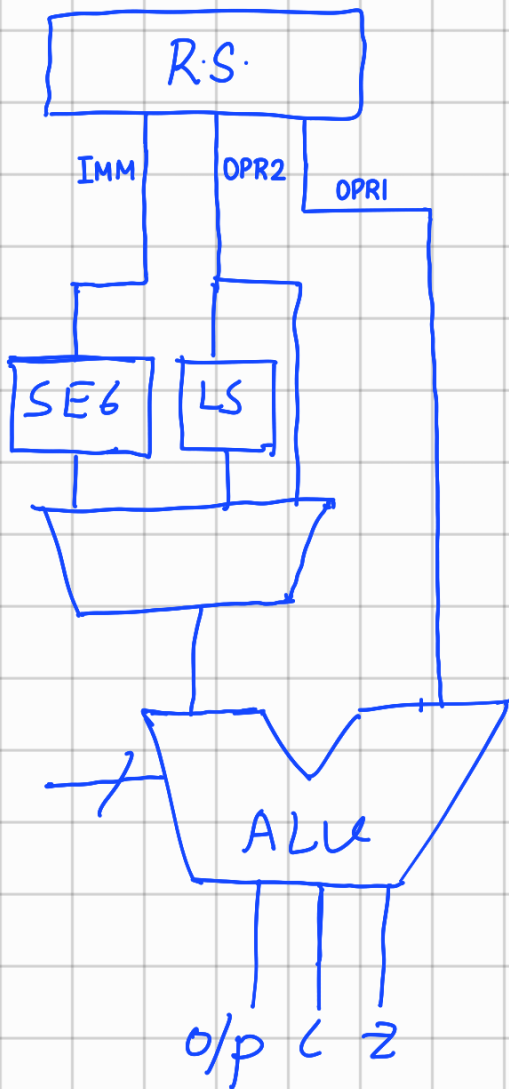


# ALU EXEC



★ The ALU queue must send RB, RL, C, Z, mux control, ALU control

★ you also have controls for writing into C, Z & registers

# RS

CONTROL	PC	OPRI	V1	OPR2	V2	IMM	C	V3	Z	V4	READY	ISSUED
(4)	(16)	(16)	(1)	(16)	(1)	(6)	(8)	(1)	(8)	(1)	(1)	(1)
↓ Represents the type of instr.	↓ Program Counter	↓ Contains the data or the sign extended RRF tag (8 bits)	↓ valid for OPR1	↓ same as OPR2	↓ valid for OPR2	↓ 6-Bit Immediate Value	↓ RRF tag or SE carry	↓ valid for carry	↓ RRF tag or SE zero	↓ valid for zero	↓ V1·V2·V3·V4	↓ current entry can be replaced by new entry if ISSUED is set

# ROB

PC	OUT	DEST	RR1	C	RR2	Z	RR3	FINISHED	COMPLETED
(16)	(16)	(5)	(8)	(1)	(8)	(1)	(8)	(1)	(1)
↓ Program Counter	↓ Output value from the Exec pipeline	↓ Destination register	↓ RR for DEST	↓ carry bit after exec	↓ RR for C	↓ zero bit after exec	↓ RR for Z	↓ instr. has finished executing and OUT is updated ready to update RRF	↓ instr. has written OUT, C, Z to respective RRs ready to update ARF

