EC 413 Lab Report

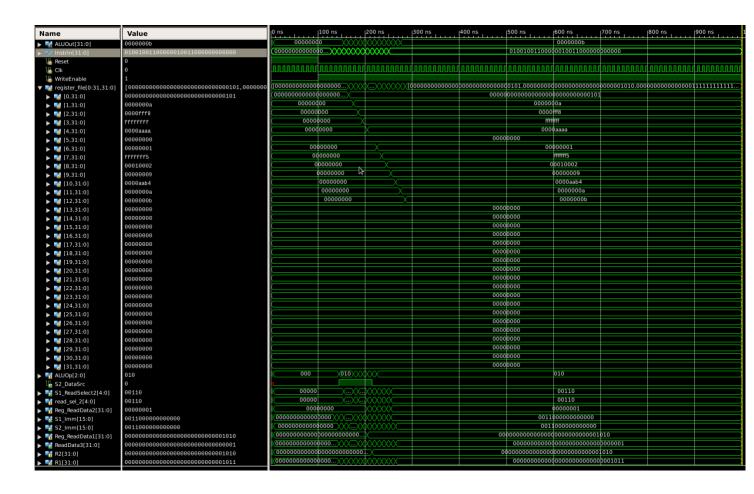
Lab - 5

Author: Anirudh Sriram

Collaborator: Anand Sanmukhani

## **Testing the Register File**

We tested the register file with waveforms, by using the testbench given. We checked the waveform for the read and write values in the register file. The following was the waveform produced.



## **Testing the ALU**

We tested the ALU along with the entire pipeline, using the waveforms produced by the given pipeline testbench. We tested for the different functions including, add, not, and, or, slt etc. We compared the ALUOp Code and the changing register values, with changing clock cycles to see accuracy.

## **Testing the Pipeline**

We used the given testbench, to test the Pipeline, but changed the initial values of the register. So in the first test we provided registers 0 -12 with initial values, and then checked the changing values of the registers every 3 clock cycles. In the second test, we initialized the registers with 0 and checked for the correct calculated output in the output registers, by checking manually for each instruction.

