

# Functional Electronic Circuits Lab6

Student Name: CAO Xinyang

Student ID: 20321308

My variant:

6	sub
---	-----

It means Subtract rs1 from rs2 and write to rd.

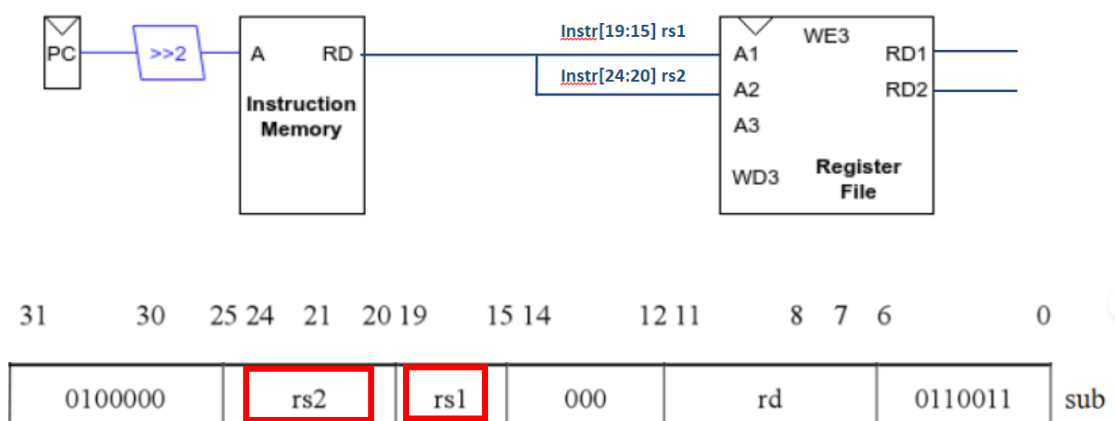
31	30	25	24	21	20	19	15	14	12	11	8	7	6	0	
0100000		rs2		rs1		000		rd		0110011		sub			

The pictures and explanation of the provided instruction execution:

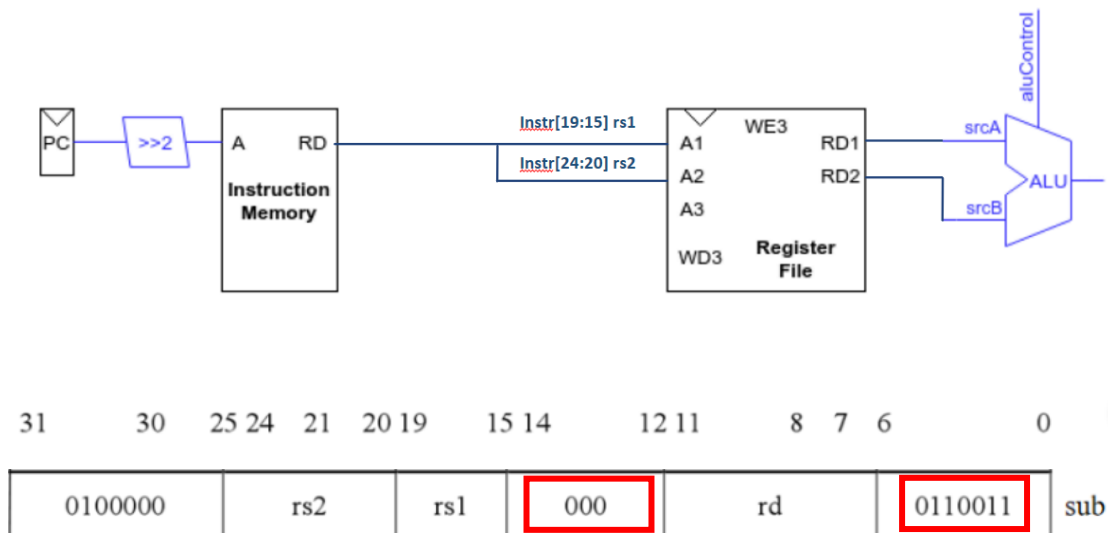
1. PC moves two bits to the right.



