Project Status Report #7 Group A3 4/6/19

This week our team worked on trying to improve the performance of core, adding interconnect so that our core could connect to memory effectively, and working on integrating the floating unit of our core. We also kept working on the vector assembler.

The floating point unit had some hidden challenges that we previously had not thought of, but we have a new plan that allowed us to more easily add the floating point while leveraging the memory architecture that we already had.

We also worked on trying to find more rounding issues that our core was having, at least compared to the GCC reference implementation we were comparing against, but we now have correct floating point handling for multiplication, addition, subtraction, and division, but a few small LSB issues with square roots.

The assembler once again gave us some unforeseen issues with handling the parsing of vector register names, but we are actively working on trying to find the issue right now.



Floating-Point-Unit Block Diagram