UNC Charlotte, Department of Electrical and Computer Engineering ECGR 4101/5101, Fall 2008, Homework #10

Due: 12/1/2008, at the beginning of class (20 points)

Assignment should be typed, a hard copy turned in to instructor

- 1. How long did this homework take you? (1 point)
- 2. Read the Eric Umansky article "Studs and Duds". In three sentences of correct English, summarize the general concept presented in the article. (4 points)
- 3. Read the David Kalinsky article "Context Switch". In three sentences of correct English, summarize the general concept presented in the article. (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 1.2 milliseconds to complete, and initialTimerValue for tasks A, B and C are 5, 4 and 3 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

	I	D. L.														
Task		Right	n	n+												
Name		before		1	2	3	4	5	6	7	8	9	10	11	12	13
		n														
A	timer	1	5													
	run	0	0													
	enabled	1	1													
В	timer	3	2													
	run	0	0													
	enabled	1	1													
C	timer	2	1													
	run	0	1													
	enabled	1	1													
	Activity		A	A,												