



Faculty of Engineering and Technology
Electrical and computer Engineering Department

Engineering Simulation Laboratory
ENEE 4104

Report about
Assignment.2

Controlling speed of DC-motor using mikro-c and protues programs

Instructors :

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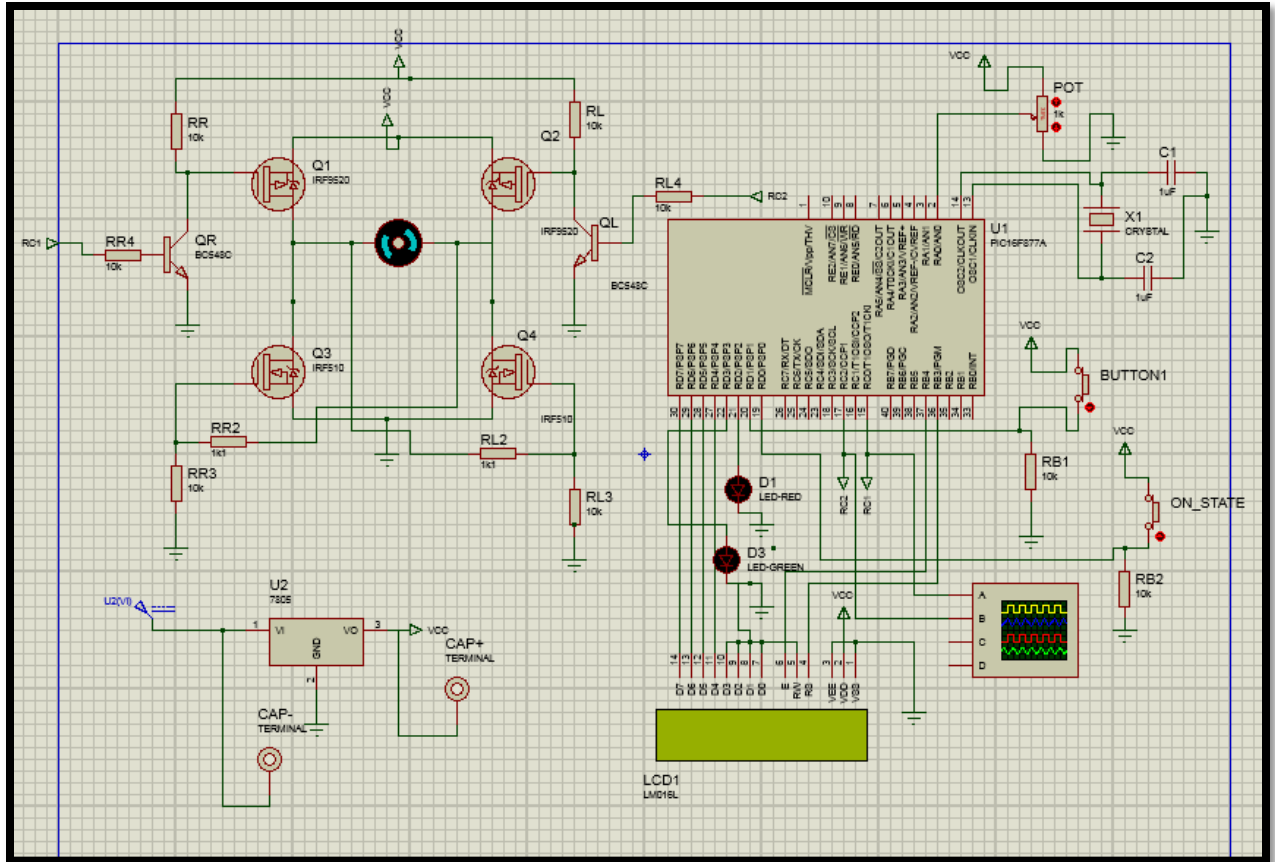
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Section #1



```

bit on_state , direction_state ;
int duty ,x , v ;
char txt[6];

// Lcd pinout settings
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;

// Pin direction
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;

void main()
{
    lcd_init();
    Lcd_Cmd( _LCD_CURSOR_OFF);
    pwm1_init(1000);
    pwm2_init(1000);
    pwm1_start();
    pwm2_start();
    pwm1_set_duty(0);
    pwm2_set_duty(0);
    trisd=0b00000011;

```

```

    trisb=0;

    lcd_out(1,1,"Iman_Abu_Ayyash");
    lcd_out(2,1,"1111568");
    delay_ms(5000);
    lcd_cmd( _lcd_clear);

    while(1)
    {
        x=ADC_Read(0);
        duty=x/4;
        v=(duty/2.55);
        intTostr(v,txt);

        if(portd.b0==1){
            on_state = ~ on_state ;
        }
        if(portd.b1=1){
            direction_state = ~ direction_state ;
        }

        if(on_state==1)
        { if(direction_state ==1){
            pwm1_set_duty(duty);
            pwm2_set_duty(0);
            PORTd.b2=1;
            lcd_out(1,1,txt );
            lcd_out(2,1,"on,cw");}

```

```

        }
        if(direction_state ==0){
            pwm1_set_duty(0);
            pwm2_set_duty(duty);
            PORTd.b3=1;

            lcd_out(1,1,txt);
            lcd_out(2,1,"on, ccw");}
        }
    }
    else {
        pwm1_set_duty(0);
        pwm2_set_duty(0);
        lcd_out(1,1,"off");
    }
}
}
}

```

