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

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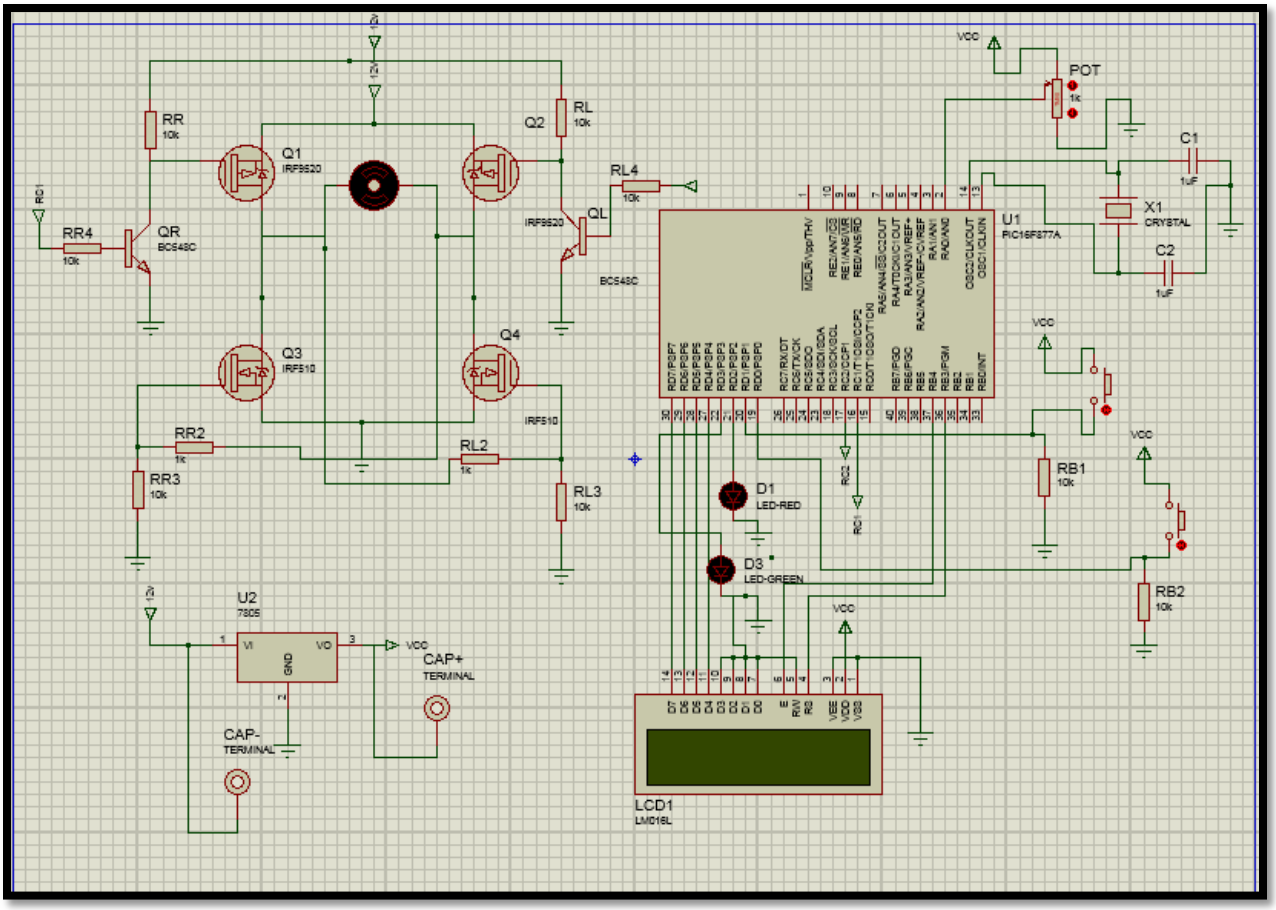
12v
RR
10k
Q1
IRF9520
Q2
RL
10k
RL4
10k
IRF9520
QL
BC548C
RC1
RR4
10k
QR
BC548C
Q3
IRF510
Q4
IRF510
RR2
1k
RR3
10k
RL2
1k
RL3
10k
U2
7805
VI
GND
VO
VCC
CAP+
TERMINAL
CAP-
TERMINAL
D1
LED-RED
D3
LED-GREEN
RC2
RC1
VCC
POT
1k
C1
1uF
X1
CRYSTAL
C2
1uF
U1
PIC16F877A
RB1
10k
RB2
10k
LCD1
LM016L

```
// 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;

lcd_init();
Lcd_Cmd(_LCD_CURSOR_OFF);


void main()   {
TRISB = 0x00;
TRISD = 0x00;
while(1){
lcd_out(1,1,"Iman Abu-Ayysh");
lcd_out(2,1,"1111568");
delay_ms(5000);
```

```
lcd_cmd(_lcd_clear);
while(1){
if(portd.b0=1){ if(portd.b1=1) {
portc=1;
TRISc=0;
pwm1_init(1000);
pwm1_start();
portd.b3=1 ;
while(1){
pwm1_set_duty(225);
delay_ms(200);}
lcd_out(1,1,"on");
lcd_out(2,1,"clockwise");
if(portd.b1=0) {
portc=1;
TRISc=0;
pwm2_init(1000);
pwm2_start();
portd.b2=1 ;
while(1){
pwm2_set_duty(225);
delay_ms(200);}
lcd_out(1,1,"off");
lcd_out(2,1,"counter - clockwise");
}}}}}}
```