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#include "I2C_LCD.h"
#include "built_in.h"

//UChar LCD_01_ADDRESS = 0x7E; //PCF8574A
UChar LCD_01_ADDRESS = 0x4E; //PCF8574T

char txt[] = "Hello World";

void main() {
    int i = 0;
    int j = 1;
    int k = 0;
    //CHECON = 0x00;
    TRISE3_bit = 0;
    AD1PCFG = 0xFFFFFFFF;
    JTAGEN_bit = 0;
    I2C2_Init(100000); //INIT I2C AT 100KHZ
    I2C_Set_Active(&I2C2_Start, &I2C2_Restart, &I2C2_Read, &I2C2_Write,
    &I2C2_Stop, &I2C2_Is_Idle); // Sets the I2C1 module active
    Delay_ms(100);
    I2C_LCD_init(LCD_01_ADDRESS);
    Delay_ms(100);
    I2C_Lcd_Cmd(LCD_01_ADDRESS, LCD_FIRST_ROW, 1);
    I2C_Lcd_Cmd(LCD_01_ADDRESS, LCD_CURSOR_OFF, 1); // Cursor off
    I2C_Lcd_Cmd(LCD_01_ADDRESS, LCD_CLEAR, 1); // Clear display
    Delay_ms(1000);
    i=1; j=0;
    while(1){
        j++;
        i=1;
        I2C_LCD_Out(LCD_01_ADDRESS, j, 1, txt);
        if(j > 4){
            j=1;
        }
        while( i < 10){
            Delay_ms(500);
            I2C_Lcd_Cmd(LCD_01_ADDRESS, LCD_SHIFT_RIGHT, 1);
            i++;
        }
        while( i > 0){
            Delay_ms(500);
            I2C_Lcd_Cmd(LCD_01_ADDRESS, LCD_SHIFT_LEFT, 1);
            i--;
        }
        I2C_Lcd_Cmd(LCD_01_ADDRESS, LCD_CLEAR, 1); // Clear display
    }
}

```