

**Learning Goals:**

- Learn how to use more complicated forms of output.
- Get practice setting up circuits using a schematic.

**Prelab:**

Follow this tutorial to get your LCD screen scrolling hello world:

<https://www.arduino.cc/en/Tutorial/LiquidCrystalScroll>

Note that the written instructions on hooking up your LCD screen are incomplete - make sure to follow the schematic! The potentiometer will control the screen brightness.

**Lab 3 - Due: Wednesday 2/13/2019**

Display your name and your favorite quote appear on the 16x2 display, name on first line and quote on the second line. The quote should not all fit on the screen and so should scroll across the screen. Your name should not scroll across the screen, only the quote should scroll.

To be considered completed “on time”, this Lab needs to be demonstrated by end of Lab on Wednesday 2/13/2019,

Your code must be submitted to Gradescope BEFORE you demo your lab!

**Late Policy**

- Late Submission - Submitted and/or demonstrated later that week (before Friday 2/15/19 11:59pm) 25% Penalty
- Late submission – Submitted and/or demonstrated during the following week (before Friday 2/22/19 11:59pm) 50% Penalty

**What should I include with my .ino Code File?**

As with any code file, it should be written in Good Coding Style: in a manner that will help other people read and understand the intent, purpose, operation of the code. So your code must include:

- Name the .ino file with your NetId and Lab Number
  - I.E. something like: ptroy4Lab2.ino
- Header Comments (including the following)
  - // FirstName LastName, UIN and NetID
  - // Lab x - Title
  - // Description - what is this code supposed to do?
  - // Include any assumptions you may have made, what do you expect from the hardware, pinouts, particular arduino versions, etc.
  - // References - where did you find code snippets, ideas, inspirations? if no references used say: "no references used"
- Code is well documented/formatted with comments, indentations, and descriptive variable names
- Actual code - the functions in the cpp/ino file

**Academic Integrity Guidelines:**

You may use any resources linked from this lab, or posted by the professor or TAs on piazza/class web page/etc. You should not look at any other internet resources for this. This is an individual assignment, and should be completed on your own. You should not show anyone your code, or look at anyone else's code. You are responsible for writing the code on your own that converts the input to binary which lights up the proper LEDs.