<EasyArduino.h>

Library Creator

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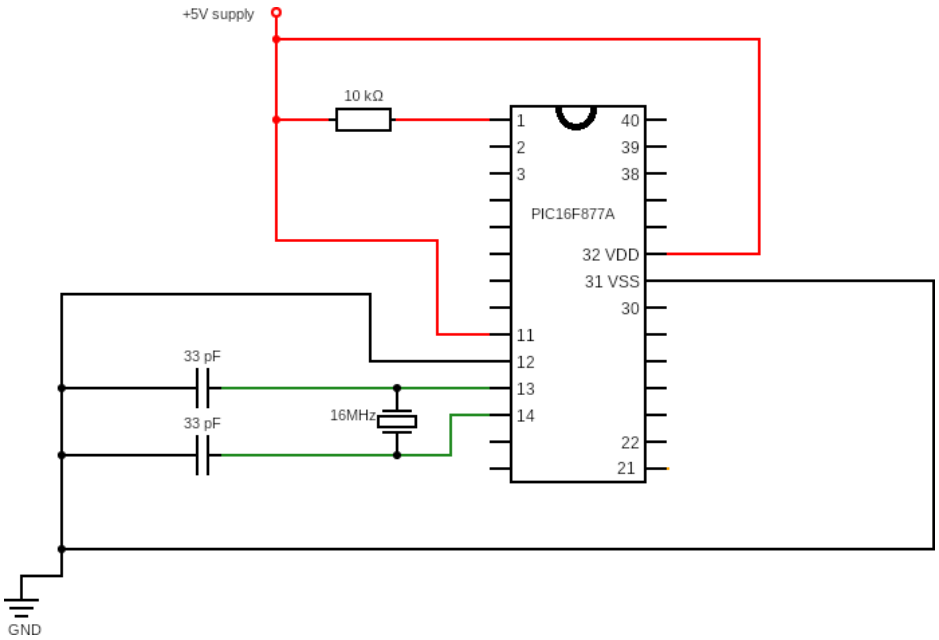
A0	2
A1	3
A2	4
A3	5
A4	7
A5	8
A6	9
A7	10
D0	19
D1	20
D2	21
D3	22
D4	27
D5	28
D6	29
D7	30
D8	33
D9	34
D10	35
D11	36

D12	37
D13	38
D14	39
D15	40

Pin Specefication



Biasing 16F77A

Function parameter

- **digitalRead(D0);**
- **digitalWrite (D0,HIGH);**
- **digitalWrite (D0,LOW);**
- **analogRead(A0);**
- **analogWrite(pin,0-255);**
- **Serial_print1(float);**
- **Serial_print2(integer);**
- **Serial_print3(string);**
- **map(x,min.max,min.max);**
- **constrain(x,min,max);**
- **delay(ms);**
- **max(a,b);**
- **min(a,b);**
- **voidloop()**
- **void setup()**
- **D0 .....D15**
- **A0 .....A7**

```
#include  <16F877A.h>
#device ADC=8
#use   delay(crystal=20Mhz)
#include   <EasyArduino.h>
#fuses HS

void setup()
{

voidloop()
{
digitalWrite(D0,HIGH);
delay(500);
digitalWrite(D0,LOW);
delay(500);
}
}
```

//Code1: LED Blynk

```
#include  <16F877A.h>
#device ADC=8
#use   delay(crystal=20Mhz)
#include   <EasyArduino.h>
#fuses HS
void setup()
{
voidloop()
{
int v = digitalRead(D8);
if(v==1)
{
digitalWrite(D0,HIGH);
}
else
{
digitalWrite(D0,LOW);
}
}
}
```

//Code2: Digital Input and Digital Output1

```
#include  <16F877A.h>
#device ADC=8
#use   delay(crystal=20Mhz)
#include   <EasyArduino.h>
#fuses HS
void setup()
{
voidloop()
{
int v = digitalRead(D8);
digitalWrite(D0,v);
}
}
```

