ECE 3544: Digital Design I

Project 3A Validation Sheet

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Student’s name

GTA Validation Instructions:

Program the FPGA on the DE1-SoC Nano board with the student’s implementation of the comparator system. When the programming has successfully completed, perform the set of tests described in the table below. For each case, indicate whether or not the student’ design demonstrates the behavior described.

|  |  |
| --- | --- |
| Procedure and *Expected Result* | Correct Operation  (**Yes** or **No**) |
| Choose values for A (SW[7:4]) and B (SW[3:0]) such that A > B. Record the values of A and B (in binary) here:  A = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    *HEX2 should display the value of A. HEX0 should display the value of B. HEX1 should display a greater-than sign.* |  |
| Choose new values for A and B such that A > B. Record the values of A and B here:  A = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    *HEX2 should display the value of A. HEX0 should display the value of B. HEX1 should display a greater-than sign.* |  |
| Choose new values for A and B such that A = B. Record the values of A and B here:  A = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    *HEX2 should display the value of A. HEX0 should display the value of B. HEX1 should display an equal sign.* |  |
| Choose new values for A and B such that A = B. Record the values of A and B here:  A = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    *HEX2 should display the value of A. HEX0 should display the value of B. HEX1 should display an equal sign.* |  |
| Choose new values for A and B such that A < B. Record the values of A and B here:  A = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    *HEX2 should display the value of A. HEX0 should display the value of B. HEX1 should display a less-than sign.* |  |
| Choose new values for A and B such that A < B. Record the values of A and B here:  A = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    *HEX2 should display the value of A. HEX0 should display the value of B. HEX1 should display a less-than sign.* |  |