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#include <avr/io.h>

#include "servo.h"
// Motor Control Functions -- pwm is an 16-bit value

void move_servo1(uint16_t angle)
{
    //Map the degree angle to the compare match register
    OCR1A = (310 - 110) * angle / 150 + 110;
}

void move_servo2(uint16_t angle)
{
    //Map the degree angle to the compare match register
    OCR1B = (310 - 110) * angle / 150 + 110;
}

// Motor Initialization routine -- this function must be called
// before you use any of the above functions
void servo_init()
{
    //Configure TIMER1
    TCCR1A|=(1<<COM1A1)|(1<<COM1B1)|(1<<WGM11);//(0<<CS12)|(1<<CS11)|(1<<CS10); //NON Inverted PWM
    //TCCR1B|=(1<<WGM13)|(1<<WGM12)|(1<<CS11)|(1<<CS10); //PRESCALER=64 MODE 14(FAST PWM)
    //ICR1=312; //fPWM=50Hz (Period = 20ms Standard).

    TCCR1B|=(1<<WGM13)|(1<<WGM12)|(0<<CS12)|(1<<CS11)|(1<<CS10); //PRESCALER=8 MODE 14(FAST PWM)
    ICR1=2499; //fPWM=50Hz (Period = 20ms Standard).

    // set PWM pins as digital outputs (the PWM signals will not
    // appear on the lines if they are digital inputs)
    DDRD |= (1 << PORTD5)|(1<<PORTD4);
}

```