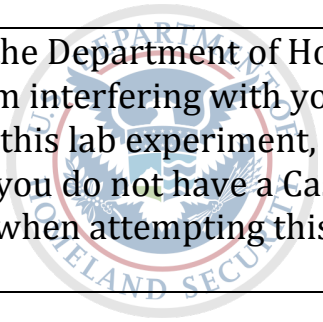
Cabrillo College, CS24 Elementary Computer Organization
second Arduino lab assignment

It's not a bomb countdown timer

This lab requires the following components *(available in the Sunfounder Super Starter Kit v2.0):*	To prevent the Department of Homeland Security from interfering with your ability to complete this lab experiment, please ensure that you do not have a Casio F-91W wristwatch when attempting this lab assignment.
• One Rotary Encoder • Two 7-Segment LED displays • Two (Shift Registers) 74HC595	



You will find that the following Sunfounder labs will be helpful in preparing you to complete this lab exercise, and I suggest that you complete them first:

- Lesson 10 7-segment display
- Lesson 11 74HC595
- Lesson 14 Rotary Encoder

Project requirements:

- Use the Rotary Encoder to select an integer value between "00" and "99". This value represents a time between 0.0 and 9.9 seconds. This value represents the "maximum seconds." Rotate the encoder clockwise to one step increase the value by one, and counterclockwise to decrease the value by one step.
- Display the "maximum seconds" using two 7-segment LED displays, unless you are in countdown mode in which case display the "current seconds" instead.
- Press (release) the Rotary Encoder to enter countdown mode. Initially the current time is set to the maximum time. In countdown mode, subtract one from the current time every tenth of a second, updating the display. When the current time reaches zero, flash the display at "00"
- If the Rotary Encoder is pressed (released) while in countdown mode, leave countdown mode and restore the display to the maximum time.
- If the Rotary Encoder is changed while in countdown mode, exit countdown mode and set the maximum time to be the current time. *(and then proceed to change the maximum time as above.)*