**ELEC 6200 CPU Project**

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1. **What did you learn from this project?**

In this project, we learned about how to design the components of a CPU. Moreover, we learned about how each of these component work together. By working in this project, we were able to understand the complete process of designing a CPU, from the instructions and register definitions to the final testing on hardware. The simulation part of the project using the software tools Modelsim and Quartus helped us in understanding the interface between the software and hardware tools. In the final step of the project we learned how to simulate our processor on the Altera FPGA board. Ultimately, we were able to apply the theory we learned in lectures to actual hardware, which was the best learning experience we could have.

1. **What would you do differently next time?**

If we are given a chance to redo the project we will try to implement pipeline-data path since it is an efficient technique. Having the experience we would be more cautious in writing the VHDL code and simulation, test and debugging part.

1. **What is your advice to someone who is going to work on a similar project?**

Our advice to someone who is going to work on a similar project would be, start early since this project typically take longer time than we expect. First go through all the requirements. Think as a whole project and decide based on the advantages and disadvantages. When you program, make sure you complete every step correctly and check for errors from the beginning. Also use appropriate diagrams to check for completeness and errors. This project is much interesting, but it is challenging too. Being organized and thoroughly verifying at every step will give you the best chance of succeeding.