DIAGRAMA DE FLUJO

MICROCONTROLADOR 16F887

POTENCIOMETRO

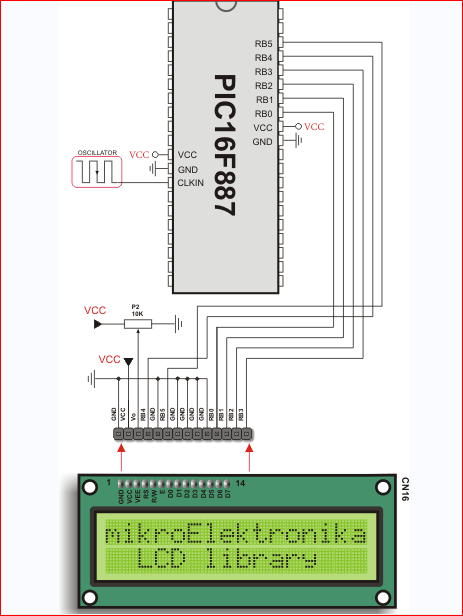
BATERIA

RASPBERRY PI

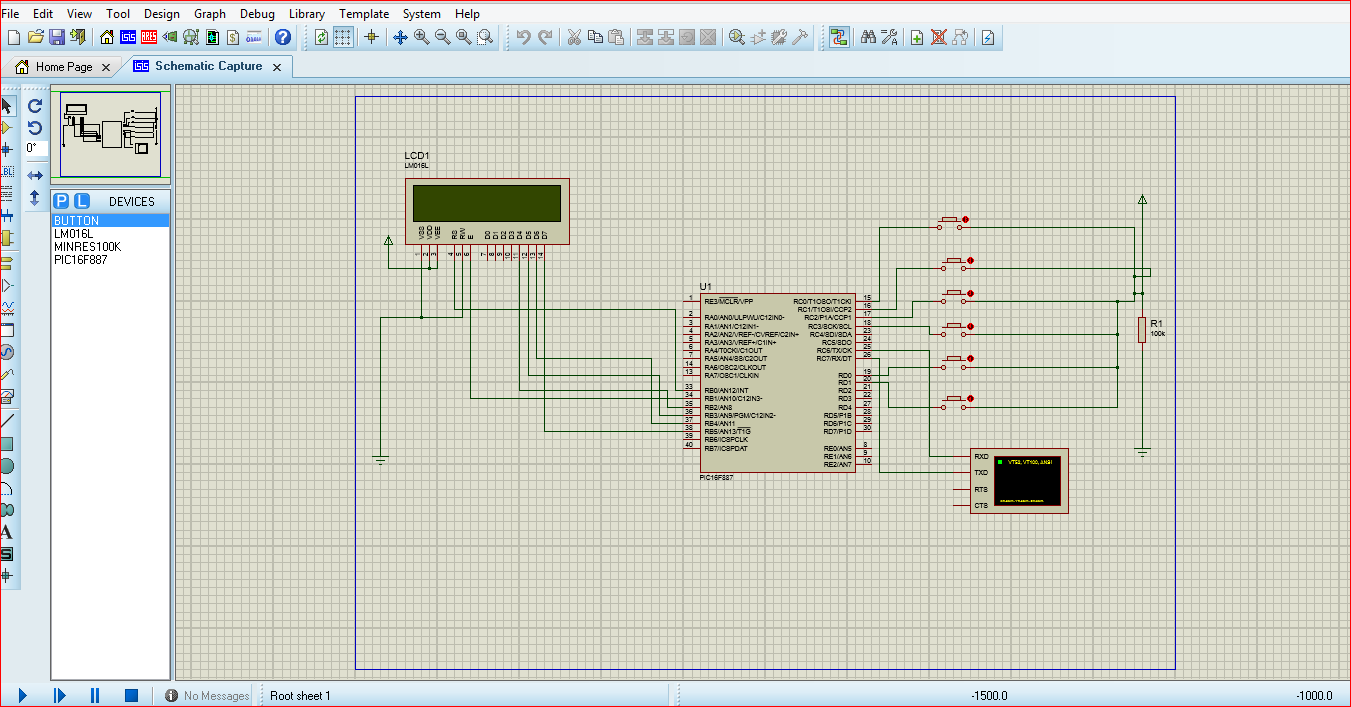
ANTENA LCD

USB SERIAL

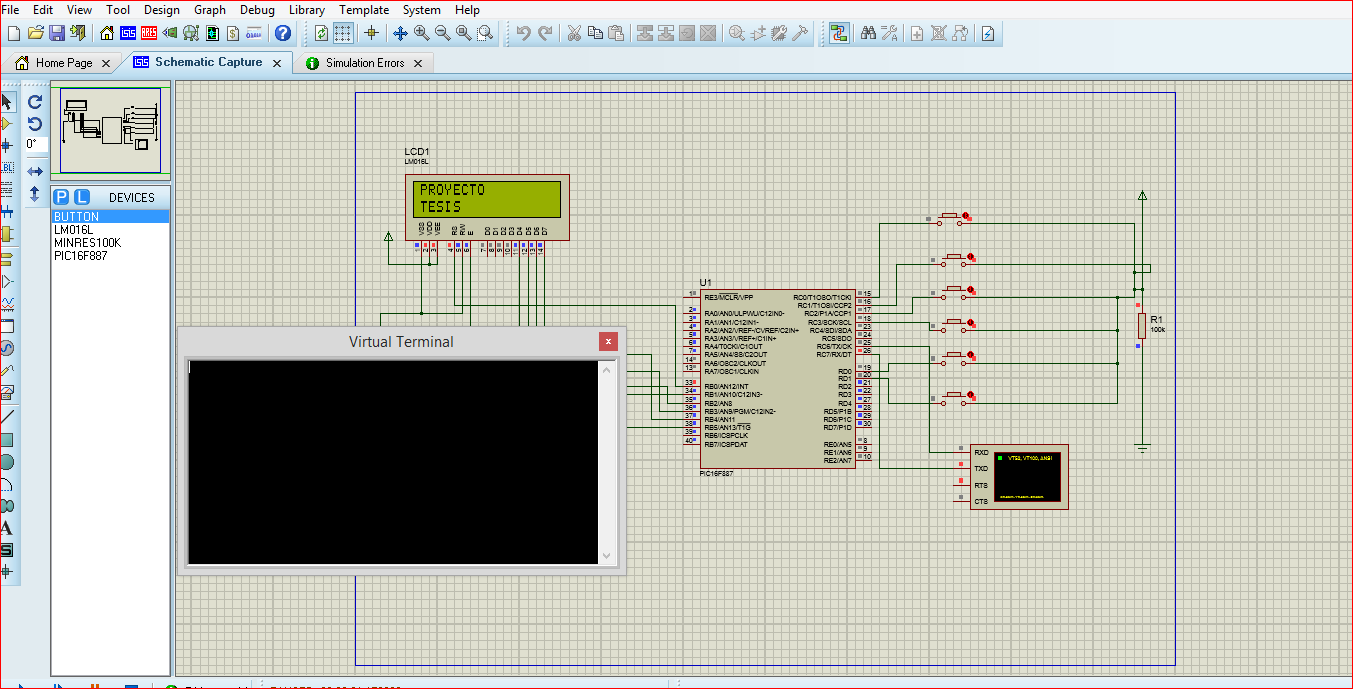
DIAGRAMA DE CONEXIÓN



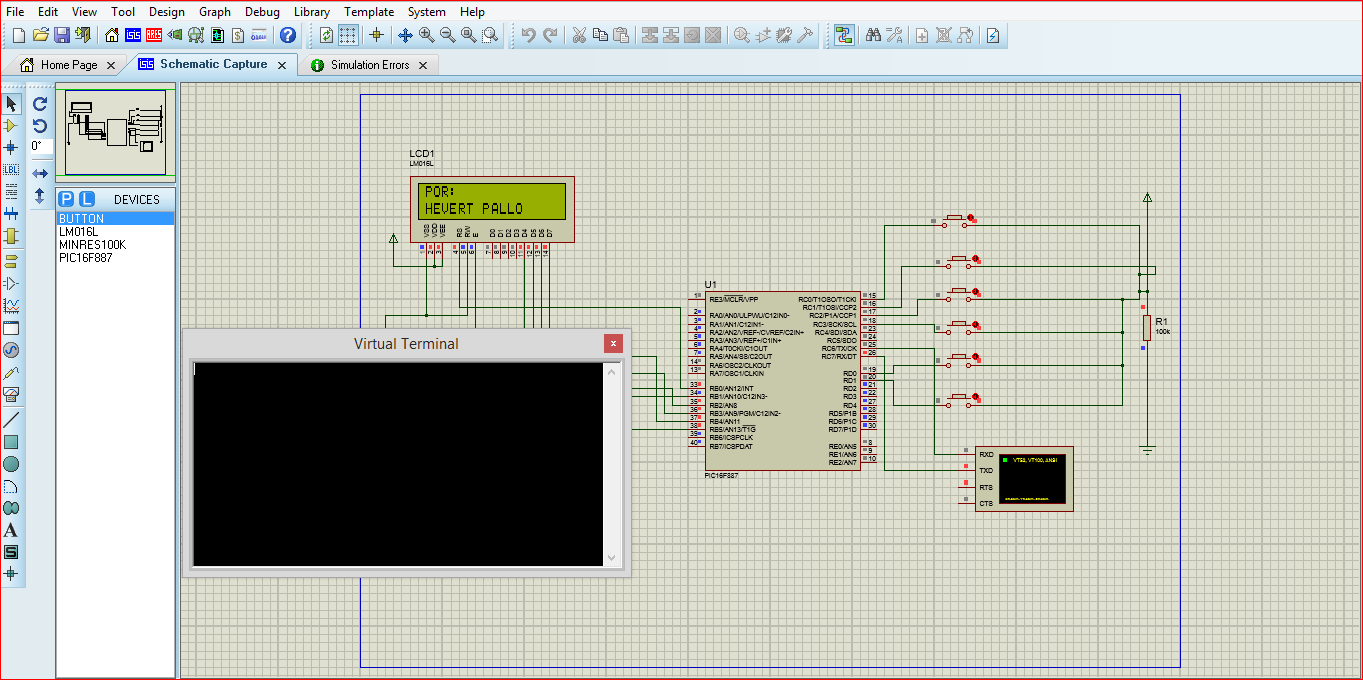
SIMULACION DEL CIRCUITO



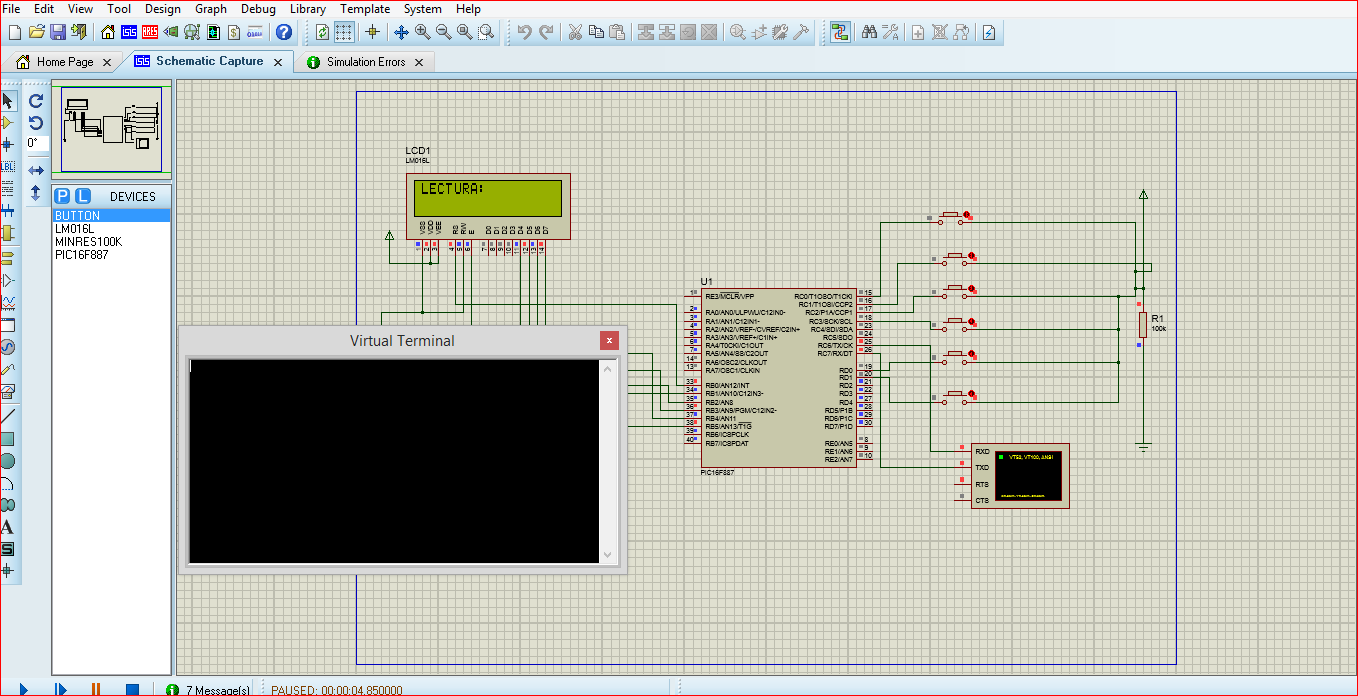
INICIO DEL PROGRAMA



