CMPE1250 – 16-bit Segs Functions

In this exercise, you will complete the remaining functions for your Segs library.

Using lecture notes from the 7-segs era, and the number theory notes, complete the `Segs_16H`, and `Segs_16D` functions if you have not already done so.

To test these functions, along with the rest of the library code you have written to date, complete the following lab:

- Build a standard project with all library support and PLL startup.

- Setup your main loop with an appropriate RTI non-blocking interval. You'll want to count at 1s intervals on the upper segs line but configure the RTI with a shorter interval – possibly 100ms, which will permit to coordinate other tasks. Count 10 events to increase the segs count. Note: nothing in your main loop should be blocking. Keep the count in the range of 0 to 9999.

- If the CTR switch is pushed, reset the count back to zero.

- On the bottom display, turn on each successive decimal point each 200ms. At the start of a new second, no DPs will be on. After 200ms, the first DP will be on… at 800ms, all 4 DPs will be on.

- Pressing the UP button will switch the top display to HEX, and only the YELLOW LED will be on.

- Pressing the DOWN button will switch the top display to DEC, and only the GREEN LED will be on.

- You want the switches to be responsive.

- Plan before you code.

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