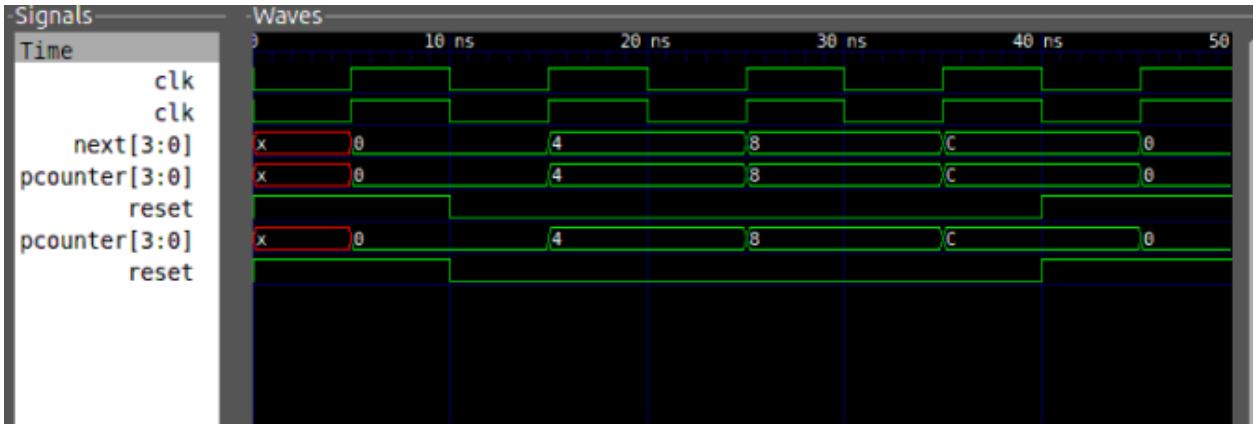
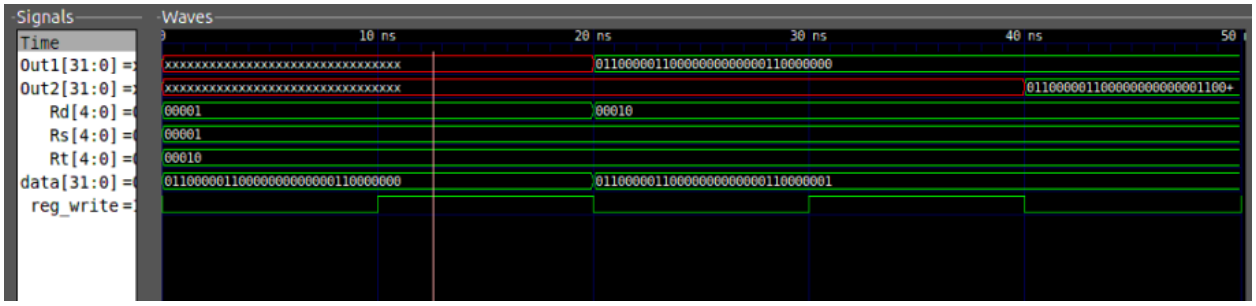
Program Counter



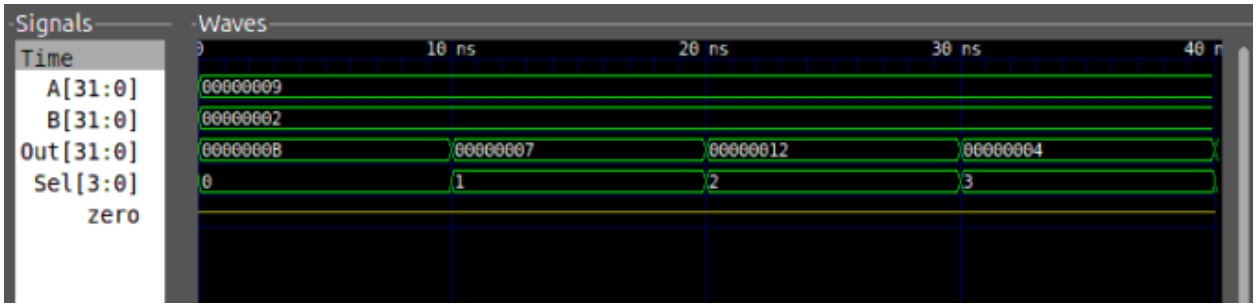
Note that at clock the instruction is incremented by 4 and with reset it goes back to zero

