

Snack food machine → requirements

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- 1) The machine shall accept 5¢, 10¢, 25¢, and \$1.00 coins.
 - 2) ~~The~~ machine shall have a device to detect if the structure is being shaken or tipped.
 - 3) The machine shall have the ability to return all coins inserted when a "change returned" button is pressed.
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UNC Charlotte, Department of Electrical and Computer Engineering
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Your name: _____ Show all work

1. 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 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.

Task Name	Right Before n	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
A	timer	2	1	0	0	0	0	0	0	0	0	0	0	0	0
	run	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	enabled	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B	timer	3	2	1	0	0	0	0	0	0	0	0	0	0	0
	run	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	enabled	1	1	1	1	1	1	1	1	1	1	1	1	1	1
C	timer	5	4	3	2	1	0	0	0	0	0	0	0	0	0
	run	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	enabled	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Activity	---	A	A	A	A	A	A	A	A	A	A	A	A	A

