Assignment 10

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#include <xc.h>

#pragma config OSC = HS //Oscillator Selection
#pragma config WDT = OFF //Disable Watchdog timer
#pragma config LVP = OFF //Disable Low Voltage Programming
#pragma config PBADEN = OFF //Disable PORTB Analog inputs

void myMsDelay (unsigned int time)   // Definition of delay subroutine
{
       unsigned int i, j;
       for (i = 0; i < time; i++)          // Loop for i time
              for (j = 0; j < 275; j++);   // Calibrated for a 1 ms
delay in MPLAB
}

void main()
{
       TRISCbits.TRISC0 = 0 ;       // Set PORTC, RC6 as output (DCM
IN1)
       TRISCbits.TRISC1 = 0 ;       // Set PORTC, RC6 as output (DCM
IN2)
       TRISCbits.TRISC2 = 0 ;       // Set PORTC, RC2 as output (CCP1)
       PR2 = 0x4E;             // set PWM Frequency 4KHz
    CCP1CON = 0x0C;         // Configure CCP1CON as PWM mode.
       T2CON = 0x07;         //Start timer 2 with prescaler 1:16
       PORTCbits.RC0 = 1;    // Turn ON the Motor
    PORTCbits.RC1 = 0;
  while(1)     // Endless Loop
       {


              // ---------------------------------
              // ----------Duty Cycle 80%-----------
              CCP1CONbits.DC1B0 = 0;
              CCP1CONbits.DC1B1 = 1;
              CCPR1L = 0x3E;
              myMsDelay(2000);
              // ---------------------------------
              // ---------------------------------
              // ----------Duty Cycle 60%-----------
              CCP1CONbits.DC1B0 = 1;
              CCP1CONbits.DC1B1 = 1;
              CCPR1L = 0x2E;
              myMsDelay(2000);
              // ---------------------------------
              // ----------Duty Cycle 40%-----------
              CCP1CONbits.DC1B0 = 1;
              CCP1CONbits.DC1B1 = 0;
              CCPR1L = 0x1F;
              myMsDelay(2000);
              // ----------Duty Cycle 20%-----------
              CCP1CONbits.DC1B0 = 0;
              CCP1CONbits.DC1B1 = 1;
              CCPR1L = 0x0F;
              myMsDelay(2000);
       }

}
```