

Lab 5

CS 3514

6/11/17

## Exploring the Liquid Crystal Display

1. Open the Hello World example under the examples menu : Examples → LiquidCrystal → HelloWorld.  
and set up the LCD as described in the Comments.
2. Set up the Pot to change the brightness of the LCD Screen.
3. Explore the `millis()` function, (See [arduino.cc](http://arduino.cc))
4. Using the LCD Screen as the output device, create a Count-down timer that sounds the buzzer on reaching 0. Use an Input button to set the number of seconds before the alarm is sounded. (Incrementing number of seconds on each button press)  
Use another button to start the Count down.

5. Build a reaction timer that sounds the buzzer when a random number of seconds ( $< 10$ ) has elapsed after reset. The user should press a button to stop the buzzer and the reaction time should be recorded on the LCD.
6. Rewire the brightness control so that the brightness can be changed from within the program.