40 || potE >= 50 && potE < 90) {

Serial.println("IT'S A TRAP!");

servo\_12.write(0);

j = 0;

k = 180;

led3 = 1;

ACESSO = LOW;

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

}

}

delay(10); // Wait for 10 millisecond(s)

}