

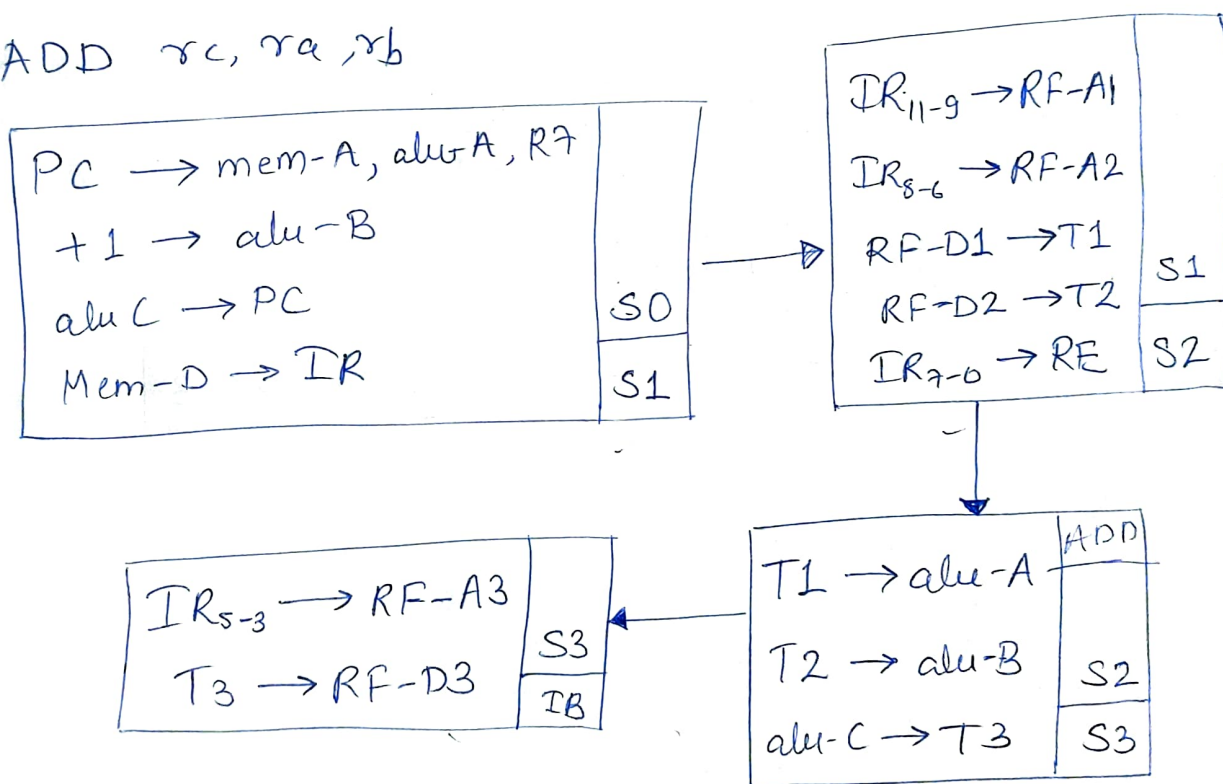
EE309-Course Project

Multicycle IITB-RISC-2022

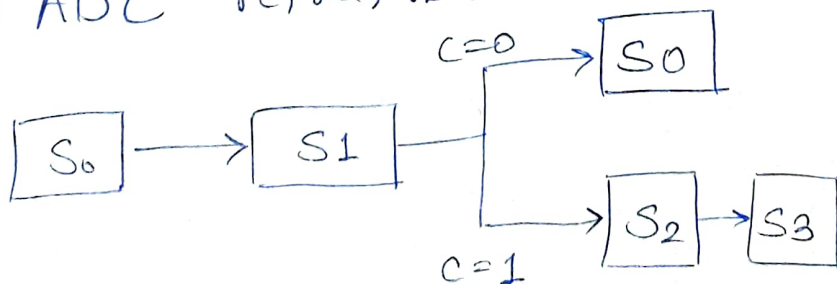
Group :- Akshata Koshti - 200070034
members Darshan Sinnarkar - 200070079
Dheeraj Shakya - 200070016
Sharvari Medhe - 200070073