//Code3: Digital Input and Digital Output2

```
#include  <16F877A.h>
#device ADC=8
#use   delay(crystal=20Mhz)
#include   <EasyArduino.h>
#fuses HS

void setup()
{

voidloop()
{
float v = analogRead(A0);
Serial_print1(v);
delay(5000);
}
}
```

//Code3: AnalogRead[0--1024] with Serial_print

```
#include  <16F877A.h>
#device ADC=8
#use   delay(crystal=20Mhz)
#include   <EasyArduino.h>
#fuses HS

void setup()
{

voidloop()
{
float v = analogRead(A0);
v = map(v,0,1024,0,100); // 0---1024 range to set 0--100
Serial_print1(v);
delay(5000);
}
}
```

//Code4: MAP Function with Serial_print

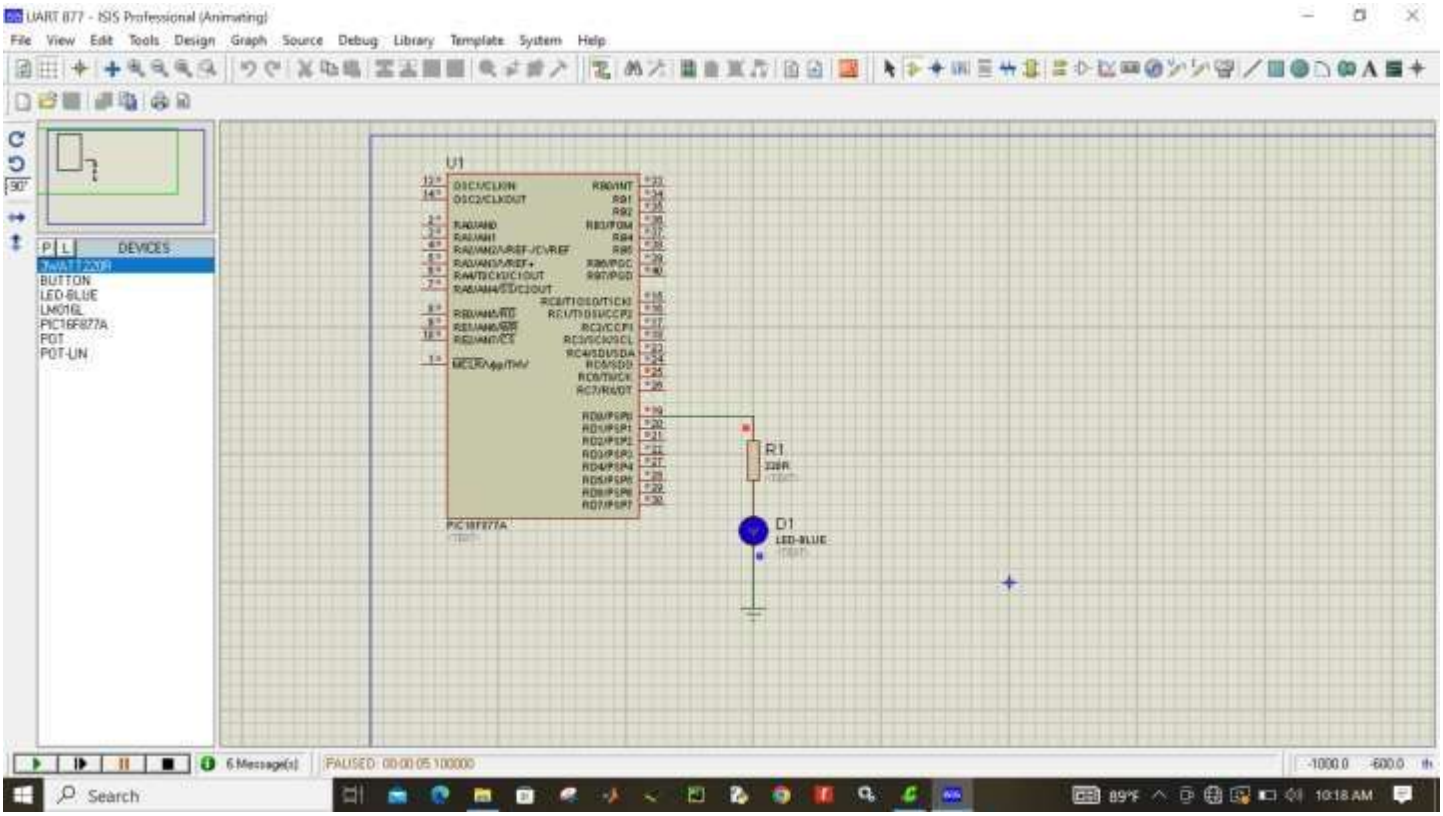
```
#include  <16F877A.h>
#device ADC=8
#use   delay(crystal=20Mhz)
#include   <EasyArduino.h>
#fuses HS

void setup()
{

voidloop()
{
float v = analogRead(A0);
v = constrain(v,0,100); // (return 0)0< v >100(return 100)
Serial_print1(v);
delay(5000);
}
}
```

