CMPE1250 – Number Entry / HEX Converter

Now that you have seen the general theory of switch transition detection, it is time to put your code into the switch library, and test it in a lab.

Your instructor will discuss the details of completing the remaining functions from the switch/LED header from long ago. The use of state variables may be used to track the previous state, so a word on this will be of benefit, to help you plan your code.

Once you have completed basic testing and validation, complete the following:

- Create a standard project with all library support and Clock / PLL activation.

- On the upper line of the segs, you will display a number to edit in decimal. The decimal point will indicate which digit you are editing. You don't have a single function to manage this, so you may either build a new version of `Segs_16D` that is parameterized to indicate the decimal point that you want on, or just manually call `Segs_Normal` in your main code.

- Pressing the up or down button will increase or decrease the current digit being edited. The digit will wrap at zero to nine, and nine to zero.

- Pressing the left or right will switch what digit is being edited, but you will not wrap at either end.

- Any time the top decimal number changes, you will show the HEX conversion on the bottom display.

- To keep things working properly, make sure the program reacts to the buttons being active only once per press.

Fully test and ensure that you cannot break your program.