Flowchart - Level 2 for all instructions

(1) ADD rc, ra, rb



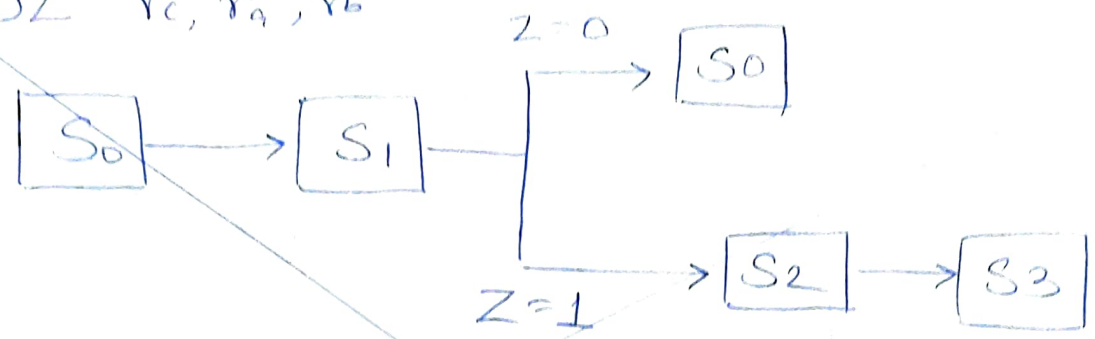
(2) ADC rc, ra, rb .



