Multicycle Datapath Project
Part 6 Report

1. What did you learn from this project?

I learned how to implement a multicycle datapath right from scratch. I got to know about the ins and outs of a basic computer architecture and the problems associated with it. I learnt to work with the Quartus and Altera-Modelsim softwares. This project took my VHDL coding and experience to a whole new level.

2. What would you do differently next time?

First I would make my design more efficient by avoiding more redundancies and only clocking the components when needed. Secondly, I would like to implement a different kind of architecture such as pipeline architecture which not only is trickier to design, but also forces the designer to incorporate various hazards every step of the way.

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

First, keep an eye on the big picture at every step. A bottom-up approach is not the best one for such a project. Second, write your own code even for very small components and comment as much as you can as it will only help you.