

BLG351E Experiment 4 Part 1 “Stack & Subroutines” REPORT	CRN	12635
	Group	G11
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Pseudo Program Address (PPA)	Line
0xC010	Setup mov #10d, R5
0xC012	mov #20d, R10
0xC014	mov R5, R6
0xC016	inc R5
0xC018	call #func1
0xC01A	inc R10
0xC01C	jmp finish
0xC01E	func1 pop R6
0xC020	call #func2
0xC022	mov #15d, R6
0xC024	ret
0xC026	func2 pop R7
0xC028	push R6
0xC02A	ret
0xC02C	finish nop

Q1) (40 pts.) You are given an arbitrary code and a Pseudo Program Address (PPA) above. Please copy lines from above in the execution order and show how does the values of PC, R5, R6, R7, R10, SP and the values inside stack changes until it reaches "finish", in the table below. You are given an initial state and result for the execution of 1st line below. Please fill the rest of the table.

PC	Line	R5	R6	R7	R10	SP	Stack Content		
0xC010	Setup mov #10d, R5	#10d	#0d	#0d	#0d	0x0400			
0xC012	mov #20d, R10	#10d	#0d	#0d	#20d	0x0400			
0xC014	mov R5, R6	#10d	#10d	#0d	#20d	0x4000			
0xC016	inc R5	#11d	#10d	#0d	#20d	0x4000			
0xC018	call #func1	#11d	#10d	#0d	#20d	0x3FFE	0xC01A		
0xC01E	func1 pop R6	#11d	0xC01A	#0d	#20d	0x4000			
0xC020	call #func2	#11d	0xC01A	#0d	#20d	0x3FFE	0xC022		
0xC026	func2 pop R7	#11d	0xC01A	0xC022	#20d	0x4000			
0xC028	push R6	#11d	0xC01A	0xC022	#20d	0x3FFE	0xC01A		
0xC02A	ret	#11d	0xC01A	0xC022	#20d	0x4000			
0xC01A	inc R10	#11d	0xC01A	0xC022	#21d	0x4000			
0xC01C	jmp finish	#11d	0xC01A	0xC022	#21d	0x4000			
0xC02C	finish nop	#11d	0xC01A	0xC022	#21d	0x4000			