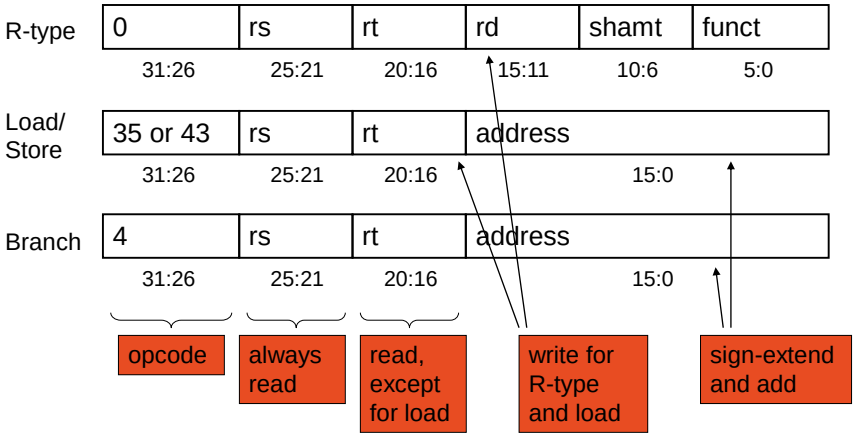
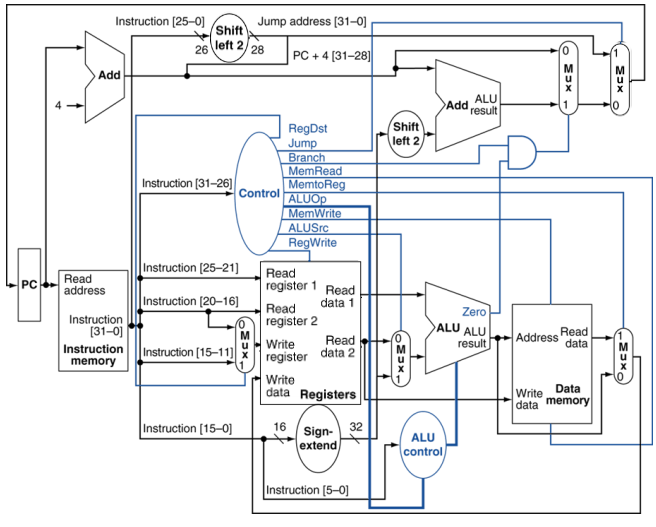
The Main Control Unit

- Control signals derived from instruction



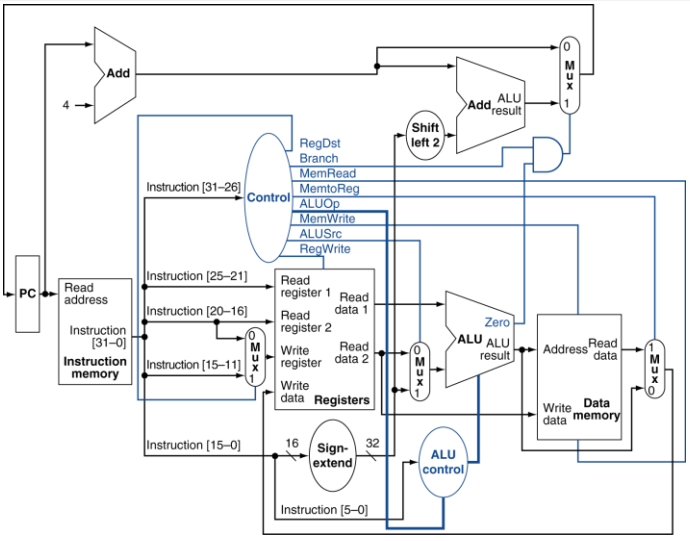
Datapath With Control



R-Type Instruction

R-type

0	rs	rt	rd	shamt	funct
31:26	25:21	20:16	15:11	10:6	5:0

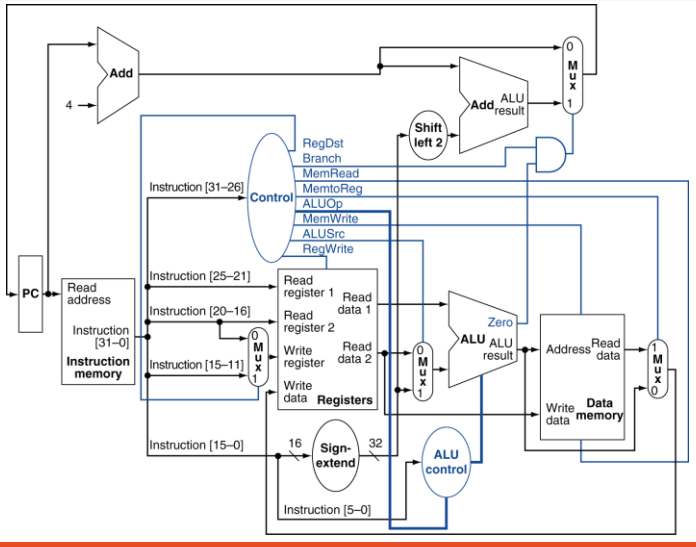


	add	and
RegDst	1	1
Branch	0	0
MemRead	0	0
MemtoReg	0	0
ALUOp	add	and
MemWrite	0	0
ALUSrc	0	0
RegWrite	1	1

lw/sw Instruction

Load/ Store

35 or 43	rs	rt	address
31:26	25:21	20:16	15:0



	lw	sw
RegDst	0	X
Branch	0	0
MemRead	1	0
MemtoReg	1	X
ALUOp	add	add
MemWrite	0	1
ALUSrc	1	1
RegWrite	1	0