#include "M5Atom.h"

const uint8\_t Srv0 = 22; //GPIO Right Leg

const uint8\_t Srv1 = 19; //GPIO Right Foot

const uint8\_t Srv2 = 23; //GPIO Left Foot

const uint8\_t Srv3 = 33; //GPIO Left Leg

const uint8\_t srv\_CH0 = 0, srv\_CH1 = 1, srv\_CH2 = 2, srv\_CH3 = 3; //チャンネル

const double PWM\_Hz = 50; //PWM周波数

const uint8\_t PWM\_level = 16; //PWM 16bit(0～65535)

int pulseMIN = 1640; //0deg 500μsec 50Hz 16bit : PWM周波数(Hz) x 2^16(bit) x PWM時間(μs) / 10^6

int pulseMAX = 8190; //180deg 2500μsec 50Hz 16bit : PWM周波数(Hz) x 2^16(bit) x PWM時間(μs) / 10^6

int cont\_min = 0;

int cont\_max = 180;

int angZero[] = {90, 90, 90, 90};

void Srv\_drive(int srv\_CH,int SrvAng){

 SrvAng = map(SrvAng, cont\_min, cont\_max, pulseMIN, pulseMAX);

 ledcWrite(srv\_CH, SrvAng);

}

void setup() {

 M5.begin(true, false, true); //SerialEnable , I2CEnable , DisplayEnable

 pinMode(Srv0, OUTPUT);

 pinMode(Srv1, OUTPUT);

 pinMode(Srv2, OUTPUT);

 pinMode(Srv3, OUTPUT);

 //モータのPWMのチャンネル、周波数の設定

 ledcSetup(srv\_CH0, PWM\_Hz, PWM\_level);

 ledcSetup(srv\_CH1, PWM\_Hz, PWM\_level);

 ledcSetup(srv\_CH2, PWM\_Hz, PWM\_level);

 ledcSetup(srv\_CH3, PWM\_Hz, PWM\_level);

 //モータのピンとチャンネルの設定

 ledcAttachPin(Srv0, srv\_CH0);

 ledcAttachPin(Srv1, srv\_CH1);

 ledcAttachPin(Srv2, srv\_CH2);

 ledcAttachPin(Srv3, srv\_CH3);

 Srv\_drive(srv\_CH0, angZero[0]);

 Srv\_drive(srv\_CH1, angZero[1]);

 Srv\_drive(srv\_CH2, angZero[2]);

 Srv\_drive(srv\_CH3, angZero[3]);

}

void loop() {

}