//Code5: Constrain Function with Serial_print

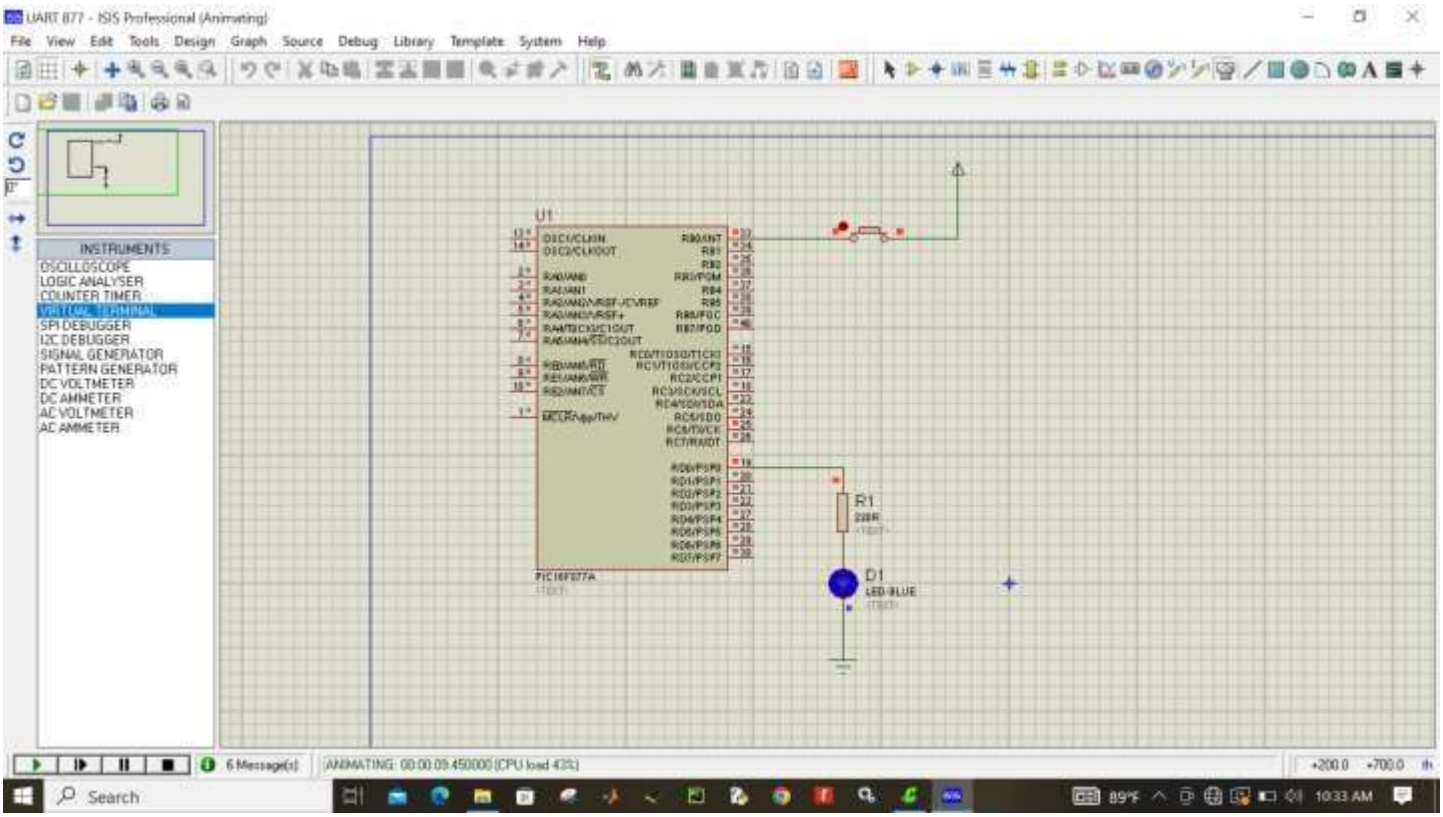
```
#include  <16F877A.h>
#device ADC=10
#use   delay(crystal=20Mhz)
#include <EasyArduino.h>#
fuses HS
# include <lcd.c>

void main(){
lcd_init();

 while(TRUE){
    float i = 2.22;
    char cc[] = "abcd";
    int in = 12;
    //lcd_print1(i);
    lcd_print2(in);
    //lcd_print3(cc);
    delay(500);
   }
}
```

