CS 362 Lab 6 Spring 2019

Learning Goals:

- Be able to take in user input and have your Arduino respond appropriately.

Lab: Due Wednesday 3/6/18

Have your Arduino get the date(mm/dd/yyyy) & time(hh:mm:ss) from the user via the serial monitor in the Arduino Development IDE software.

- Date includes day, month and year
- Time includes hour, minutes and seconds

You circuit/program should:

- print a prompt on the serial monitor,
- get input of date and time from user via the serial monitor
- include error checking for input that doesn't make sense (hours not in range of 0 to 23, minutes not in range 0 to 59, month not range of 1 to 12, etc). Giving error messages to the 16x2 display
- setting the Arduino to contain the (valid) date and time entered by the user.
- display Arduino's date and time on the 16x2 display
- keep an accurate (continually updating) date and time shown on 16x2 display

To open the Serial Monitor on your computer:

- click on the "Tools" menu item in the Arduino Development IDE
- then click on the "Serial Monitor"

To send input from the Serial Monitor on your computer:

- set the cursor to the input field on the top line in the Serial Monitor window
- type in some text
- click the Send Button to the left of the input field or type in Enter

References on Serial:
https://www.arduino.cc/reference/en/language/functions/communication/serial/
https://www.arduino.cc/reference/en/language/functions/communication/serial/available/
https://www.arduino.cc/reference/en/language/functions/communication/serial/read/
https://www.arduino.cc/reference/en/language/functions/communication/serial/readbytesuntil/

Date/Time library:

- You may need to install the Time Library: https://www.arduino.cc/en/Guide/Libraries
- Time Library Discussion: http://playground.arduino.cc/Code/Time
- Another Time Library: https://www.arduino.cc/en/Reference/CurieTime

Updated Time library:
Github : https://github.com/PaulStoffregen/Time
Using the library : http://www.pjrc.com/teensy/td_libs_Time.html

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To be considered completed "on time", this Lab needs to be demonstrated by end of Lab on Wednesday 3/6/2019. 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 3/8/19 11:59pm) 25% Penalty
- Late submission – Submitted and/or demonstrated during the following week (before Friday 3/15/19 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.