

ECE 3300L

Lab Report #8

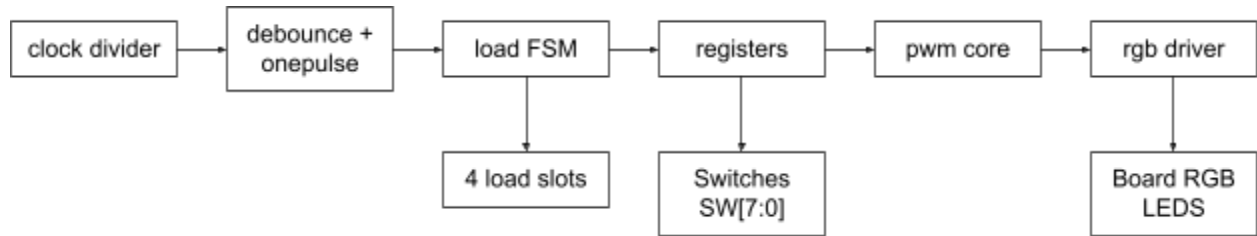
Group E

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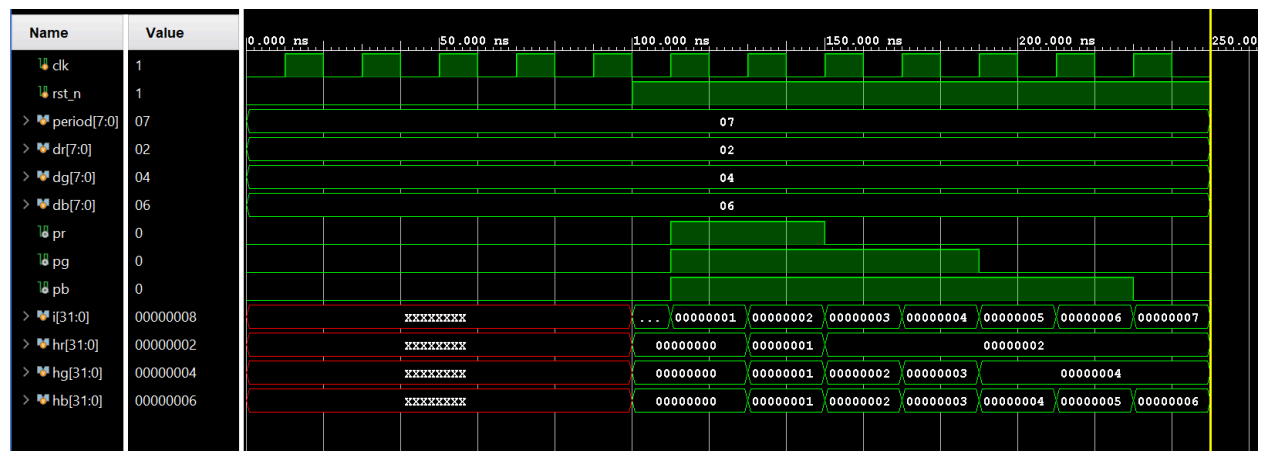
August 14, 2025

Block Diagram:

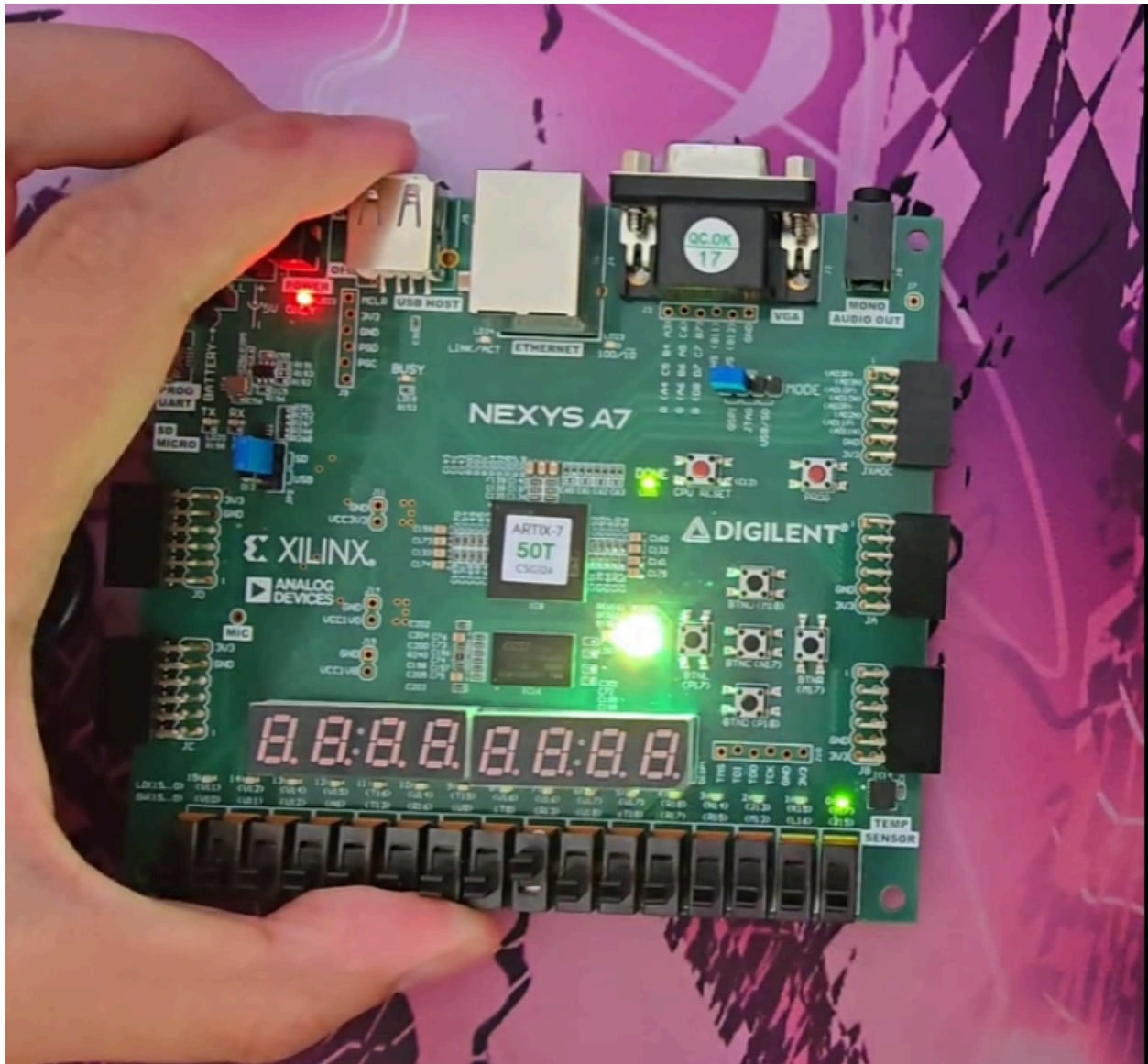


Simulation:

pwm_core_tb:



Board Photo:



Summary:

The single LOAD button goes to a 2-bit slot counter through four different values: resolution (RES), red, green, and blue. With each press, the current switch value is saved into the selected register, indicated by the 4 LEDs as a one-hot slot marker. In the PWM core, the period is $RES + 1$, which ensures a non-zero period and guarantees a valid count range from 0 to RES.

Contributions:

Paul Kim - Testbench, Simulation - 50% contribution

Winson Zhu - Implementation, Hardware Demo - 50% contribution