

GTA Validation Instructions:

Program the FPGA on the DE1-SoC Nano board with the student's implementation of the FSM-Datapath. When the programming has successfully completed, perform the tests described below. Apply the values to the switches and/or press the key as indicated, reading from left to right. In general, the first value represents the opcode, the second value represents operand A, and the third value represents operand B. For each step, record the value of HEX[3:0] as the **Result**.

HEX[3:0] should not change its value while the switches are being changed. If they do change, make a note in the comments section. (HEX[3:0] should change while KEY1 or KEY0 is being pressed. That is acceptable and there is no need to make a note of it.)

SW[3:0]		SW[7:4]	SW[3:0]		SW[7:4]	SW[3:0]		Result
							KEY0	____ _
0000	KEY1	0000	0000	KEY1	0000	0000	KEY1	____ _

Compare the last result to the last four digits of the student's ID number. If the digits do not match, STOP THE VALIDATION. DO NOT CONTINUE.

SW[3:0]		SW[7:4]	SW[3:0]		SW[7:4]	SW[3:0]		Result
0001		1100	0001					
0010	KEY1	0011	1001	KEY1	0101	0011	KEY1	____ _
0011	KEY1	0110	1010	KEY1	0011	0100	KEY1	____ _
0100	KEY1	0011	0101	KEY1				____ _
0101	KEY1	0111	1010	KEY1	1101	0110	KEY1	____ _
0110	KEY1	0100	0011	KEY1	0110	1101	KEY1	____ _
1000	KEY1	0110	0011	KEY1	0000	0111	KEY1	____ _
1001	KEY1	1110	1110	KEY1	0000	0011	KEY1	____ _
1010	KEY1	0011	1010	KEY1	0000	0101	KEY1	____ _
1011	KEY1	0011	1010	KEY1	0000	0101	KEY1	____ _

The validation continues on the next page.

SW[3:0]		SW[7:4]	SW[3:0]		SW[7:4]	SW[3:0]		Result
1100		0011	1100					
1101	KEY1	0111	1101	KEY1	0110	0111	KEY1	____ _
							KEY1	____ _
							KEY1	____ _
							KEY1	____ _
							KEY1	____ _
							KEY1	____ _
							KEY1	____ _
							KEY1	____ _

Comments (only required if something is unusual or wrong):

 GTA Printed Name

 GTA Signature

 Date and Time of Validation