CS466 Homework -- isIntContext()

Due via Blackboard by midnight Saturday March 5, 2021.

Implement the following function

```
//
// isIntContext
//
// Will return a true (1) if called from interrupt context
// or false (0) if called from code
// running in normal (non-interrupt) context.
//
int isIntContext(void);
```

You will need to look at the ARM info Center and drill down into to the
programmers model for the Cortex-M4 processor at the heart of
the microcontroller on our Tiva boards.

I used mostly the section at:
 * Cortex-M4 Devices Generic User Guide
     * The Cortex-M4 Processor
         * Programmers Model
             * Core Registers
                 * Program Status Register

To complete the assignment you will need to determine
   1)   Program Status Word (PSR) register values you will need to examine to determine
        interrupt context.
   2)   Determine how to generate some ARM inline assembly and get the data back to 'C'
        context
   3)   Figure out how to test it.
        a.   We have LED's and now have code running in task and interrupt context.
        b.   I recommend setting an LED color depending on the context that the routine
              is called in.

This is a little tricky for the Cortex-M4. There are in fact three
32 bit registers inside the processor for program status. Then ARM
offers three separate assembly language mnemonics to access subsets
of 96 PSR bits. There are multiple ways to retrieve the register
information

There are many web references and examples for Gnu compiler inline
assembly syntax and good working examples of how to transfer
inline assembly results to 'C' context.

Hand in your listing and a description of how you tested it.