

# ECE 497: Special Project

## Weekly Report

Week 03

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# What We Did

- ▶ Attempted to flash default chip to Alex's FPGA.
- ▶ Generate a non-default chip
- ▶ Run the `asm` tests on the non-default chip
- ▶ Went spelunking through the repository to find options, their definitions, and their overrides.

# What We Learned

- ▶ The repository is incredibly complicated
- ▶ **VERY** deep directory nesting (Partly due to Scala/Java project directory conventions).
- ▶ Putting the generated chip on an FPGA seems to be much more difficult than originally thought.
- ▶ Generating a non-default chip can be very easy or very hard.
  - ▶ Some of the options that must be overridden to ensure a different chip is built and simulated/benchmarked are not easy to understand or find.

# Next Steps

- ▶ Continue trying to write the default chip out to Alex's FPGA and test.
- ▶ Practice generating other non-default chips to understand all the options used when generating a new chip.
- ▶ Hopefully, start defining a new, custom, chip using what we know, and building a very small proof-of-concept.



Alon Amid et al. “Chipyard: Integrated Design, Simulation, and Implementation Framework for Custom SoCs.” In: *IEEE Micro* 40.4 (2020), pp. 10–21. ISSN: 1937-4143. DOI: [10.1109/MM.2020.2996616](https://doi.org/10.1109/MM.2020.2996616).