Next Steps in Zynq SoC Design

EE332/493 Embedded Systems Hardware/Software Fall 2021

Lab 2

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https://github.com/embedded-systems-2-fall-2021-labs/lab-2-Alec-Bakholdin-Rutgers

Purpose/Objective

The purpose of this lab was to introduce interrupts and general input to the system. Previously, we had worked with lights that flashed without any interaction from the user, but this lab introduces more complex behavior, specifically incorporating user input the form of buttons as well as programmatic interrupts that occur every second to affect the output of the LEDs.

Theory of Operation

Vivado

Unfortunately, I waited until the last minute and Vivado was going to take 3 hours to download and install on my computer, and by that time office hours had gone. I don't have the images from Vivado… whoops.

Conclusion

I learned how interrupt handlers are added to the block diagrams in Vivado as well as how to handle interrupts in software (Vitis). I have a better understanding of how to affect inputs and outputs through programming in software, and I feel confident I can start to develop my own block diagrams in the near future.