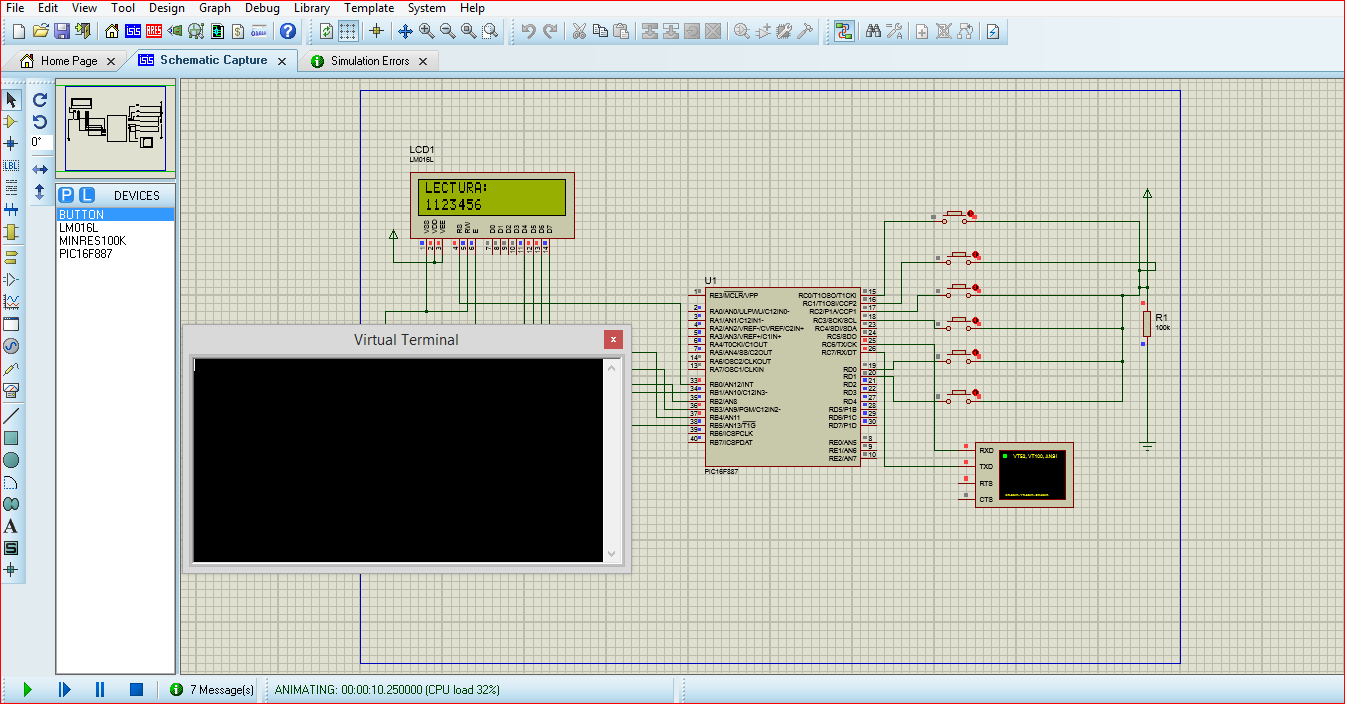
ETAPA DE NOMBRAMIENTO



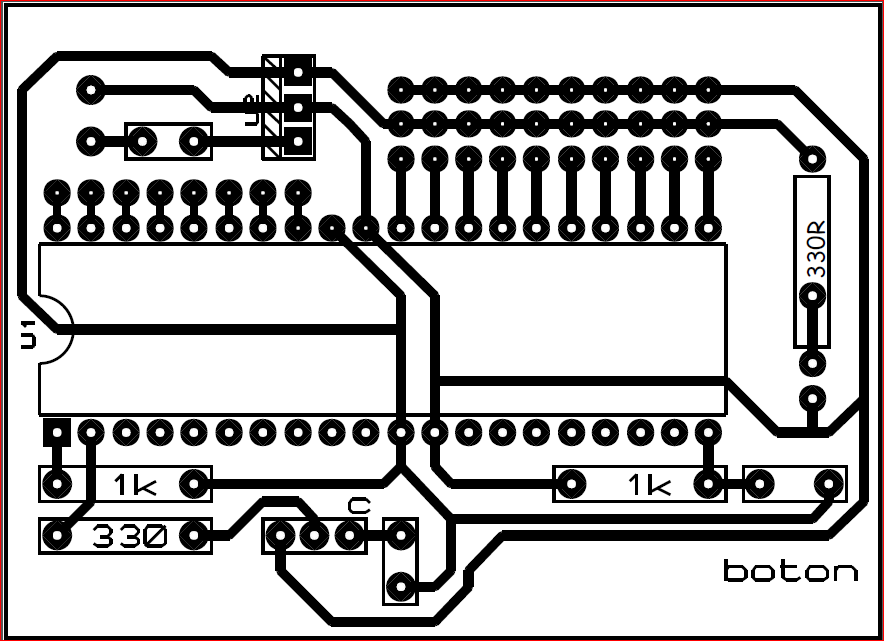
ETAPA DE LECTURA



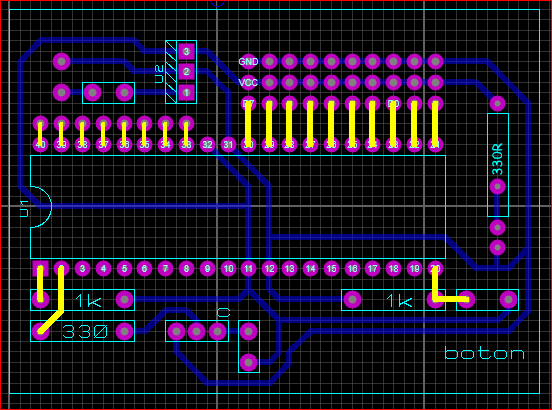
ETAPA DE MUESTRA DE DATOS



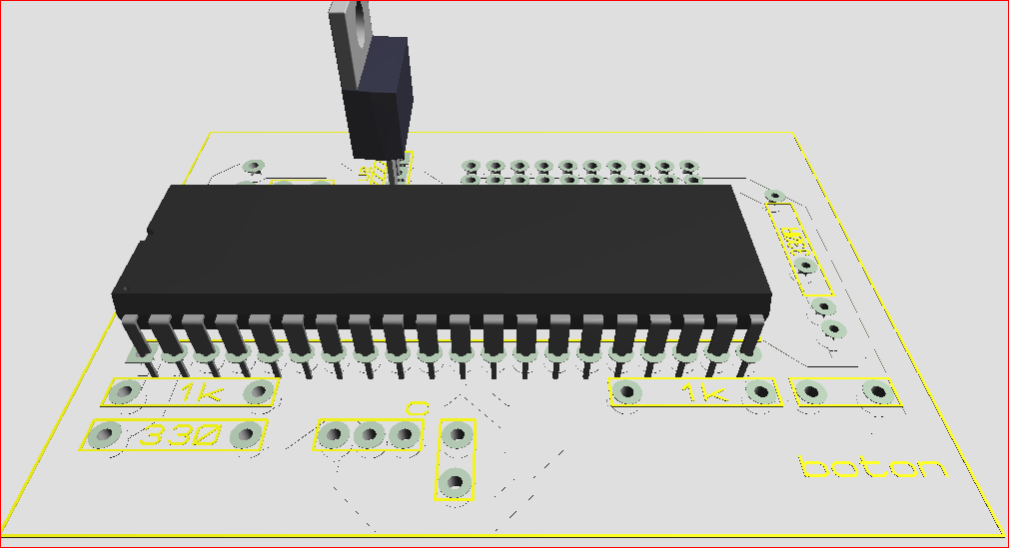
PCB



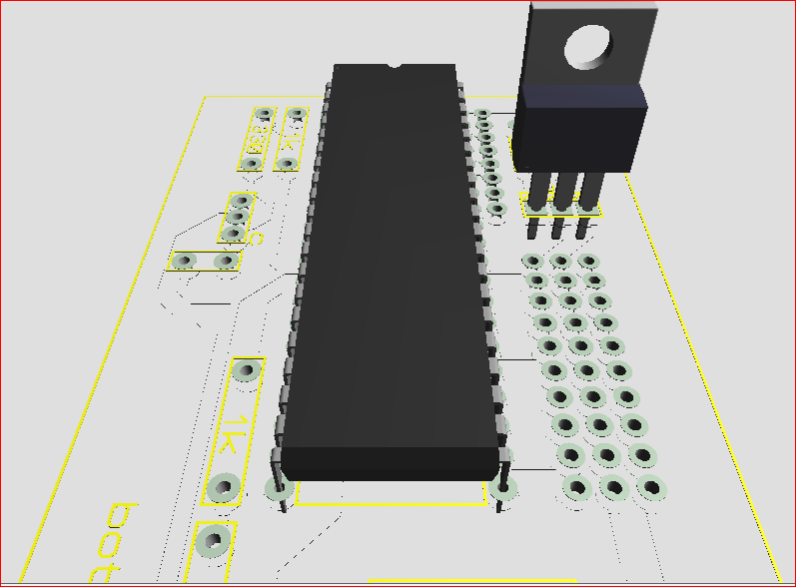
DESAARROLLO DE PLACA



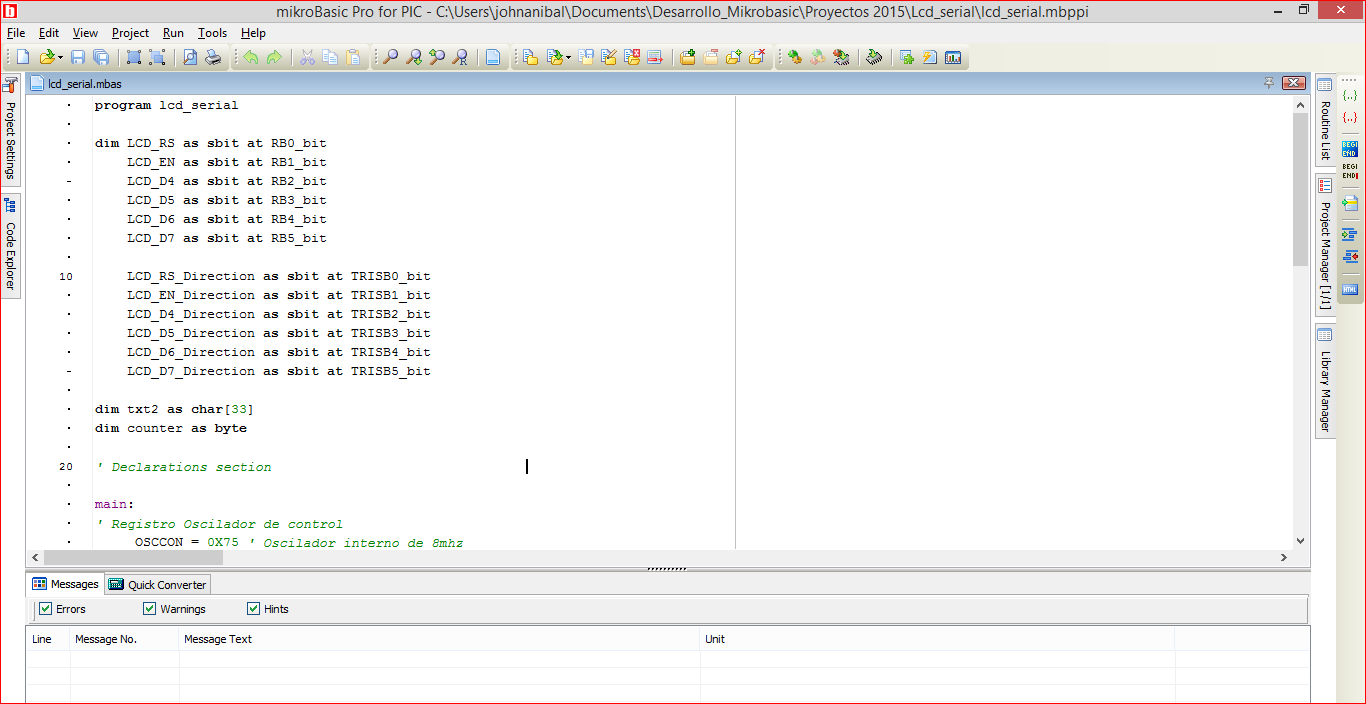
VISTA EN 3D



VISTA FRONTAL



