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CPU Report

This CPU project has been quite an experience for me. It has had its highs and lows throughout the semester. While it was extremely difficult, I learned about important aspects of CPU architecture. Learning about the MIPS architecture was important for me to complete the design aspects of the project. As well as learning about the architecture of a CPU, I learned about the environments needed to test a CPU’s implementation. Not having worked with VHDL before, I probably went about testing it differently than an experienced engineer. I set up a virtual box environment on my machine and installed Linux. I learned about many tricks and important commands in UNIX to get Xilinx ISE installed. Once installed, a whole new world of software was opened up to me. VHDL became a daily subject I had to tackle and I learned a lot through the experience.

I absorbed a lot through the project, but I would have done things differently. I worked on my own for the project and see a great benefit a partner would have been. Having another brain to sort through problems is always a good thing in my opinion. A team member with knowledge of VHDL and running it in software would have been an immense help. I also would have befriended the TA earlier in the semester. Even though I contacted her multiple time for help, she never answered me back or was available during her office hours. I believe getting in contact with here earlier would have bettered my chances. I had an extreme lack in confidence in my work because I didn’t feel like it was my best work. This led me to not turn in my work. Looking back now, I wish I had turned in what I had completed for each part. Not turning in all parts killed my grade and is the biggest mistake I would have done differently.

Having built the project, I can say the best possible advice is start early. The earlier you start the more time you have to trouble shoot and redesign. Other people’s knowledge to teach you could be a huge asset. Hopefully they will have a more responsive TA. Also test your code is a known program. Do not go the route I took to install it on my local machine. Another advice would be to test your design thoroughly and turn it in even if its not 100% complete.