

Correct codes of LCD PIC18, LED Buzzer

LCD PIC18

```
#include <p18f4550.h>

// Configuration Bits
#pragma config FOSC = HS
#pragma config WDT = OFF
#pragma config LVP = OFF
#pragma config PBADEN = OFF

#define RS PORTCbits.RC0
#define RW PORTCbits.RC1
#define EN PORTCbits.RC2

void LCD_data(unsigned char data);
void LCD_cmd(unsigned char cmd);
void LCD_init();
void delay(unsigned int time);

void main() {
    TRISD = 0x00; // Set PORTD as output for data
    TRISC = 0x00; // Set PORTE as output for control pins

    LCD_init();
    LCD_cmd(0x80); // Move cursor to the beginning of the first line

    LCD_data('L');
    delay(25);
    LCD_data('C');
    delay(25);
    LCD_data('D');
    delay(25);
    LCD_data('P');
    delay(25);
    LCD_data('I');
    delay(25);
    LCD_data('C');
    delay(25);
    LCD_data('1');
    delay(25);
    LCD_data('8');

    while (1); // Keep looping to prevent the program from exiting
}

void LCD_data(unsigned char data) {
```

```

PORTD = data; // Send data to the data port
RS = 1; // Set RS to 1 for data
RW = 0; // Set RW to 0 for write
EN = 1; // Enable LCD
delay(25);
EN = 0; // Disable LCD
}

void LCD_cmd(unsigned char cmd) {
    PORTD = cmd; // Send command to the data port
    RS = 0; // Set RS to 0 for command
    RW = 0; // Set RW to 0 for write
    EN = 1; // Enable LCD
    delay(25);
    EN = 0; // Disable LCD
}

void LCD_init() {
    delay(15); // Wait for LCD to power up
    LCD_cmd(0x38); // 8-bit mode, 2 lines, 5x7 matrix
    delay(5);
    LCD_cmd(0x01); // Clear display
    delay(2);
    LCD_cmd(0x06); // Increment cursor
    delay(1);
    LCD_cmd(0x0C); // Display on, cursor off
    delay(1);
    LCD_cmd(0x80); // Move cursor to the beginning of the first line
    delay(1);
}

void delay(unsigned int time) {
    int i, j;
    for (i = 0; i < time; i++)
        for (j = 0; j < 275; j++); // Simple delay loop
}

```

OUTPUT:



LED Buzzer-

```
#include <p18f4550.h>
#pragma config FOSC=HS
#pragma config WDT=OFF
#pragma config LVP=OFF
#pragma config PBADEN=OFF
#define lrbit PORTBbits.RB4 //SW0 interfaced to RB4
#define rlbit PORTBbits.RB5 //SW1
#define buzzer PORTCbits.RC2
#define relay PORTCbits.RC1
void MsDelay (unsigned int time)
{
    unsigned int i, j;
    for (i = 0; i < time; i++)
        for (j = 0; j < 275; j++);
}
void main()
{
    unsigned char val=0;
    INTCON2bits.RBPU=0;
    ADCON1 = 0x0F;
    TRISBbits.TRISB4=1;
    TRISBbits.TRISB5=1;
    TRISCbits.TRISC1 = 0;
    TRISCbits.TRISC2 = 0;
    TRISD = 0x00;
    PORTD = 0x00;
    buzzer = 0;
    relay=0;
    while (1)
    { if (!(lrbit)) // if (lrbit == 0)
        val = 1;
        if(!(rlbit))
        val = 2;
        if (val == 1)
        {
            buzzer = 1;
            relay = 1;
            PORTD = PORTD >>1;
            if (PORTD == 0x00)
                PORTD = 0x80;
        }
        MsDelay(250);
    }
```

```

if(val == 2)
{
buzzer = 0;
relay = 0;
PORTD = PORTD<<1;
if(PORTD== 0x00)
PORTD = 0x01;
MsDelay(250);
}
}

```

OUTPUT:

