

Assignment 4

LCD

Embedded Logic Design

August 23, 2015

1 HD44780 Controlled LCD

1. Have a look at the manual explaining, how to drive the HD44780 controlled LCD at <http://nanu.iiitd.edu.in/ELD/lcd/HD44780%20Controlled%20LCD.html>
2. Display your name in the LCD display using the AVR library only. Change your program to drive the LCD in a way so that the names of both group partners are displayed alternating, i.e. `name1` is displayed and after 2 seconds `name2` is shown in a continuous loop.
 - To solve this problem, first you have to read and understand the manual for the LCD.
 - It is always helpful to think about the problem and to discuss approaches with your group partner.
 - Cut this problem into smaller pieces, which can be solved more easily.
 - If you think that your display is not working, implement the same problem using the Arduino IDE and by utilizing the LCD library. If your LCD works, then there is a bug in your AVR code. Do not submit the Arduino IDE code.

2 Deliverables

All files must be submitted to nanu.iiitd.edu.in via `git` or `subversion`. Late submissions are not evaluated nor will be submissions through <https://www.usebackpack.com> or mail. Your repository has to contain:

- Source code
- Makefile

2.1 Remarks

If you encounter a problem, ask Google, DuckDuckGo, Bing, etc. first. The TAs will not type the question that you have, into the mask in the search engine for you. Required resources, textbooks, etc. are available on the ELD course website of <https://www.usebackpack.com> or in the Internet (datasheets, AVR library documentation, etc.)