

DE2 – project 6

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204437

LCD signal(s)	AVR pin(s)	Description
RS	PB0	Register selection signal. Selection between Instruction register (RS=0) and Data register (RS=1)
R/W	GND	Read/Write
E	PB1	Enable loads the data into the HD44780 on the falling edge.
D[3:0]	X	Used in 8-bit mode.
D[7:4]	D7-D4	Upper nibble used in 4-bit mode.

What is the ASCII table? What are the values for uppercase letters A to Z, lowercase letters a to z, and numbers 0 to 9 in this table?

ASCII table contains ASCII code.

ASCII code is the numerical representation of a character.

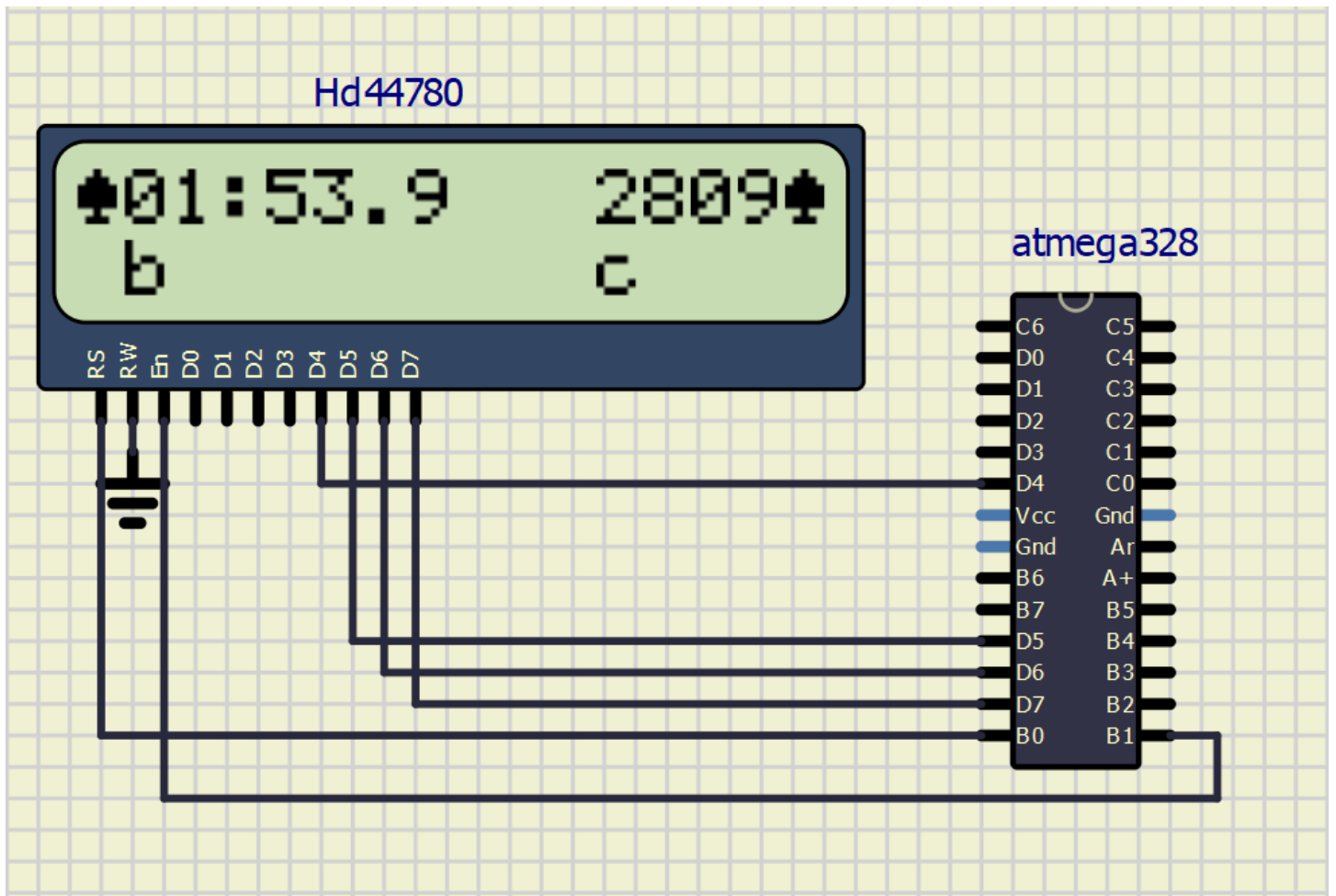
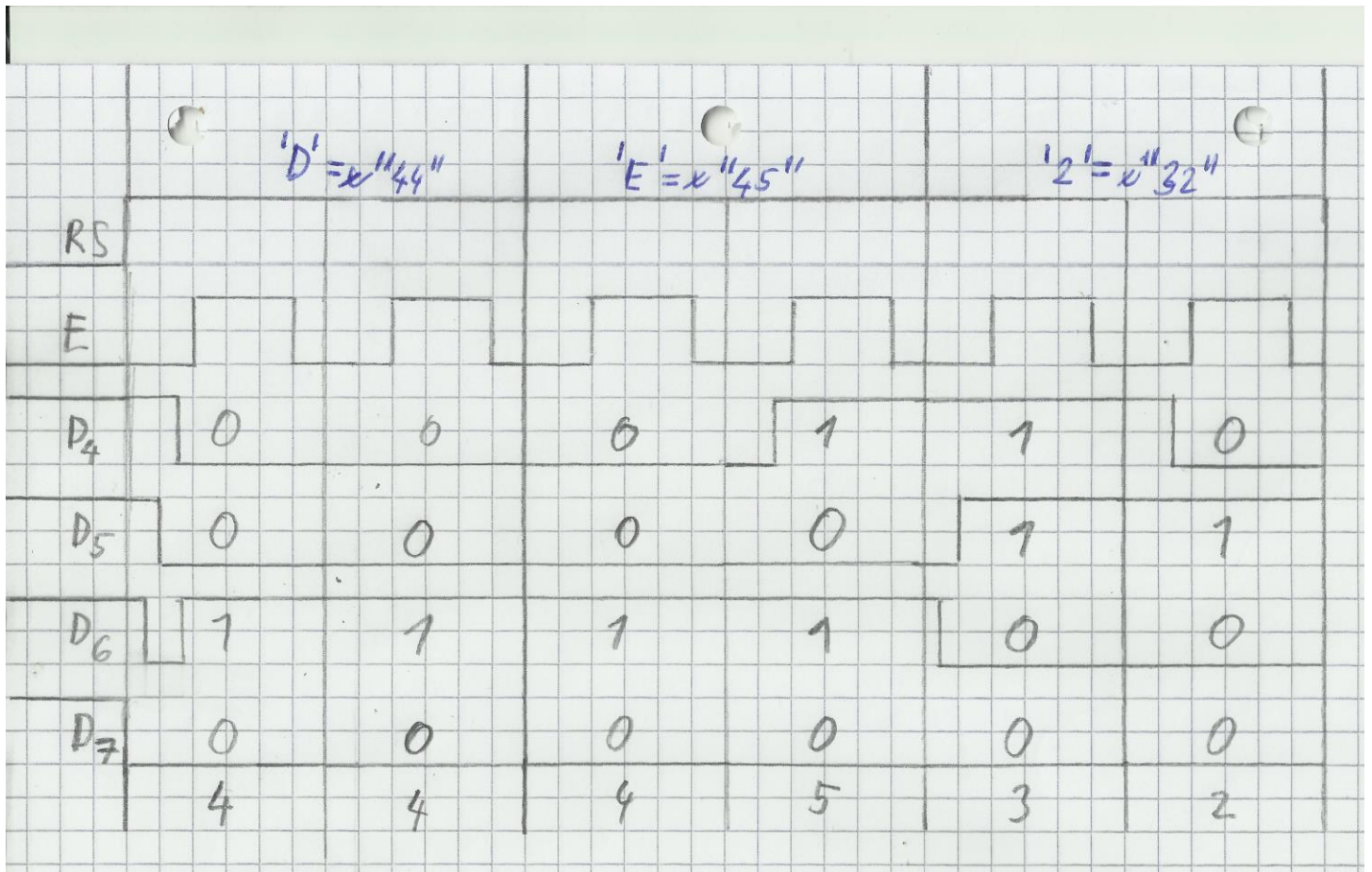
Char → Dec

