

1.

RegDst	ALUSrc	MemtoReg	RegWrite	MemRead	MemWrite	Branch	ALUControl
WB	EXE	WB	WB	MEM	MEM	EXE	EXE

2. IF

- input: Clk, pcsrc, jump, jal, BAddr, JAddr, R31
- output: Code, PC4

ID

- Input: Clk, regwrite, Dwrite, Rwrite, Code, PC4
- Output: regwrite, memwrite, memread, AluOp, jump, branch, memtoreg, alusrc, regdst, A, B, Immediate, Code, PC4

EXE

- Input : regwrite, memwrite, memread, AluOp, jump, branch, memtoreg, alusrc, regdst, A, B, Immediate, Code, PC4
- Output : regwrite, jump, memtoreg, memwrite, memread, pcsrc, Rst, Dwrite, jal, Baddr, JAddr, R31, Rwrite, PC4

MEM

- Input : Clk, regwrite, jumpR, memtoreg, memwrite, memread, Addr, Dwrite, Rwrite, PC4
- Output : regwrite, jumpR, memtoreg, DataRead, Rst, Rwrite, PC4

WB

- Input : jumpR, memtoreg, DataRead, Rst, Rwrite, PC4, regwrite
- Output : DataWB, Rwrite, regwrite