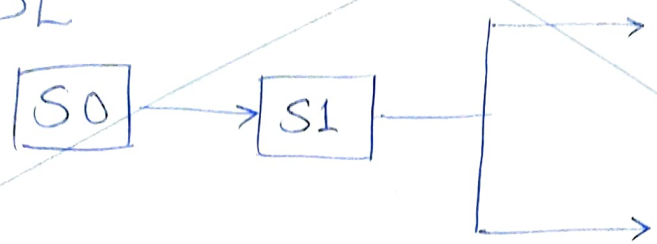
S3: Rd-WR

$$I_2 = R_3 + R_2 -$$

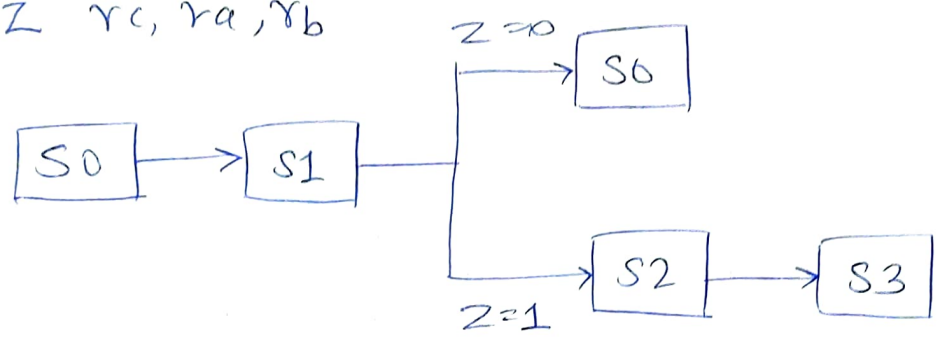
3) ADZ r_c, r_a, r_b



4) ADL



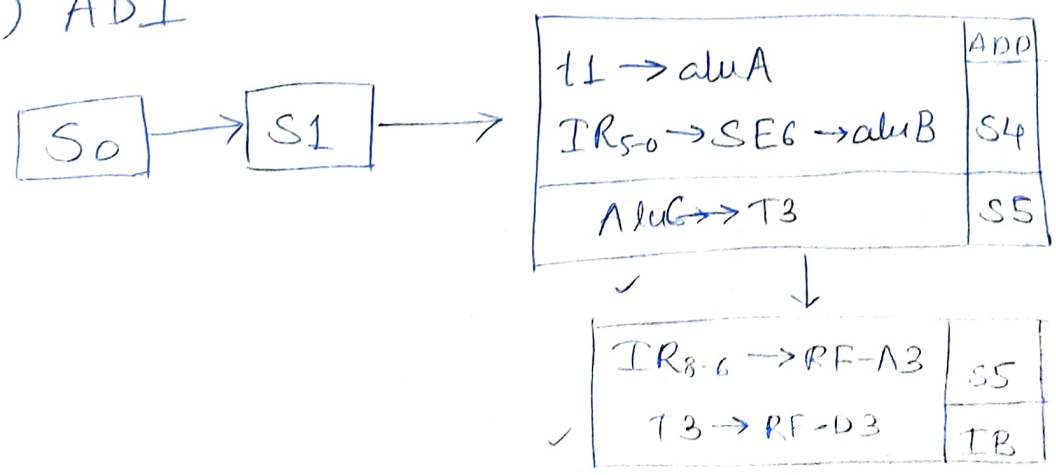
(3) ADZ r_c, r_a, r_b



(4) ADL r_c, r_a, r_b



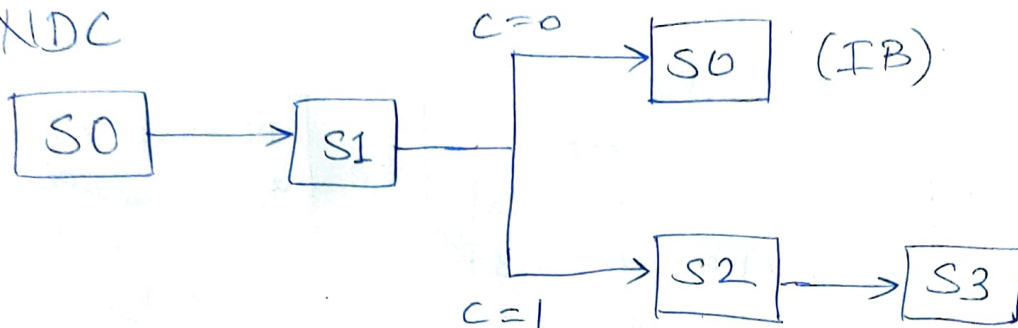
(5) ADI



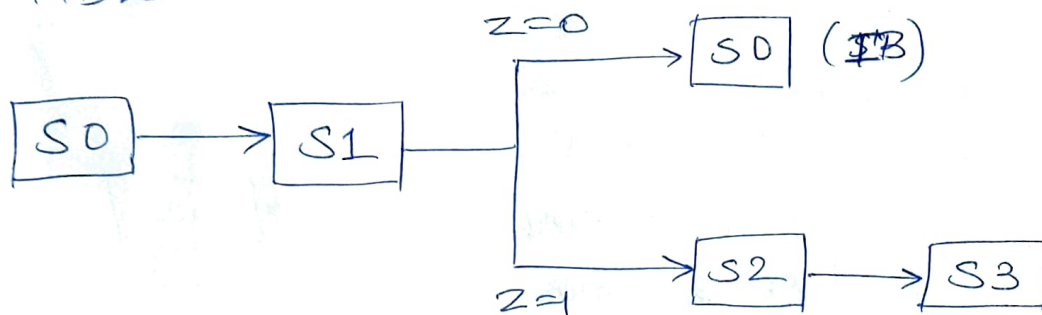
(6) NDU



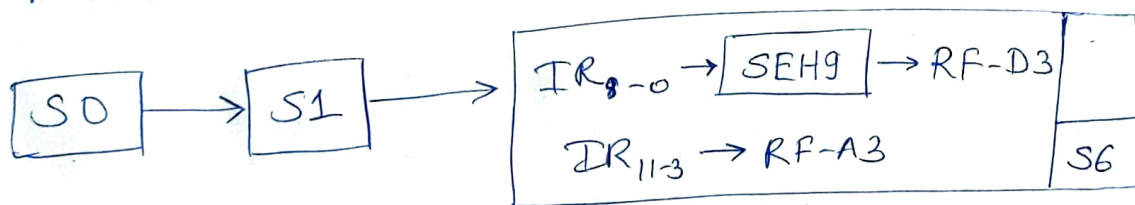
(7) NDC