//Code6: LCD Display operating

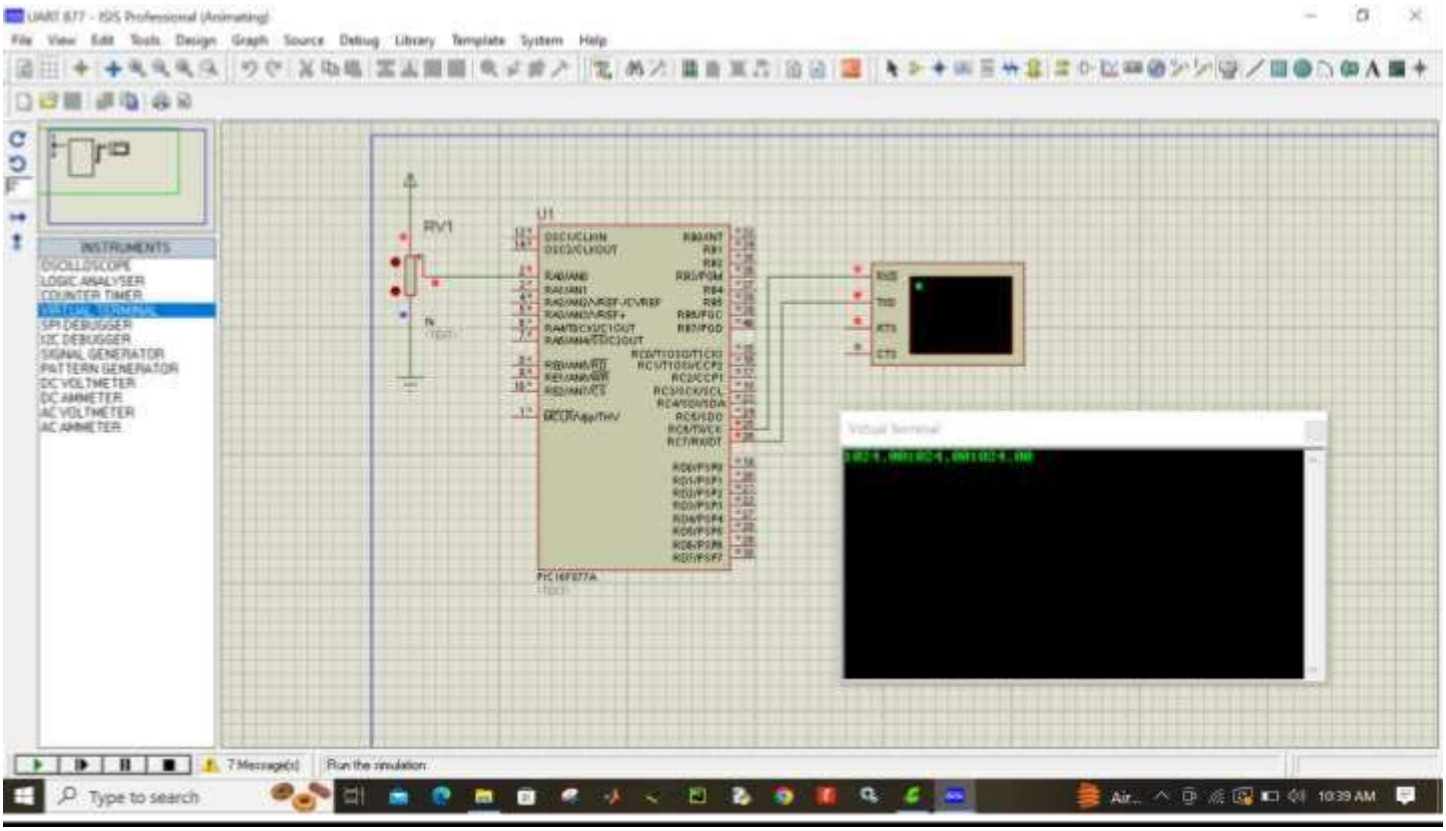
```
#include <16F877A.h>
#device ADC=8
#use delay(crystal=20Mhz)
#include <EasyArduino.h>
#fuses HS
void setup()
{

voidloop()
{

analogWrite(D0,255);

}
}
```


