BEQ

SUB

AND

JR.

IF ID EX MEM WB CLK CLK CLK RegWriteE = 4 RegWriteW

A RegWriteM 🗲 🖠 RegWriteD Control MemtoRegW = 6 MemtoRegE = 0 MemtoRegM = MemtoRegD MemWriteM = 0 MemWriteE = 0 MemWriteD ALUControlE_{2:0} = | | 0 ALUControlD₂₀ 31:26 Op 5:0 Funct ALUSrcD ALUSrcE = O RegDstD RegDstE= 4 BranchD = 1 EqualD CLK A1 CLK CLK CLK V WE WE3 0 20000 0003 SrcAE ALUOutM RD1 InstrD RD ALU ReadDataW <u></u>

X A RD Instruction 0400xC A2 RD2 0 SrcBE Data memory memory WD3 Register WriteDataM 0x 0000 de d3 WriteDataE WD ALUOutW × 0000 00 RsE RtE RsD 25:21 RtD 20:16 WriteRegW_{4:0} WriteRegE40 WriteRegM_{4:0} RdE RdE 15:11 00001 0010 SignImmD SignImmE Sign 15:0 extend <<2 PCPlus4F PCPlus4D CLR **PCBranchD** ResultW RegWriteE MemtoRegE ForwardBD
ForwardAD Forward AE RegWriteW FlushE StallD Hazard unit

OR PLB2,R3 AND RY, R2,R3 SUB RS,R3,RY BEQ R2,R3,20 ADD RS,R1,86