

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 ;

 }

 }

 }

}