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/*
 * main_step.c
 *
 * Created: 28-Dec-17 3:12:58 PM
 * Author : BSS
 */

#include <avr/io.h>
#define F_CPU 1000000
#include <util/delay.h>
#include <stdlib.h>

#define enable 5
#define registerselection 6 //Entry Mode

int main(void)
{
    DDRB = 0xFF;
    PORTB = 0x00;
    DDRA = 0;
    DDRD |= (1<<PD5); /* Make OC1A pin as output */
    //TCNT1 = 0; /* Set timer1 count zero */
    //ICR1 = 2499;
    int degree;
    _delay_ms(50);

    ADMUX |= (1<<REFS0); //Reference is set to VCC
    ADCSRA |= (1<<ADEN)|(1<<ADSC)|(1<<ADPS0)|(1<<ADPS1)|(1<<ADPS2); //Pre-scalar is
    set to 128

    float voltage = 0;
    //char voltageshow [7];

    ADCSRA |= (1<<ADSC); //To start the conversion

    //TCCR1A = (1<<WGM11)|(1<<COM1A1);
    //TCCR1B = (1<<WGM12)|(1<<WGM13)|(1<<CS10)|(1<<CS11); /* Set Fast PWM, TOP in
    ICR1, Clear OC1A on compare match, clk/64 */

    while (1)
    {
        voltage = ADC/204.8*18;//ADC/18.618;

        if (voltage>=0 && voltage<=3)
        {
            // OCR1A = 65;
            degree = 34;

            while(degree)
            {
                PORTB = 0x01; //0001
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        _delay_ms(10);
        PORTB = 0x04;           //0100
        _delay_ms(10);
        PORTB = 0x02;           //0010
        _delay_ms(10);
        PORTB = 0x08;           //1000
        _delay_ms(10);
        degree--;
    }
    //_delay_ms(1500);
}
else if(voltage>3 && voltage<=4)
{
    //OCR1A = 175;
    degree = 75;
    //All pins of PORTB as output

    while(degree)
    {
        PORTB = 0x01;           //0001
        _delay_ms(10);
        PORTB = 0x04;           //0100
        _delay_ms(10);
        PORTB = 0x02;           //0010
        _delay_ms(10);
        PORTB = 0x08;           //1000
        _delay_ms(10);
        degree--;
    }
    //_delay_ms(1500);
}
else
{
    //OCR1A = 300;
    degree = 100;

    while(degree)
    {
        PORTB = 0x01;           //0001
        _delay_ms(10);
        PORTB = 0x04;           //0100
        _delay_ms(10);
        PORTB = 0x02;           //0010
        _delay_ms(10);
        PORTB = 0x08;           //1000
        _delay_ms(10);
        degree--;
    }
    //_delay_ms(1500);
}
}
}
}

```