

Over the course of my education career, I have been part of several projects. Two of the most notable of these have been the creation of a Mips Single Cycle Processor for CprE 381 and my project for ComS 309, “CyNote”. While unrelated, these projects have taught me valuable lessons about being an engineer and working with a team, leaving me with knowledge I will carry forward forever.

To begin, the creation of a Mips Single Cycle Processor helped both to teach me directly and to refine my workflow. The project was designed to teach the builder about the processor itself, as well as the many conventions and processes that go into building such a device. I wrote the project entirely in VHDL, a language I had no experience with beforehand and, along with the language, I learned much about the composition of a processor and the process taken to build as complicated as a device from scratch. This will no doubt help in the future when I undertake more circuitry based projects, and the conventions and subsystems knowledge will prove useful when designing similarly complex devices.

My second example, “CyNote”, was a project done over the length of a semester with a group. In a group of 4 randomly assigned students, we undertook a project to create a peer to peer network for class based real time and personal note sharing along with a system question/answer, as well as a hub for textbook exchange. This project was made to enhance the students ability to work cohesively in a group, and to better understand the process behind a large scale project. While I already had experience with small team based development, this project came with its own set of lessons. I had already worked closely with a team of developers much more experienced than I in my work, but I had never led a team of less experienced programmers. The skillset I had gained from programming over the years as well as the one from

devops in my workplace served to create a productive, united team. As a result of working with the various team members, I learned better how to teach, and what to say to appropriately direct someone who has never seen anything like the material being worked on. These learned skills will apply when I graduate to leading my own teams in a professional environment, ensuring that I don't let them down.

At the conclusion of these projects, I found myself with an increased skillset that will remain useful moving forward. The creation of the single cycle processor served to build my engineering and general knowledge, opening my eyes to the deeper world of timing and pipelining, while the creation of CyNote helped to refine my team-based skills, as well as deposit many new and necessary ones into my portfolio. I expect to take what I have learned and use it to enhance any projects I take up in the future, further developing my skills so that I may become a better engineer.