Postlab for Lab9

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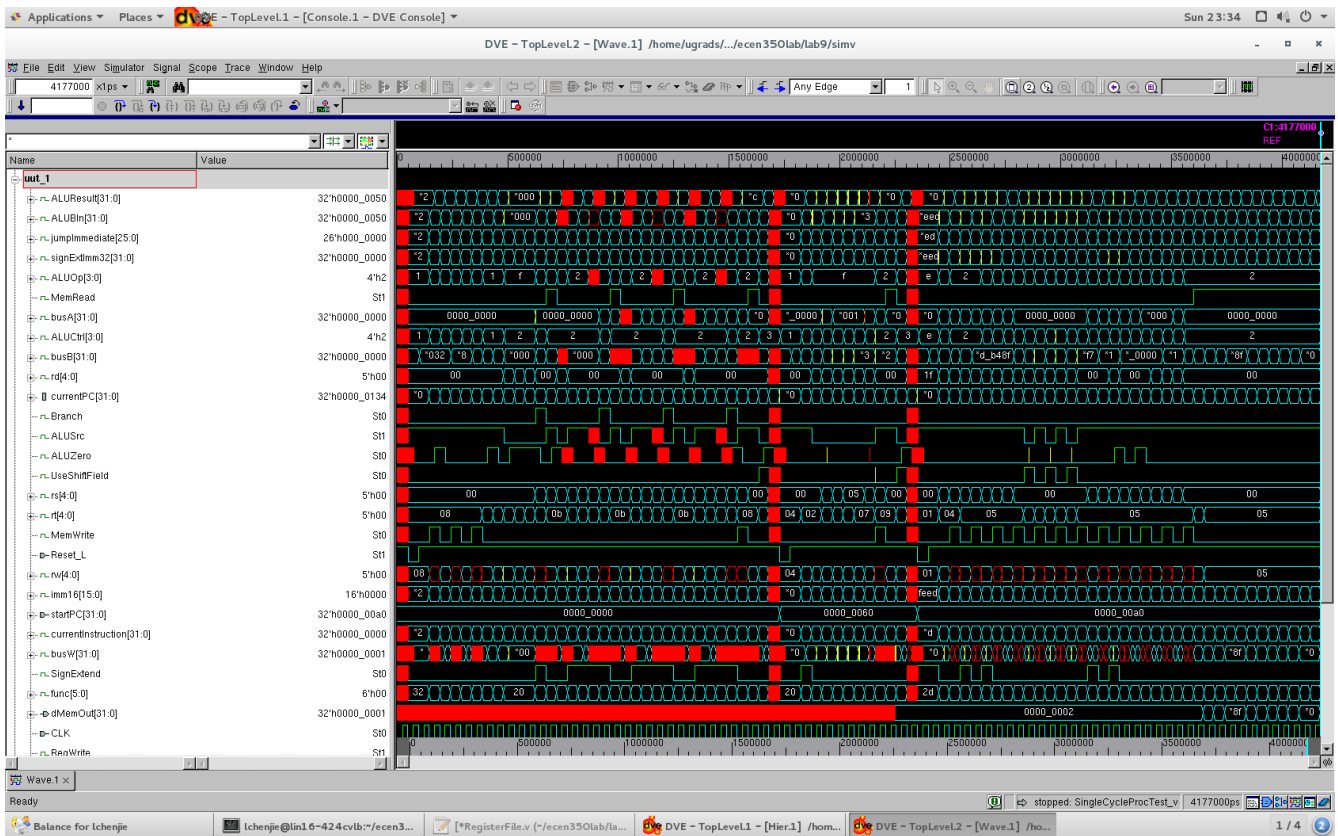
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Figure 1

This lab basically describes how the single cycle processor works. In lab 7 and lab 8, we have

successfully designed the key components of the processor like ALU and Register file. In this lab our

aim is to combine all the components and run the given instruction correctly. For the first program, the

machine will firstly store values 50,40 and 30 into memory address 0x0, 0x00000004, 0x00000008.

