bit on\_state ,direction\_state;

int duty ,x, v ;

int var=1;

int txt[6];

int pushbutton1 ;

int pushbutton2;

// 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);

trisd=0b00000011;

trisb=0;

trisc=0;

pwm1\_set\_duty(duty);

pwm2\_set\_duty(duty);

lcd\_out(1,1,"Iman Abu\_Ayyash");

lcd\_out(2,1,"1111568");

delay\_ms(5000);

lcd\_cmd(\_lcd\_clear);

option\_reg.f0=0;

option\_reg.f1=0;

 pwm1\_init(1000);

 pwm2\_init(1000);

for(;;){

x=ADC\_Read(0);

duty = x/4;

v=(duty/2.55);

intTostr(v,txt);

 if(portd.b0==0) {

 pushbutton1=0;

 }

if(portd.b0==1){

if(pushbutton1==0)

{on\_state =~on\_state;

 pushbutton1=1;

} }

 if(portd.b1==0) {

 pushbutton2=0;

 }

if(portd.b1==1) {

if(pushbutton2==0)

{direction\_state =~direction\_state;

pushbutton2=1;

} }

if ( on\_state==1)

{ if ( direction\_state==0)

{

pwm1\_start();

pwm1\_set\_duty(duty);

pwm2\_stop();

PORTd.b2=1;

PORTd.b3=0;

if(var==1||var==2)

{var=0;

lcd\_cmd(\_lcd\_clear);

}

lcd\_out(1,1,"speed");

lcd\_out(1,6,txt);

lcd\_out(2,1,"ON,CW");

 }

 if ( direction\_state==1)

{

pwm1\_stop();

pwm2\_start();

pwm2\_set\_duty(duty);

PORTd.b3=1;

PORTd.b2=0;

 if(var==0||var==2)

{var=1;

lcd\_cmd(\_lcd\_clear);

}

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

lcd\_out(1,6,txt);

lcd\_out(2,1,"on, CCW");}

 }

else

{

pwm1\_set\_duty(0);

 pwm2\_set\_duty(0);

PORTd.b3=0;

PORTd.b2=0;

 if(var==0|| var==1)

{var=2;

lcd\_cmd(\_lcd\_clear);

}

 lcd\_out(1,1,"OFF");

 }}}