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#define ANALOG_IN_PIN_A1 A1
#define ANALOG_IN_PIN_A0 A0

#define CS 12
#define UD 10
#define INC 11
#define PIN8 8
#define PIN9 9

int pot_position = 0;
int pot_target_position = 0;
int max_pot_pos = 40;
int min_pot_pos = 1;
bool pot_reset = 0;

float R1 = 11;
float R2 = 1;

float ref_voltage = 5.0;
int adc_value = 0;
double voltage = 0;
float adc_voltage = 0;

float stop_voltage = 13;
float start_voltage = 14;
float break_voltage = 40;

void setup()
{
    // set pin mode
    pinMode(INC, OUTPUT);
    pinMode(CS, OUTPUT);
    pinMode(UD, OUTPUT);
    pinMode(PIN8, OUTPUT);
    pinMode(PIN9, OUTPUT);

    // open serial monitor
    Serial.begin(9600);
    Pot_Reset();
}

void Pot_Reset()
{
    Serial.print("Resetting potentiometer please wait...");
    for (int i = 0; i <= 102; i++)
        Down();
    pot_position = 0;

    for (int i = 1; i <= min_pot_pos; i++)
        Up();
}

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    pot_reset = 1;
    Serial.println("Ok!");
}

void Show_Values()
{
    Serial.print("voltage: ");
    Serial.println(voltage);
    Serial.println("");
    Serial.print("pot_position: ");
    Serial.println(pot_position);
    Serial.println("");
    Serial.println("");
    // delay(200);
}

void Up()
{
    pot_position++;
    digitalWrite(CS, LOW);
    digitalWrite(UD, HIGH);
    delay(5);
    digitalWrite(INC, HIGH);
    digitalWrite(INC, LOW);
    delay(5);
    pot_reset = 0;
}

void Down()
{
    pot_position--;
    digitalWrite(CS, LOW);
    digitalWrite(UD, LOW);
    delay(5);
    digitalWrite(INC, HIGH);
    digitalWrite(INC, LOW);
    delay(5);
    pot_reset = 0;
}

void Get_Voltage()
{
    adc_value = analogRead(ANALOG_IN_PIN_A1);
    adc_voltage = (adc_value * ref_voltage) / 1024.0;
    voltage = adc_voltage / (R2 / (R1 + R2));
    voltage = voltage - 0.2;
}

void loop()
{
    Get_Voltage();
}

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if (voltage > start_voltage)
{
    digitalWrite(PIN9, LOW);
    if (voltage > 14) pot_target_position = 1;
    if (voltage > 15) pot_target_position = 2;
    if (voltage > 16) pot_target_position = 2;
    if (voltage > 17) pot_target_position = 2;
    if (voltage > 18) pot_target_position = 3;
    if (voltage > 19) pot_target_position = 3;
    if (voltage > 20) pot_target_position = 4;
    if (voltage > 21) pot_target_position = 5;
    if (voltage > 22) pot_target_position = 6;
    if (voltage > 23) pot_target_position = 7;
    if (voltage > 24) pot_target_position = 8;
    if (voltage > 25) pot_target_position = 9;
    if (voltage > 26) pot_target_position = 11;
    if (voltage > 27) pot_target_position = 12;
    if (voltage > 28) pot_target_position = 14;
    if (voltage > 29) pot_target_position = 16;
    if (voltage > 30) pot_target_position = 18;
    if (voltage > 31) pot_target_position = 20;
    if (voltage > 32) pot_target_position = 23;
    if (voltage > 33) pot_target_position = 23;
    if (voltage > 34) pot_target_position = 26;
    if (voltage > 35) pot_target_position = 29;
    if (voltage > 36) pot_target_position = 31;
    if (voltage > 37) pot_target_position = 34;
    if (voltage > 38) pot_target_position = 37;
    if (voltage > 39) pot_target_position = 40;

    do
    {
        if (pot_target_position > pot_position) Up();
        if (pot_target_position < pot_position) Down();
    } while (pot_position != pot_target_position);
}

if (voltage < stop_voltage)
{
    digitalWrite(PIN9, HIGH);
    delay (50);
    if (pot_position >= min_pot_pos && pot_reset == 0)
        Pot_Reset();
}

if (voltage > break_voltage)
{
    digitalWrite(PIN8, LOW);
    delay (50);
}
}

```