

Faculty of Engineering and technology

Electrical Engineering Department

Engineering Simulation LAB (ENEE4104)

Experiment IV

MiKroC

**“*Introduction to MiKroC Program*”**

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Section: 1

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Home Work :

void main() {

TRISB=0b00000000;

PORTB=0b00000001;

delay\_ms(500);

while(1)

{

PORTB=PORTB<<1;

if(PORTB.f5==1)

{

delay\_ms(500);

PORTB=0b00000001;

}

delay\_ms(500);

}

}

For the assignment to control Motor (Motor Drive) :

sbit LCD\_RS at RB3\_bit;

sbit LCD\_EN at RB4\_bit;

sbit LCD\_D7 at RD7\_bit;

sbit LCD\_D6 at RD6\_bit;

sbit LCD\_D5 at RD5\_bit;

sbit LCD\_D4 at RD4\_bit;

sbit LCD\_RS\_Direction at TRISB3\_bit;

sbit LCD\_EN\_Direction at TRISB4\_bit;

sbit LCD\_D7\_Direction at TRISD7\_bit;

sbit LCD\_D6\_Direction at TRISD6\_bit;

sbit LCD\_D5\_Direction at TRISD5\_bit;

sbit LCD\_D4\_Direction at TRISD4\_bit;

int speed = 0;

int count =0;

char dir = 0;

int start = 1 ;

char srt[3] ;

char num[] =" 1110727" ;

void InitTimer0(){

OPTION\_REG = 0x07 ;

TMR0 = 0 ;

INTCON = 0xA0 ;

INTCON.GIE = 1 ;

INTCON.TMR0IE = 1 ;

INTCON.TMR0IF = 1 ;

}

void Interrupt(){

if (TMR0IF\_bit){

TMR0IF\_bit = 0;

TMR0 = 0;

while(count<20)

{

delay\_ms(200) ;

count++ ;

}

count = 0 ;

INTCON.TMR0IF = 0 ;

}

}

void main() {

TRISA = 0xFF ;

TRISB = 0x00 ;

TRISC = 0x00 ;

TRISD = 0x03 ;

lcd\_init(); // initialize the lcd

lcd\_cmd(\_LCD\_CLEAR) ;

lcd\_out(1,1,"SAMER MKHEMER");

lcd\_out(2,2,"n") ;

Lcd\_Out\_CP('a');

Lcd\_Cmd(\_LCD\_CURSOR\_OFF);

InitTimer0() ;

PWM1\_Init(500);

PWM2\_Init(500);

lcd\_init() ;

while(1)

{

speed = ADC\_Read(0)/4 ;

if (Button(&PORTD, 0, 300, 1))

start = !start ;

if (!start && Button(&PORTD, 1, 300, 1))

dir = !dir ;

if(Button(&PORTD, 0, 300, 1))

{

lcd\_cmd(\_LCD\_CLEAR) ;

if(start)

{

lcd\_out(1,1,"Speed: %") ;

ByteToStr(speed/2.56, srt) ;

lcd\_out(1,9,srt) ;

lcd\_out(2,2,"on") ;

if(dir)

lcd\_out(2,6,"C Clock Wise") ;

else

lcd\_out(2,6," Clock Wise") ;

}

else{

lcd\_init() ;

lcd\_out(1,1,"the motor is off") ;

}

Lcd\_Cmd(\_LCD\_CURSOR\_OFF) ;

if(start && dir)

{

PWM2\_Stop();

PWM1\_Start() ;

PWM1\_Set\_Duty(speed);

PORTC.RC2 = 0 ;

}

if(start && !dir){

PWM1\_Stop() ;

PWM2\_Start() ;

PWM2\_Set\_Duty(speed) ;

PORTC.RC1 = 0 ;

}

if(!start){

PWM1\_Stop() ;

PWM2\_Stop() ;

PORTC.RC1 = 0 ;

PORTC.RC2 = 0 ;

}

}

}

}