ECE 3544: Digital Design I

Project 3A Validation Sheet

GTA Validation Instructions:

Program the FPGA on the DE1-SoC Nano board with the student’s implementation of the parity checking 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 a 7-bit value on SW[6:0] as the desired “transmit word.” Record the value you applied here:  SW[6:0] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Set the values of SW[9:7] = 000. *LED[6:0] should display the value on SW[6:0]. LED[9:7] should all be 0.* |  |
| Change the 7-bit value on SW[6:0]. Record the value you applied here:  SW[6:0] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Leave the values of SW[9:7] unchanged. *LED[6:0] should display the value on SW[6:0]. LED[9:7] should all be 0.* |  |
| Change the value of SW[9:7] to a non-zero value. Record the value you applied here:  SW[9:7] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Leave the value of SW[6:0] unchanged. *LED[6:0] should display the value on SW[6:0]. LED[9:7] should equal the value on SW[9:7].* |  |
| Change the value of SW[9:7] to a different non-zero value. Record the value you applied here:  SW[9:7] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Leave the value of SW[6:0] unchanged. *LED[6:0] should display the value on SW[6:0]. LED[9:7] should equal the value on SW[9:7].* |  |
| Change the 7-bit value on SW[6:0]. Record the value you applied here:  SW[6:0] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Leave the values of SW[9:7] unchanged. *LED[6:0] should display the value on SW[6:0]. LED[9:7] should all equal the value on SW[9:7].* |  |
| Change the value of SW[9:7] to a different non-zero value. Record the value you applied here:  SW[9:7] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Leave the value of SW[6:0] unchanged. *LED[6:0] should display the value on SW[6:0]. LED[9:7] should equal the value on SW[9:7].* |  |