#ifndef LCD\_H

#define LCD\_H

#include <avr/io.h>

#include <util/delay.h>

#include <stdint.h>

// rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2; This is our connection

// define some macros for the pins used

// for RS pin

#define LCD\_RS\_PORT PORTB

#define LCD\_RS\_DDR DDRB

#define LCD\_RS\_PIN PB4

// for enable pin EN

#define LCD\_EN\_PORT PORTB

#define LCD\_EN\_DDR DDRB

#define LCD\_EN\_PIN PB3

// for data/commands

#define LCD\_D\_PORT PORTD

#define LCD\_D\_DDR DDRD

#define LCD\_D7\_PIN PD2

#define LCD\_D6\_PIN PD3

#define LCD\_D5\_PIN PD4

#define LCD\_D4\_PIN PD5

// now lets declare our functions

void lcd\_init(void); // for initialisation sequence

void lcd\_enable\_pulse(void); // to generate enable pulse

void lcd\_cmd(uint8\_t c); // for commands(instructions

void lcd\_data(uint8\_t d); // for data

void lcd\_set\_cursor(uint8\_t row, uint8\_t col); // for setting cursor(row: 0 or 1, col: 0..15)

void lcd\_print(const char \*s); // to print string

void lcd\_clear(void); // to clear\_lcd

void lcd\_home(void); // to return cursor to origin (row=0. Column =0)

void lcd\_print\_uint16(uint16\_t v); // to print an integer value

#endif