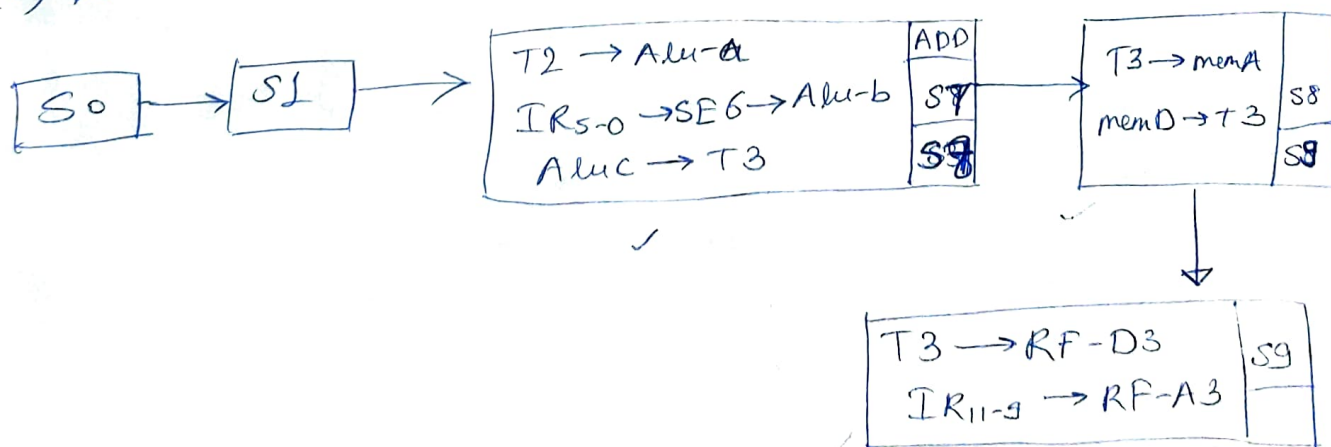
(8) NDZ



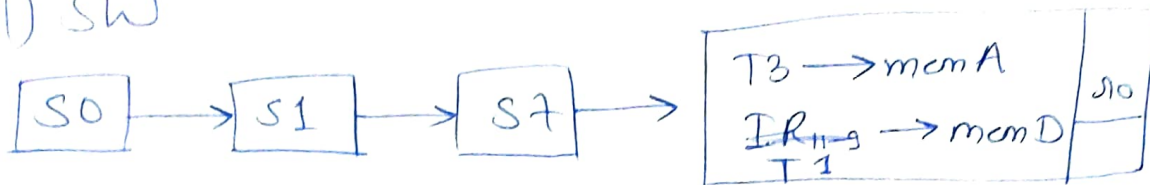
(9) LHI



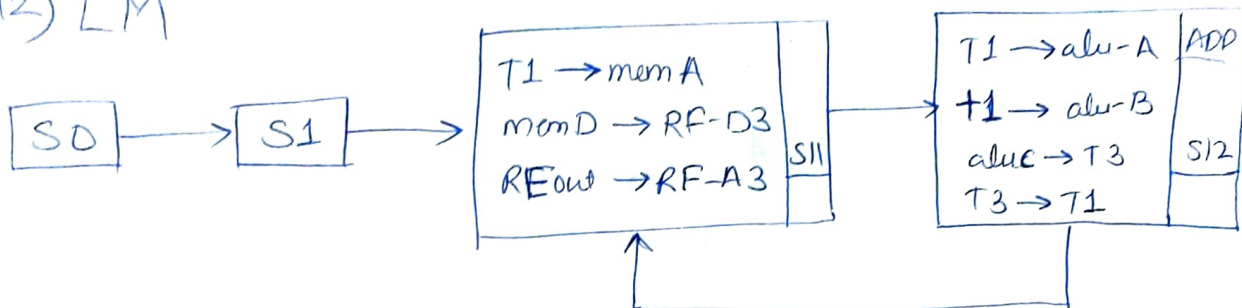
(10) LW



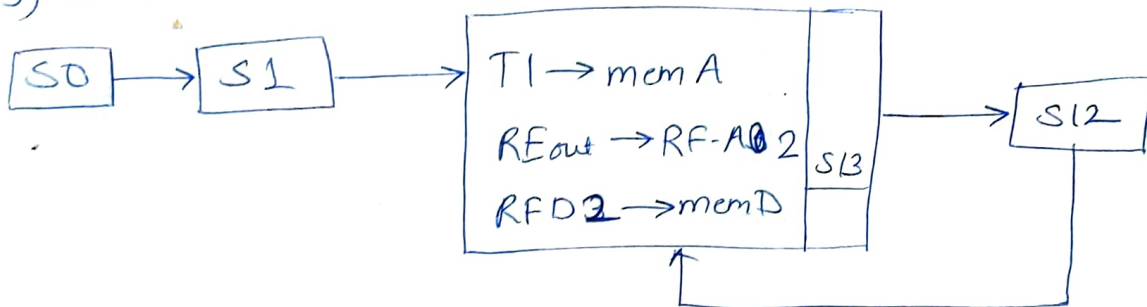
11) SW



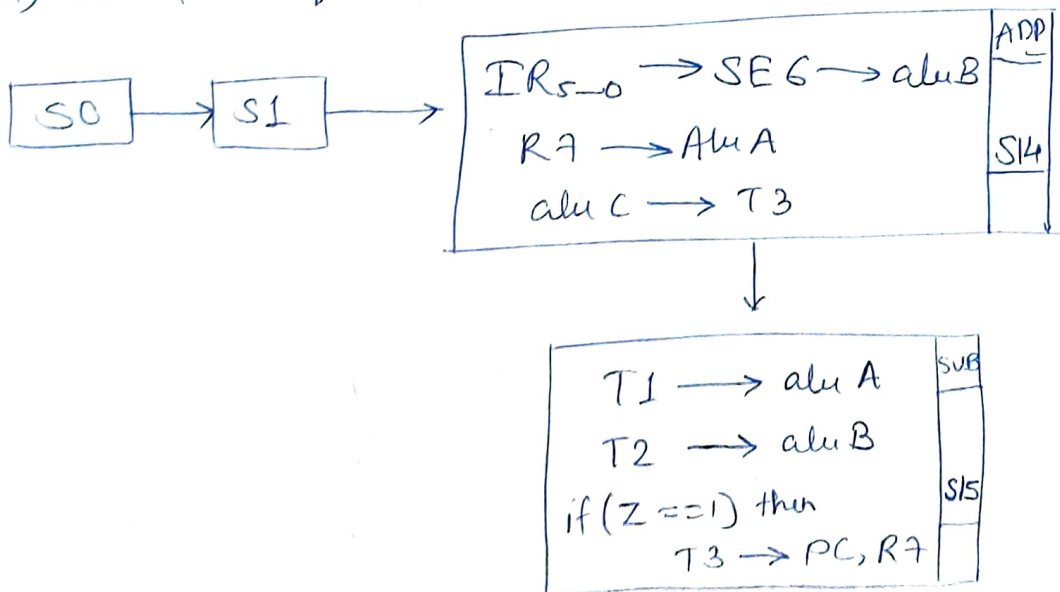
12) LM



13) SM



14) BEQ beq ra, rb, Imm



15) JAL



| | |
|--|-----|
| PC \rightarrow RF-D3 | ADD |
| IR ₁₁₋₉ \rightarrow RF-A3 | |
| R7 \rightarrow aluA | |
| IR ₈₋₀ \rightarrow SE9 \rightarrow aluB | S16 |
| aluC \rightarrow T3 \rightarrow PC, R7 | |

16) JLR



| | |
|--|-----|
| PC \rightarrow RF-D3 | |
| IR ₁₁₋₉ \rightarrow RF-A3 | S17 |
| T2 \rightarrow PC, R7 | |

17) JRI



| | |
|--|-----|
| T1 \rightarrow aluA | ADD |
| IR ₈₋₀ \rightarrow SE9 \rightarrow aluB | |
| aluC \rightarrow PC, R7 | S18 |

~~T2~~ \rightarrow PC