UART 877 - ISIS Professional (Animating)
File View Edit Tools Design Graph Source Debug Library Template System Help
DEVICES
2WAT7.220R
BUTTON
LED-BLUE
LM016L
PIC16F877A
POT
POT-LIN
U1
R1
D1
LED-BLUE
PIC16F877A
6 Message(s)
PAUSED: 00:00:05.100000
Search
10:18 AM

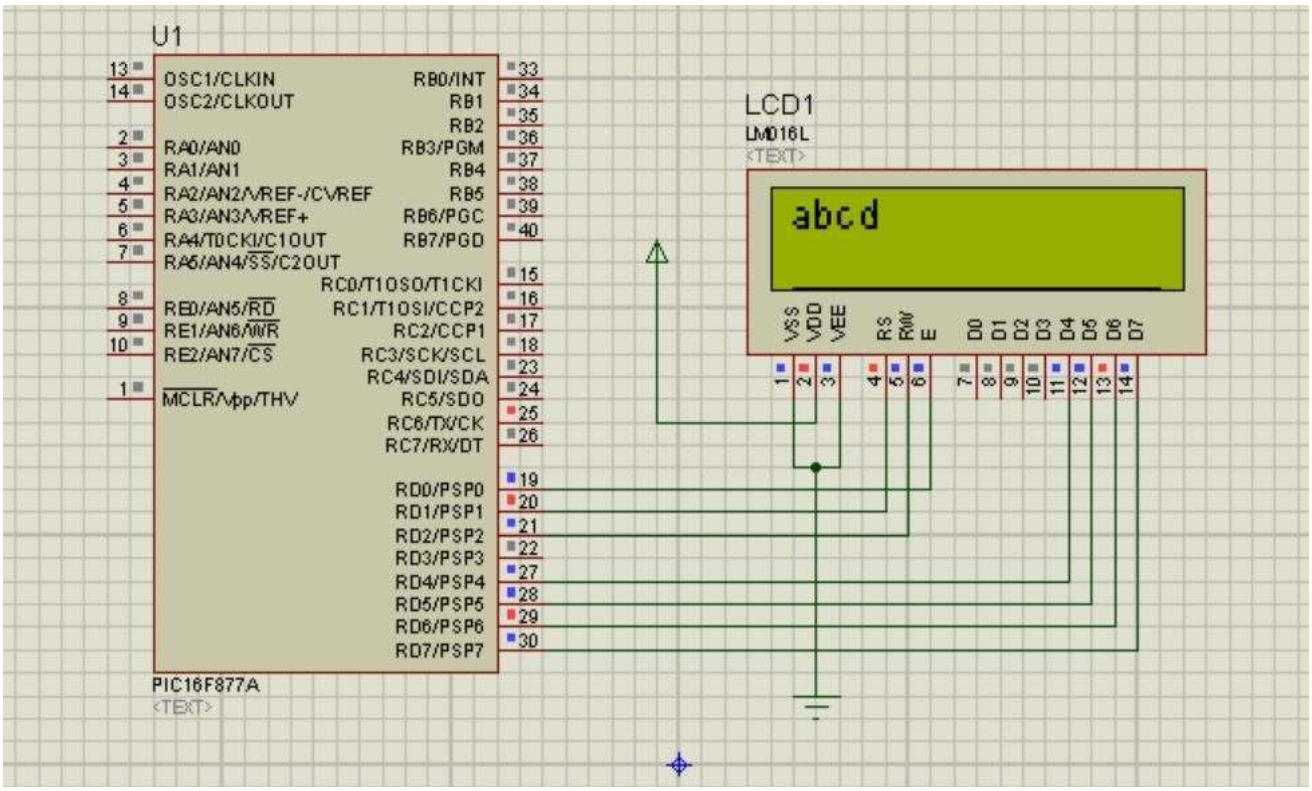
//Code1


UART 877 - ISIS Professional (Animating)
File View Edit Tools Design Graph Source Debug Library Template System Help
INSTRUMENTS
OSCILLOSCOPE
LOGIC ANALYSER
COUNTER TIMER
VIRTUAL TERMINAL
