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();

pwm1\_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);

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

 else {

pwm1\_set\_duty(0);

pwm2\_set\_duty(duty);

PORTd.b3=1;

lcd\_out(1,1,txt);

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

 }

 else if(on\_state==0)

 {pwm1\_set\_duty(0);

 pwm2\_set\_duty(0);

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

} } }