Here is the schematic for the PIC18F1320 LCD Demo.

The code follows on the next page. Build your proto board to match this hardware.

Now build your C project in MPLAB with PIC C18.

This code will print ascii data on the lcd.

```c
#include <p18cxxx.h>
#include <p18f1320.h>
#include <xlcd.h>
#include <delays.h>

#pragma config OSC = INTIO2
#pragma config PWRT = OFF
#pragma config WDT = OFF
#pragma config MCLRE = ON
#pragma config LVP = OFF

void DelayFor18TCY( void )
{
Nop();Nop();Nop();Nop();
Nop();Nop();Nop();Nop();
Nop();Nop();Nop();Nop();
}

void delay (void)
{
  int iopklnm;
  for (iopklnm = 0; iopklnm < 5000; iopklnm++)
        ;
}

void DelayPORXLCD (void)
{
Delay1KTCYx(120); // Delay of 15ms
// Cycles = (TimeDelay * Fosc) / 4
// Cycles = (15ms * 16MHz) / 4
// Cycles = 60,000
return;
}
void DelayXLCD (void)
{
Delay1KTCYx(20); // Delay of 5ms
// Cycles = (TimeDelay * Fosc) / 4
// Cycles = (5ms * 16MHz) / 4
// Cycles = 20,000
return;
}
```

```c
void main( void )
{
int data;
data = 0x21;
OSCCON = 0b01110011;//set osc for 8MHz
ADCON0 = 0b00000000;
ADCON1 = 0b01111111;//set portb to all digital
ADCON2 = 0b10111111;

// configure external LCD
OpenXLCD( FOUR_BIT & LINES_5X7 );
while(BusyXLCD());          // Wait if LCD busy
WriteCmdXLCD(SHIFT_DISP_LEFT);   // set lcd write left to right

while(1)
{
while( BusyXLCD() );
WriteDataXLCD(data); //write to LCD
delay();//pause so we can see the data update
++data;//increment data to print
if(data==127)
break;
}
}
```