SPI DEBUGGER
I2C DEBUGGER
SIGNAL GENERATOR
PATTERN GENERATOR
DC VOLTMETER
DC AMMETER
AC VOLTMETER
AC AMMETER
U1
R1
D1
LED-BLUE
PIC16F877A
6 Message(s)
ANIMATING: 00:00:09.450000 (CPU load 43%)
Search
10:33 AM

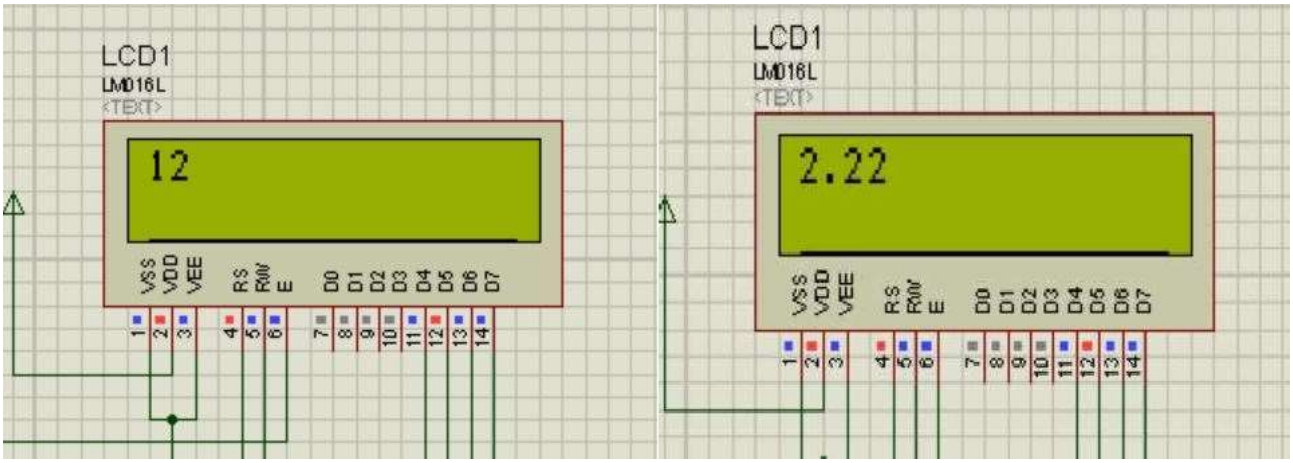
//Code2



//Code3,4,5



//Code6


LCD1
LM016L
<TEXT>
12
VSS VDD VEE RS RW E D0 D1 D2 D3 D4 D5 D6 D7
1 2 3 4 5 6 7 8 9 10 11 12 13 14
LCD1
LM016L
<TEXT>
2.22
VSS VDD VEE RS RW E D0 D1 D2 D3 D4 D5 D6 D7
1 2 3 4 5 6 7 8 9 10 11 12 13 14

