

① ALUWR 570171

JALR ①F

IR ←

ALVOut ← PC + 4

②D

PC ← PC + s - e (imm)

③B

GPR[X1] ← ALVOut

JALR

④I

IR ←

ALVOut ← PC + 4

⑤D

From 2nd

s - e (imm)

⑥X

PC ← [GPR[rs1]

+ s - e (imm)] & -

⑦B

GPR ← ALVOut

Branch

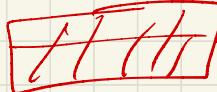
(IF) Instruction 읽어서 → control signal) 내뱉고 → PC+4 ALUout에 저장

(ID) PC+sign-extend(Lmm) 끌기 & GPR 값 A,B에 저장하기

(EX) GPR 값 비교 → 같았을 때 PC에 넣기

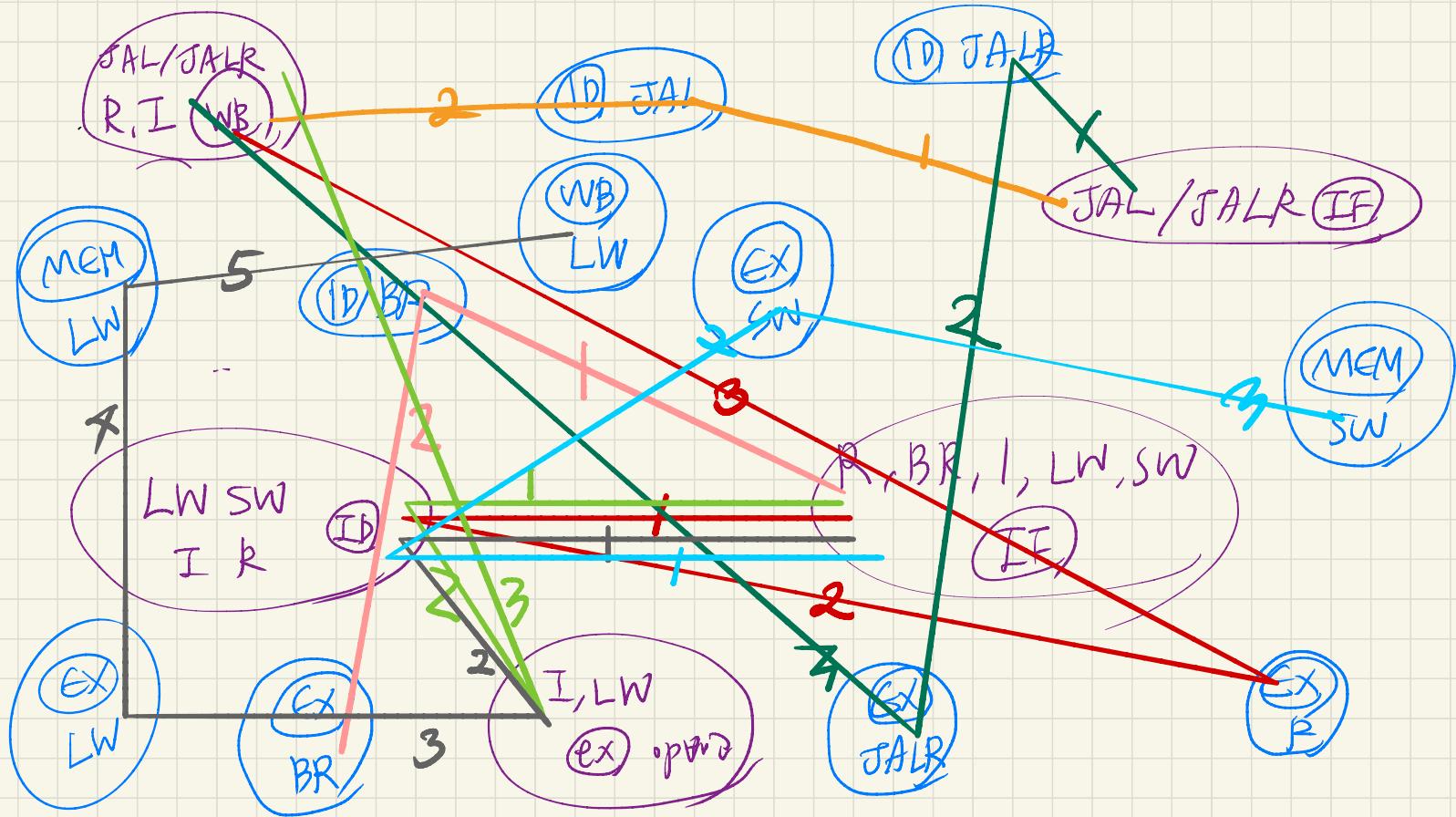


① JAL/JALR → RT₁₁

② RT → β_m ex) IF → 

③ state diagram $\Sigma\pi\tau$.

④ 각 state에 맞는 control signal.



