ECE 3544: Digital Design I Student Name:

Project 3B Validation Sheet

Student ID#:

GTA Validation Instructions:

Program the FPGA on the DE1-SoC board. When the programming has successfully completed, press and release KEY1 to reset the design. Record the value of the seven-segment displays:

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|  |
| Press KEY1 |

Set SW[6] to 0. (The switches are 0 when they are down.) Press and release KEY0. Record the values of the seven-segment displays as four hexadecimal digits.

|  |  |  |
| --- | --- | --- |
| **SW[6] = 0** |  |  |
|  | Press KEY0 |

*If the value does not match the last four digits of the student’s Student ID Number, stop the validation.*

*DO NOT RESET THE DESIGN.* Set SW[6:4] to 111. Choose a non-zero value for SW[3:0]. Record the value.

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|  |
| SW[3:0] value |

Press and release KEY0 five times. After each release, record the value of the seven-segment displays.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SW[6:4] = 111** |  |  |  |  |  |  |  |  |  |  |
|  | 1st Press |  | 2nd Press |  | 3rd Press |  | 4th Press |  | 5th Press |

*Reset the design using KEY1.* Set SW[6:4] to 100. Choose a new non-zero value for SW[3:0]. Record the value.

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|  |
| SW[3:0] value |

Press and release KEY0 five times. After each release, record the value of the seven-segment displays.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SW[6:4] = 110** |  |  |  |  |  |  |  |  |  |  |
|  | 1st Press |  | 2nd Press |  | 3rd Press |  | 4th Press |  | 5th Press |

*DO NOT RESET THE DESIGN.* Set SW[6:4] to 111. Press and release KEY0 five times. After each release, record the value of the seven-segment displays.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SW[6:4] = 101** |  |  |  |  |  |  |  |  |  |  |
|  | 1st Press |  | 2nd Press |  | 3rd Press |  | 4th Press |  | 5th Press |

*DO NOT RESET THE DESIGN.* Set SW[6:4] to 110. Press and release KEY0 five times. After each release, record the value of the seven-segment displays.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SW[6:4] = 100** |  |  |  |  |  |  |  |  |  |  |
|  | 1st Press |  | 2nd Press |  | 3rd Press |  | 4th Press |  | 5th Press |