After that, a sum of them will be calculated and stored into at the end of array. What we will test is the

sum stored in the memory. Similarly, the second test program will do some dependent arithmetic

calculations and store the final result into memory. What we need to check is if the final result stored in

memory is correct. For the third program, machine will also need to calculate the arithmetic

computations and then store them into memory sequentially. All of the results will be tested this time.

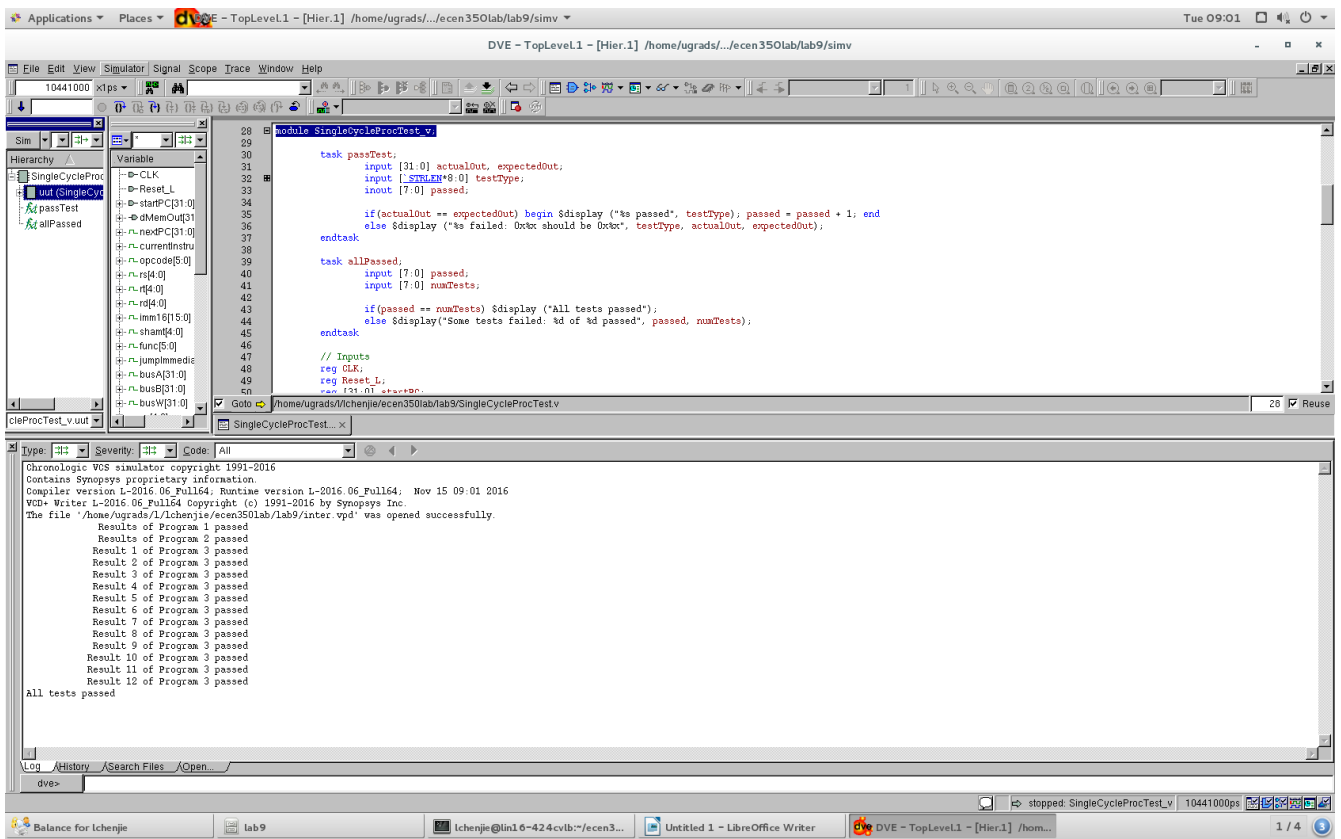(Screenshot of the SingleCycleProc is on the next page)

Figure 2