Lab 7 Bonus (Preliminary) Results

Summary for Chathil Rajamanthree (32523201,L1E):

Part 1/1: 7.35 (out of 10.0 marks) (#q1)

Details for Part 1/1:

Files: alu.sv cpu.sv datapath.sv lab7bonus_autograder_check.sv lab7bonus_top.sv regfile.sv shifter.sv

Autograder test summary:

Test No.	Result	Details	Comment
0	CORRECT (+0.500)		
1	CORRECT (+0.500)		
2	CORRECT (+0.500)		
3	CORRECT (+0.500)		
4	CORRECT (+0.500)		
5	CORRECT (+0.500)		
6	CORRECT (+0.500)		
7	CORRECT (+0.500)		
8	CORRECT (+0.500)		
9	CORRECT (+0.500)		
10	CORRECT (+1.000)		
11	CORRECT (+1.000)		
12	WRONG (+0.000)	BLX R0 timeout	test program takes 196609 cycles timeout
13	CORRECT (used for ranking for bonus marks)		
14	CORRECT (used for ranking for bonus marks)		
15	CORRECT (used for ranking for bonus marks)		

Relative Ranking for Table 1 and 2 instructions (up to 2 marks)

Clock Frequency	147.71 MHz (**Linux** version of Quartus 15.0 as per Lab 7 Bonus handout)
Exec. Time (Table 1)	1.65 usec
Class Rank (Table 1)	18th place out of 26 submissions passing tests (0.35 marks)
Exec. Time (Table 2)	<disqualified>
Class Rank (Table 2)	<disqualified> out of 24 submissions passing tests (0.00 marks)
Class Rank (all)	<disqualified> out of 24 submissions passing tests

Error and Warning messages:

Quartus messages...

```
Warning (10034): Output port "LEDR[9]" at lab7bonus_top.sv(9) has no driver
Warning (10034): Output port "HEX0" at lab7bonus_top.sv(10) has no driver
Warning (10034): Output port "HEX1" at lab7bonus_top.sv(10) has no driver
Warning (10034): Output port "HEX2" at lab7bonus_top.sv(10) has no driver
Warning (10034): Output port "HEX3" at lab7bonus_top.sv(10) has no driver
Warning (10034): Output port "HEX4" at lab7bonus_top.sv(10) has no driver
Warning (10034): Output port "HEX5" at lab7bonus_top.sv(10) has no driver
```

```
Warning (13410): Pin "LEDR[9]" is stuck at GND
Warning (13410): Pin "HEX0[0]" is stuck at GND
Warning (13410): Pin "HEX0[1]" is stuck at GND
Warning (13410): Pin "HEX0[2]" is stuck at GND
Warning (13410): Pin "HEX0[3]" is stuck at GND
Warning (13410): Pin "HEX0[4]" is stuck at GND
Warning (13410): Pin "HEX0[5]" is stuck at GND
Warning (13410): Pin "HEX0[6]" is stuck at GND
Warning (13410): Pin "HEX1[0]" is stuck at GND
Warning (13410): Pin "HEX1[1]" is stuck at GND
Warning (13410): Pin "HEX1[2]" is stuck at GND
Warning (13410): Pin "HEX1[3]" is stuck at GND
Warning (13410): Pin "HEX1[4]" is stuck at GND
Warning (13410): Pin "HEX1[5]" is stuck at GND
Warning (13410): Pin "HEX1[6]" is stuck at GND
Warning (13410): Pin "HEX2[0]" is stuck at GND
Warning (13410): Pin "HEX2[1]" is stuck at GND
Warning (13410): Pin "HEX2[2]" is stuck at GND
Warning (13410): Pin "HEX2[3]" is stuck at GND
Warning (13410): Pin "HEX2[4]" is stuck at GND
[23 more]
```

```
Warning (21074): Design contains 4 input pin(s) that do not drive logic
Warning (21074): Design contains 4 input pin(s) that do not drive logic
```

```
Warning (13024): Output pins are stuck at VCC or GND
```

This warning says that an output pin never changes (is "stuck"). This can sometimes indicate a bug if the output pin shouldn't be a constant. If this pin is not supposed to be constant, check for bugs that cause the value being assigned to never change (e.g., `assign a = x & ~x;`)

```
Warning (15610): No output dependent on input pin "KEY[2]"
Warning (15610): No output dependent on input pin "KEY[3]"
Warning (15610): No output dependent on input pin "SW[8]"
Warning (15610): No output dependent on input pin "SW[9]"
Warning (15610): No output dependent on input pin "KEY[2]"
Warning (15610): No output dependent on input pin "KEY[3]"
Warning (15610): No output dependent on input pin "SW[8]"
Warning (15610): No output dependent on input pin "SW[9]"
```

This warning says that these input pins aren't used by anything (or don't affect the behaviour of the circuit). If this happens to an input you know you're not supposed to ignore, it could indicate a bug.

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