A-Z → 65-90

a-z → 97-122

0-9 → 48-57

Function name	Function parameters	Description	Example
lcd_init	uint8_t LCD_DISP_OFF	Display off	lcd_init(LCD_DISP_OFF);
	uint8_t LCD_DISP_ON	Display on, cursor off	lcd_init(LCD_DISP_ON);
	uint8_t LCD_DISP_ON_CURSOR	Display on, cursor on	lcd_init(LCD_DISP_ON_CURSOR);
	uint8_t LCD_DISP_ON_CURSOR_BLINK	Display on, cursor on flashing	lcd_init(LCD_DISP_ON_CURSOR_BLINK);
lcd_clrscr	void	Clear display and set cursor to home position	lcd_clrscr();
lcd_gotoxy	uint8_t x, uint8_t y	Set cursor to specified position, x horizontal (left most), y vertical (first line) positions	lcd_gotoxy(x, y);
lcd_putc	char c	Display character at current cursor position.	lcd_putc(c);
lcd_puts	const char* s	Display string without auto linefeed.	lcd_puts(s);
lcd_command	uint8_t cmd	Send LCD controller instruction command.	lcd_command(cmd);
lcd_data	uint8_t data	Send data byte to LCD controller.	lcd_data(data);



Hd44780



atmega328

