**(a) What did you learn from this project?**

This project showed me the importance of timing components in computer design. It also showed me that implementation of an idea can vary significantly from the initial design.

**(b) What would you do differently next time?**

I would try to make an instruction set closer to MIPS. This might make debugging and troubleshooting easier during implementation on FPGA. I would also try to give myself time to write several “Hello World” programs on the FPGA to become better acquainted with its IDE and tools.

**(c) What is your advice to someone who is going to work on a similar project?**

I would recommend that students to begin work on implementing the VHDL portion of the project as early as possible. This was by far the most challenging part of the entire project. Each component was instantiated easily, although, implementing and debugging the code on the FPGA and displaying the correct registers, was very time consuming. One very important bug to note is that our PC register was incrementing by 4 instead of 1 for word addressing. Our PC actually needed to be incrementing by 1. Although simple, this was a tricky bug to catch.