MIKROBASIC



PROGRAMACION DEL PIC

program lcd\_serial

dim LCD\_RS as sbit at RB0\_bit

LCD\_EN as sbit at RB1\_bit

LCD\_D4 as sbit at RB2\_bit

LCD\_D5 as sbit at RB3\_bit

LCD\_D6 as sbit at RB4\_bit

LCD\_D7 as sbit at RB5\_bit

LCD\_RS\_Direction as sbit at TRISB0\_bit

LCD\_EN\_Direction as sbit at TRISB1\_bit

LCD\_D4\_Direction as sbit at TRISB2\_bit

LCD\_D5\_Direction as sbit at TRISB3\_bit

LCD\_D6\_Direction as sbit at TRISB4\_bit

LCD\_D7\_Direction as sbit at TRISB5\_bit

dim txt2 as char[33]

dim counter as byte

' Declarations section

main:

' Registro Oscilador de control

OSCCON = 0X75 ' Oscilador interno de 8mhz

' Registro PUERTO A

TRISA = 0X00 ' PORTA.0 Entrada

PORTA = 0X00

' Registro PUERTO B

TRISB = 0X00 ' PORTB salidas

PORTB = 0X00

' Registro PUERTO C

TRISC = 0XFF ' PORTC salidas

PORTC = 0X00

' Registro PUERTO D

TRISD = 0X03 ' PORTE como salidas digital

PORTD = 0X00

' Seleccion de registro analogico. 1 analogico, 0 digitales

ANSEL = 0X00 ' AN<7:0>

ANSELH = 0X00 ' AN<13:8>

Lcd\_Init() ' Inicializacion Lcd

Lcd\_Cmd(\_LCD\_CLEAR) ' encera display

Lcd\_Cmd(\_LCD\_CURSOR\_OFF) ' Cursor off

Lcd\_Out(1,1,"PROYECTO ") ' escribe la cadena en la primera fila

Lcd\_Out(2,1,"TESIS ") ' escribe la cadena en la segunda fila

delay\_ms(2000)

Lcd\_Cmd(\_LCD\_CLEAR) ' encera display

Lcd\_Out(1,1,"POR:") ' escribe la cadena en la primera fila

Lcd\_Out(2,1,"HEVERT PALLO") ' escribe la cadena en la segunda fila

delay\_ms(2000)

Lcd\_Cmd(\_LCD\_CLEAR) ' encera display

delay\_ms(250)

UART1\_Init(9600)

Lcd\_Out(1,1,"LECTURA:") ' escribe la cadena en la primera fila

while(1)

if (UART1\_Data\_Ready() <> 0) then ' If data is received,

UART1\_Read\_Text(txt2,"-",32) ' lee la cadena hasta que encuentre la letra K mayuscula

Lcd\_Cmd(\_LCD\_CLEAR) ' encera display

Lcd\_Out(1,1,"LECTURA:") ' escribe la cadena en la primera fila

Lcd\_Out(2,1,txt2)

end if

wend

end.