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/*
 * File:   newmain.c
 * Author: Herbert
 *
 * Created on 12. Oktober 2019, 17:26
 */


#define _XTAL_FREQ 8000000

#include <xc.h>
#pragma config FOSC = INTOSCIO        // Oscillator Selection bits (HS
oscillator: High-speed crystal/resonator on RA4/OSC2/CLKOUT and RA5/OSC1/CLKIN)
#pragma config WDTE = OFF       // Watchdog Timer Enable bit (WDT disabled)
#pragma config PWRTE = ON       // Power-up Timer Enable bit (PWRT enabled)
#pragma config MCLRE = OFF      // MCLR Pin Function Select bit (MCLR pin
function is digital input, MCLR internally tied to VDD)
#pragma config CP = OFF         // Code Protection bit (Program memory code
protection is disabled)
#pragma config CPD = OFF        // Data Code Protection bit (Data memory code
protection is disabled)
#pragma config BOREN = OFF      // Brown Out Detect (BOR disabled)
#pragma config IESO = OFF       // Internal External Switchover bit (Internal
External Switchover mode is disabled)
#pragma config FCMEN = ON       // Fail-Safe Clock Monitor Enabled bit
(Fail-Safe Clock Monitor is enabled)




void servoRotate0() //0 Degree
{
  unsigned char i;
  for(i=0;i<50;i++)
  {
      GP1 = 1;
      __delay_us(800);
      GP1 = 0;
    __delay_us(19200);
      GP0 = 1;
      __delay_us(800);
      GP0 = 0;
    __delay_us(19200);
  }
}


void servoRotate90() //90 Degree
{
  unsigned int i;
  for(i=0;i<50;i++)
  {
    GP1 = 1;
```

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    __delay_us(1500);
    GP1 = 0;
    __delay_us(18500);
     GP0 = 1;
    __delay_us(1500);
    GP0 = 0;
    __delay_us(18500);

  }

}

void servoRotate180() //180 Degree
{
  unsigned int i;
  for(i=0;i<50;i++)
  {
    GP1 = 1;
    __delay_us(2200);
    GP1 = 0;
    __delay_us(17800);
    GP0 = 1;
    __delay_us(2200);
    GP0 = 0;
    __delay_us(17800);
  }
}


void main()
{
    OSCCON = 0b00000000;
    OSCCONbits.IRCF = 0b111;

  TRISIO = 0x00; // PORTB as Ouput Port
  do
  {
    servoRotate0(); //0 Degree
    __delay_ms(2000);
    servoRotate90(); //90 Degree
    __delay_ms(2000);
    servoRotate180(); //180 Degree
  }while(1);
}
```