Register File



Gets registers rd (destination), rt, rs.
When regwrite is settled then rd is written
The value of out1, out2 is calculated by retrieving the values in rs rt
To do so I first wrote some values into rt and rs by activating regwrite

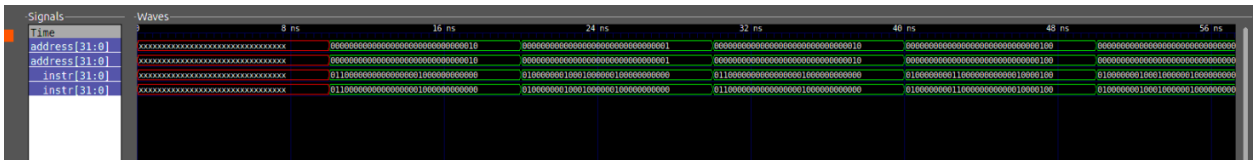
Alu



Different operations are tested with a and b = 2, 9 by changing the opcode
I had a small syntax error for the zero

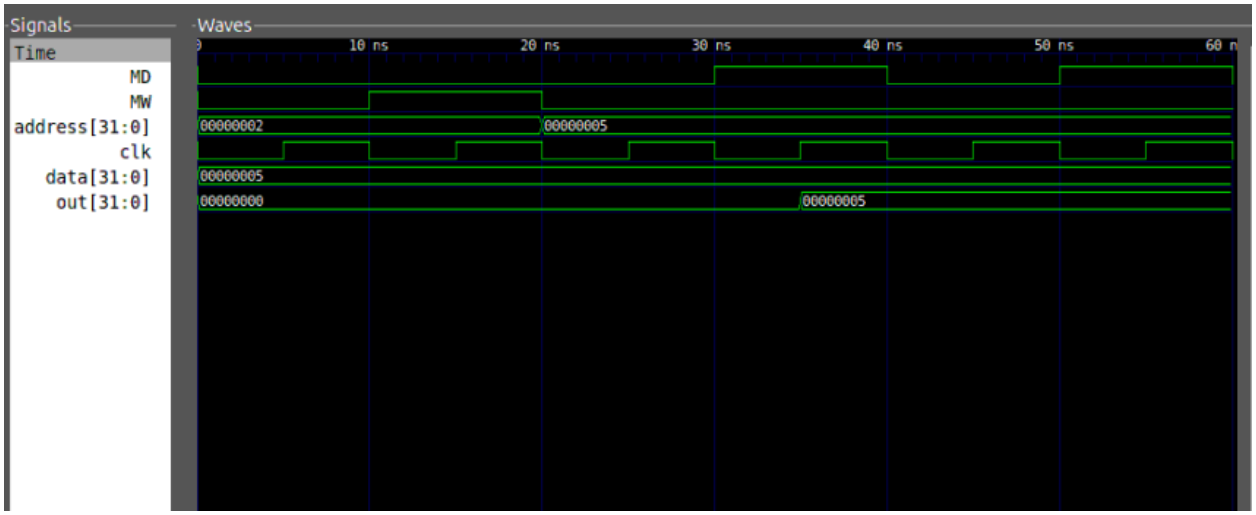
In general zero = !result because if result = 0 then zero should be setted

Instruction Memory



I filled some instructions memories and retrieved the instruction at different address to check that the instructions are retrieved as expected

Data Memory



Important to set md and mw correctly, md to get data from memory, mw to write data to memory. When md is on then the value of out is taken from the data