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CS/ECE 250

Homework 4: 16-bit Processor

I (Bradley Sykes) and my partner William Shelburne completed this 16-bit processor without any outside help. The only resources we used in completing this assignment were the assignment rubric, Piazza, and Logisim documentation.

We are quite happy with the processor’s functionality, as it correctly supports all of the required instructions. However, in certain places it looks overly-complex and lacks organization. This was the result of a bottom-up approach in which we incrementally added one instruction at a time. To improve the design we could reorganize the components to make it easier to read. However, in spite of the processor’s complexity we did not have much trouble adding new instructions or debugging. In completing this assignment we prioritized functionality over readability due to the grading criteria.

In order to run the processor, it is necessary to load the instructions to ROM and data to RAM before stepping through by poking the clock.