UNCC, Department of Electrical and Computer Engineering ECGR4101/5101, Fall 2006, Homework #10, Due: 11/16/06, at the beginning of class (20 points)

- 1. How long did this homework take you? (1 point)
- 2. Read the Michael Barr article "Introduction to Counter/Timers". In three sentences of correct English, summarize the general concept presented in the article. (4 points)
- 3. Read the article Reentrancy by Jack Ganssle. In 4 lines of correct English, describe why Mr. Ganssle thinks you may find "60 Minutes" knocking on your door. (4 points)
- 4. Fill in the table below to show which tasks the processor will execute and when, as well as scheduler table contents. Assume that timer tick interrupts occur every 1 millisecond, all tasks take 500 microseconds to complete, and initialTimerValue for tasks A, B and C are 2, 4 and 5 respectively. Note that the entries in the table in column "Right before n" (e.g. timer, run, enabled) show the variable's value right before the timer tick interrupt occurs. This means that a task will run on the tick when its timer reaches 0 (but show the value after the tick and after the ISR executes). Assume task A has the highest priority, followed by task B and then C. (11 points)

Tick Number

	Tick Pullipei															
Task Name		Right before	n	n+ 1	n+ 2	n+ 3	n+ 4	n+ 5	n+ 6	n+ 7	n+ 8	n+ 9	n+ 10	n+ 11	n+ 12	n+ 13
		n														
A	timer	2	1													
	run	0	0													
	enabled	1	1													
В	timer	3	2													
	run	0	0													
	enabled	1	1													
C	timer	1	5													
	run	0	1													
	enabled	1	1													
	Activity		C													