Autograder Results

Files Submitted Properly (1.0/1.0)

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AUTOGRADER SCORE
1.0 / 1.0

PASSED TESTS
Files Submitted Properly (1.0/1.0)

QUESTION 2
Testcase   **18.0** / 18.0 pts

QUESTION 3
Hardware   **22.0** / 22.0 pts

QUESTION 4
Microcode   **22.0** / 22.0 pts

QUESTION 5
Interrupt Handlers   **20.0** / 20.0 pts

QUESTION 6
Multiple Devices   **16.0** / 16.0 pts

QUESTION 7
Demo   **1.0** / 1.0 pts

✔	− 0 pts	Correct
	− 0.25 pts	Missed 1 demo
	− 0.5 pts	Missed 2 demos
	− 1 pts	Missed 3 demos

💬 100%

QUESTION 2
Testcase   **18.0** / 18.0 pts

✔	− 0 pts	Correct

- prj2.s runs to completion
- timer increments repeatedly (should be in the 3-10 hex range by the end of execution
- toaster should update to be the following: `009ce117`, `00ff9fce` (all other values should not show in memory since they are smaller) min: `000000ce` or `00002caa`, max: `0000fa89` or `0000f858`, range: `0000f9bb`, `0000cddf`, `0000cbae` or `0000f78a`

− 8 pts	prj2.s does not run to completion (never halts or has the incorrect value in RAM)

Timer

− 9 pts	Timer never increments
− 4.5 pts	Timer only increments once
− 0 pts	Click here to replace this description.

Toaster

− 9 pts	Toaster max and min does not ever update with the correct value
− 4.5 pts	Toaster only updates correctly once
− 4.5 pts	Toaster always takes most recent values (doesn't take max and min value)
− 4.5 pts	Toaster completes with an incorrect difference value

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QUESTION 3
Hardware   **22.0** / 22.0 pts

✔	− 0 pts	Correct
	− 4 pts	PC does not start at 0x08 or some other similar solution implemented
	− 5 pts	Interrupt enabled register not properly connected
	− 5 pts	Int bus does not connect devices to microcontroller (onInt)
	− 4 pts	IntAck line does not connect devices to the microcontroller
	− 4 pts	DrDATA does not drive device outputs to main bus
	− 4 pts	$k0 register not properly added to regsel mux
	− 4 pts	finite state machine connect to wrong bits
	− 4 pts	wrong tunnel label

QUESTION 4
Microcode   **22.0** / 22.0 pts

✔	− 0 pts	Correct
	− 6 pts	INT macrostate incorrect
	− 6 pts	INT ROM and/or modifications to FETCH incorrect
	− 4 pts	DI instruction incorrect
	− 4 pts	EI instruction incorrect
	− 6 pts	RETI instruction incorrect
	− 6 pts	IN instruction incorrect
	− 6 pts	FETCH macrostate incorrect
	− 6 pts	missing interrupt rom value
	− 6 pts	missing sequencer rom value
	− 22 pts	Blank/No submission

QUESTION 5
Interrupt Handlers   20.0 / 20.0 pts

✔	– 0 pts	Correct
	– 6 pts	Does not load handler addresses into the IVT and enable interrupts correctly at the start of assembly code
	– 6 pts	Syntax Errors

Timer Handler

	– 6 pts	Does not have interrupts disabled while saving/restoring $k0
	– 4 pts	Does not save necessary registers while interrupts are enabled
	– 3 pts	Does not increment timer value in memory (`ticks`)
	– 3 pts	Does not use RETI to return
	– 3 pts	did not pop off stack correctly

Toaster Handler

	– 4 pts	Does not have interrupts disabled while saving/restoring $k0
	– 4 pts	Does not save necessary registers while interrupts are enabled
	– 3 pts	Does not increment toaster max value in memory (`maxval`)
	– 3 pts	Does not increment toaster min value in memory (`minval`)
	– 3 pts	Does not use RETI to return
	– 3 pts	did not pop off stack correctly

	– 20 pts	Blank/No submission
	– 2 pts	Minor error

QUESTION 6
Multiple Devices   16.0 / 16.0 pts

✔	– 0 pts	Correct
	– 6 pts	Devices do not share the same INT bus (or eventually connect to the same line through some logic)
	– 6 pts	Devices are not properly daisy chained
	– 6 pts	DAR not properly connected to the bus & toaster
	– 16 pts	Missing one or more devices