ENGR-355
HW#4

Note: an ARM Cortex-M0+ processor is assumed for questions asking for a code fragment or for how an instruction operates.

1) In Chapter3 regarding the basics of software concurrency, it is claimed that software modularity it good. Why? And how is it achieved?

2) How is the responsiveness of a program to some event, such as the assertion of a signal coming from outside, improved?

3) How might the work load of the CPU be reduced ?

4) Does the stack in ARM processors grow toward larger or smaller addresses?

5) Write Thumb code to add the number 7 to the contents of r3.

6) Write Thumb code to subtract 4096 from the contents of r6. Use r2 as a temporary register.

7) Write Thumb code to mulitply the two values stored at 0x2000_0100 and 0x2000_0130 and store the result at 0x2000_1000.

8) How does the BLX instruction differ from the BL instruction?

9) Write Thumb code to implement a branch to Label_A if the value in r0 is greater than 10.

10) What is the difference between a RORS instruction and a LSRS instruction?