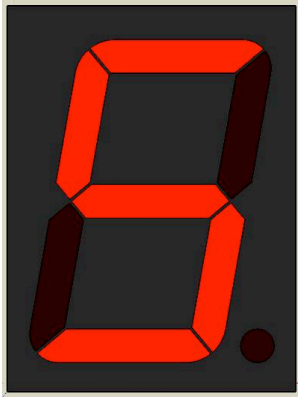# Hacker Challenge - 7 segment display

I have a few 7-segment displays I can loan out. These are fairly simple to hook up to the Arduino. The displays have a common cathode pin meaning you hook that pin to your 330 ohm resistor which in turn is hooked to ground. The anode pins of the display go to various digital I/O pins.

There are two hacker challenges for this display. The first is to have a countdown time that goes from nine to zero displaying every digit for 1 second. Why count down rather than count up? Because it is way scarier to have a red LED count down to zero. To make it even scarier, when it gets to zero, you should flash on zero a bunch using a for loop. Here are the functions you need to write to get full credit for this challenge.

First, you will need 11 functions. Each of them instructs each of the 7 segments to be either on or off:

> void zero()
> void one()
> void two()
> ...
> void nine()
> void allOff()

The last function you need to write is zeroFlash which will flash zero a bunch of times at a sufficiently scary rate.

The final step is to change the loop function so it counts down using the functions you wrote.

Completing this task will give you 50XP.

An additional 25XP will be awarded if, in addition to the above, you write a separate program that counts button presses. Initially, the display is off. One button press will turn on the display and show zero. another button press will display one and so on up to nine. Another button press will turn off the display.