BR JAL R JALR I LW SW

|E

$R \leftarrow \text{MEM}[PC]$

$PC \leftarrow PC + 4$

|D

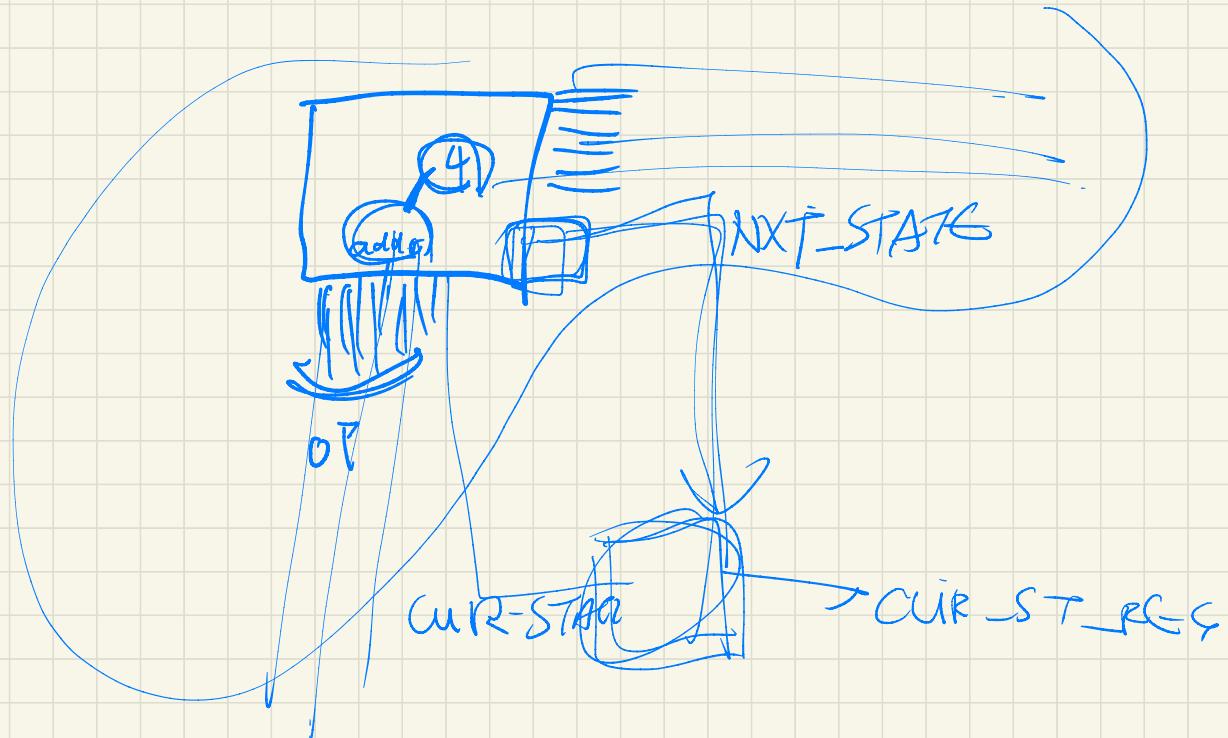
$A \leftarrow \text{RF}[R[25:21]]$

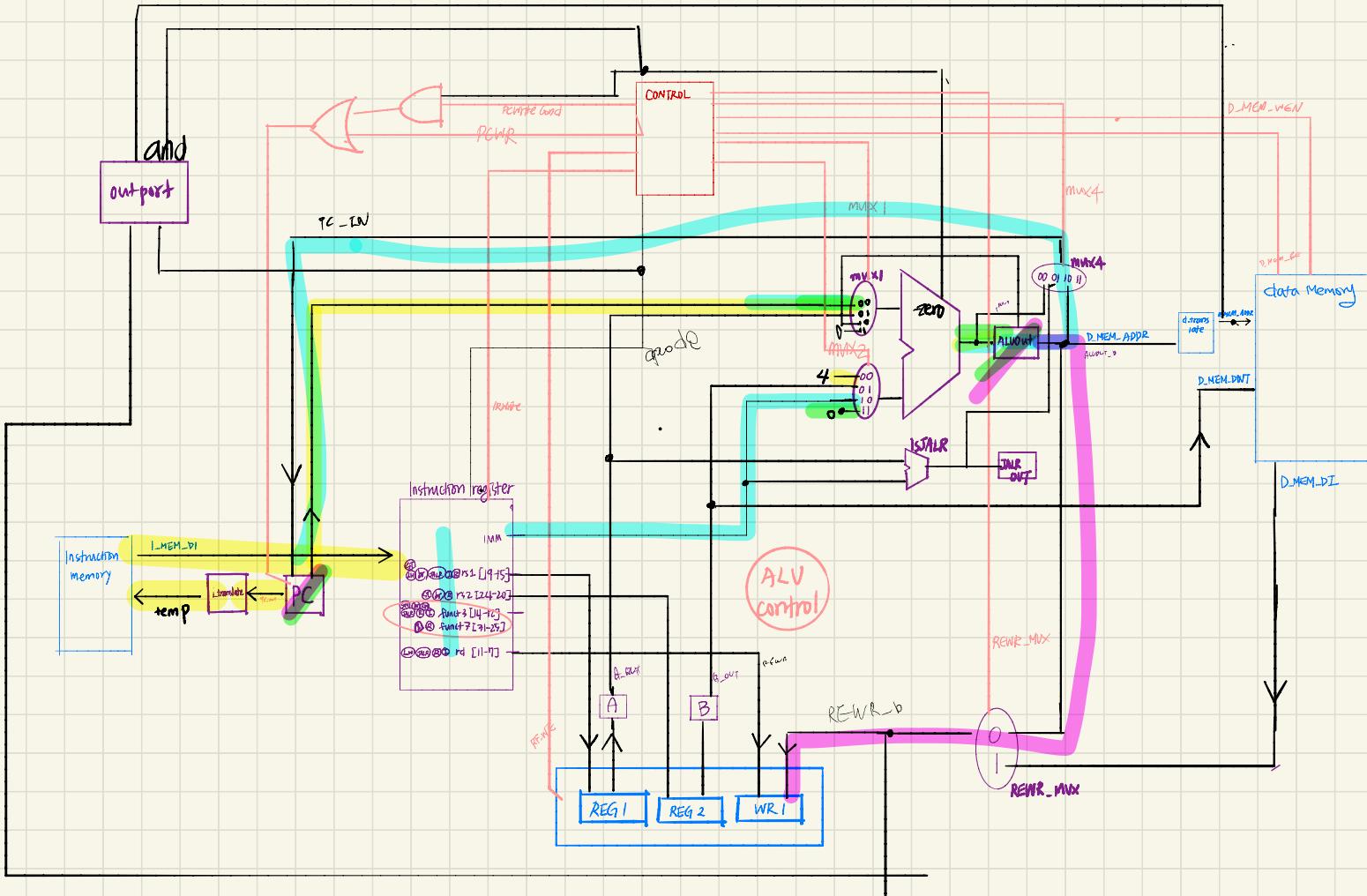
|Ex

$ALUout \leftarrow A_f \underline{s - e} \text{ (imm)}$

|NB

 $\leftarrow ALUout.$





JAL 1101111

JA LR 1100111

Br 1100011

LW 0000011

SW 0100011

R 0110011

I 0010011