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/*
 * LCD interface header file
 * See lcd.c for more info
 */
#include "bluebird.h" // BYTE

// Entry Mode Set
#define LCD_SHIFT_OFF 0x00
#define LCD_SHIFT_ON 0x01
#define LCD_DECREMENT 0x00
#define LCD_INCREMENT 0x02

// Display ON/OFF Control
#define LCD_BLINK_ON 0x01
#define LCD_BLINK_OFF 0x00
#define LCD_CURSOR_ON 0x02
#define LCD_CURSOR_OFF 0x00
#define LCD_DISPLAY_ON 0x04
#define LCD_DISPLAY_OFF 0x00

// Cursor of Display shift
#define LCD_SHIFT_LEFT 0x00
#define LCD_SHIFT_RIGHT 0x04
#define LCD_CURSOR_MOVE 0x00
#define LCD_DISPLAY_SHIFT 0x08

// Function Set
#define LCD_5x7_DOTS 0x00
#define LCD_5x10_DOTS 0x04
#define LCD_1_LINE 0x00
#define LCD_2_LINES 0x08
#define LCD_4_BITS 0x00
#define LCD_8_BITS 0x10

// Busy Flag
#define LCD_READY 0
#define LCD_BUSY 1

/* write a byte to the LCD in 4 bit mode */
extern void lcd_write(unsigned char);

/* Clear and home the LCD */
extern void lcd_clear(void);

/* write a string of characters to the LCD */
extern void lcd_puts(const char * s);

/* Go to the specified position */
extern void lcd_gotoXY(BYTE posX, BYTE posY);

/* Set Display Control */
extern void lcd_displayControl(BYTE);

/* Set Entry Mode */
extern void lcd_entryMode(BYTE);

/* Cursor Or Display Shift */
extern void lcd_cursorDisplayShift(BYTE);

/* initialize the LCD - call before anything else */
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extern void lcd_init(void);

/* write a single character to the LCD */
extern void lcd_putchar(char);

/* Set the cursor position */
#define lcd_cursor(x)    lcd_write(((x)&0x7F)|0x80)
```