**ECE 491 Lab 1 – Requirements Checklist**

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| **Description** | **Test Method** | **Detailed Results** |
| 1. Module Interface | Code Inspection |  |
| 2. Module function: accepts eight 4-bit inputs and eight 1-bit “decimal point” inputs and displays eight 7-segment outputs without noticeable flicker. | Demonstration in hardware using Nexys 4 DDR board:  Proper display of all 8 digits and 16 digit symbols.  Proper display of 8 decimal points  Free of noticeable flicker | We verified this requirement by having the 7-seg display show digits 0-7 with decimal points on even numbers, and then displaying 8-F with decimal points on the odd numbers. |
| 3. Uses Nexys4 board 100Mhz clock; all flip-flop clock inputs tied directly to this signal | Code inspection  Using the ‘find all’ feature in Vivado to find all instances of ‘always\_ff’ and checking that it was triggered on the 100MHz clock each time. | We verified that the 100MHz clock is the only signal we are triggering on/ |
| 4. Contains no latches | Inspection of Synthesis Report | We had no warnings of latches being generated. |
| 5. Test circuit – show test that test circuit functions properly to exercises circuit. | Demonstration in hardware  We set the 7-seg digits first from 0-7 and then from 8-F whilst alternating the decimal points on all even digits at first and then all odd ones. | 7-seg display displayed expected values on all instances. |
| In submitting this checklist as part of our report, I/We certify that the tests described above were conducted and that the results of these tests are accurately described and represented. I/We understand that any misrepresentation of the tests or the results constitutes a violation of the College policy on academic dishonesty. | | |
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