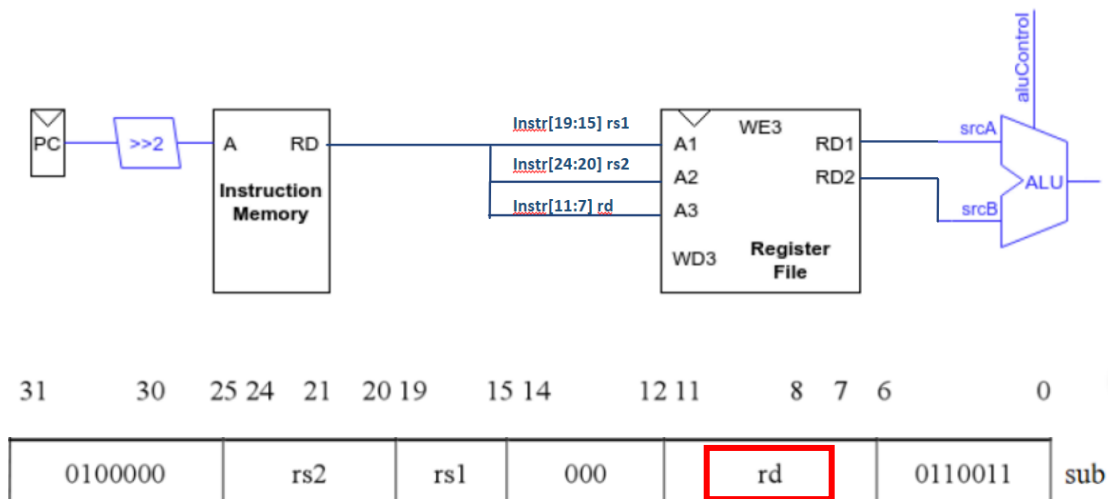
2. Input rs1 and rs2 from instruction memory into A1 and A2 in register file respectively.



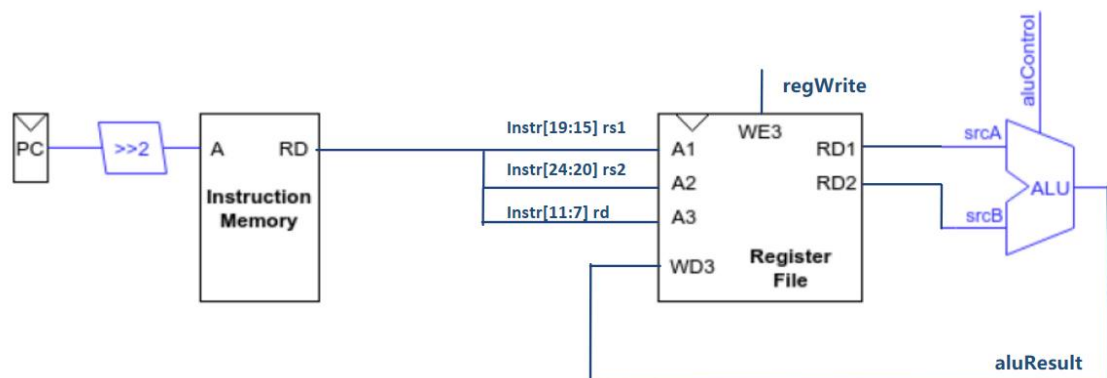
- Input srcA and srcB from RD1 and RD2 into ALU for computation.

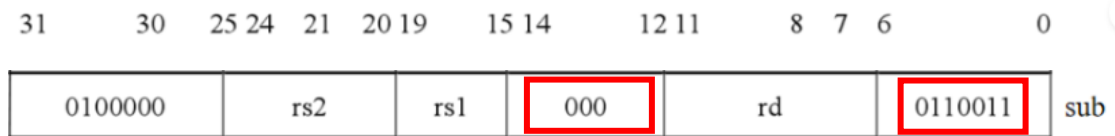


- Input rd from instruction memory to A3 in register file.



- Input the result of ALU into WD3 in register file and rewrite it.





6. PC plus 4 and then go to the next instruction.