//Code6

```
#include <lcd.c>
#include <math.h>
#include <stdio.h>
#include <ctype.h>
#include <stdio.h>
#define voidloop()
while(TRUE)
#define setup()
main()
#define max(x,y)
((x > y) ? x : y)
#define min(x,y)
((x < y) ? x : y)
#define A0 AN0
#define A1 AN1
#define A2 AN2
#define A3 AN3
#define A4 AN4
#define A5 AN5
#define A6 AN6
```

#define A7 AN7

#define D0

PIN_D0

#define D1

PIN_D1

#define D2

PIN_D2

#define D3

PIN_D3

#define D4

PIN_D4

#define D5

PIN_D5

#define D6

PIN_D6

#define D7

PIN_D7

#define D8

PIN_B0

#define D9

PIN_B1

```
#define D10
PIN_B2
#define D11
PIN_B3
#define D12
PIN_B4
#define D13
PIN_B5
#define D14
PIN_B6
#define D15
PIN_B7
#define High 1
#define LOW 0
//////////////////////////
//////////////////////////
///
float map(float v ,
float x , float y ,
float z, float zz)
{
```

```
float a = ((v)/y)*zz
;
return a;

}
//////////////////////////
//////////////////////////
///////
void
digitalWrite(pin,st
ate)
{

if(state== 1)
{
output_high(pin);
}
else
{
```

```
output_low(pin);
}

}

//////////////////////////
/////
int
digitalRead(pin)
{
int x = input(pin);
return x;
}

//////////////////////
float
analogRead(pin2){

                //
Initialize LCD
```

```
module

setup_adc(ADC_C
LOCK_DIV_32);
// Set ADC
conversion time to
32Tosc

setup_adc_ports(pi
n2);              //
Configure AN0 as
analog

set_adc_channel(0)
;
  float i =
read_adc();//
Select channel 0
input
  i = (i/255*5);
  i =
```

```
map(i,0,5,0,1024);
  return i;



}



//////////////////////////
////////////
//////////////////////////
///////////

//////////////////////////
///////
int constrain(float
v , float x , float y )
{
if(v>=y)
{
return y;
```

```
}
if(v<=x)
{
return x;
}
else
{
return v;
}
}
//////////////////////////
///////
void delay(int ms)
{
delay_ms(ms);
}
//////////////////////////
/////////
//#use
rs232(baud=9600,
```

```
xmit=PIN_C6,
rcv=PIN_C7,
ERRORS)
#use
rs232(baud=9600,
xmit=PIN_C6,
rcv=PIN_C7,
ERRORS)
void
Serial_print1(float
x44)
{printf("%f\n",x44
);}

void
Serial_print2(int
x45)
{printf("%d\n",x45
);}

void
```

```
Serial_print3(char
x459)
{printf("%s\n",x45
9);}
//////////////////////////
//////////////////////
void
lcd_print1(float i)
{

printf(lcd_putc,"\f
%f",i);
}
void lcd_print2(int
i)
{
printf(lcd_putc,"\f
%d",i);
}
void
lcd_print3(char i)
```

```
{
printf(lcd_putc,"\f
%s",i);
}
//////////////////////////
///////////////
void
analogWrite(pin,fl
oat value)
{
float x99 =
map(value,0,255,0,
10);
//x99 =
constrain(x99,0,10
);
int ce = ceil( x99 );
int on =
constrain(ce,0,10);
int of = 10 - ce;
of =
```

```
constrain(of,0,10);
digitalWrite(pin,HI
GH);
delay(on);
digitalWrite(pin,L
OW);
delay(of);
}
//////////////////////////
```