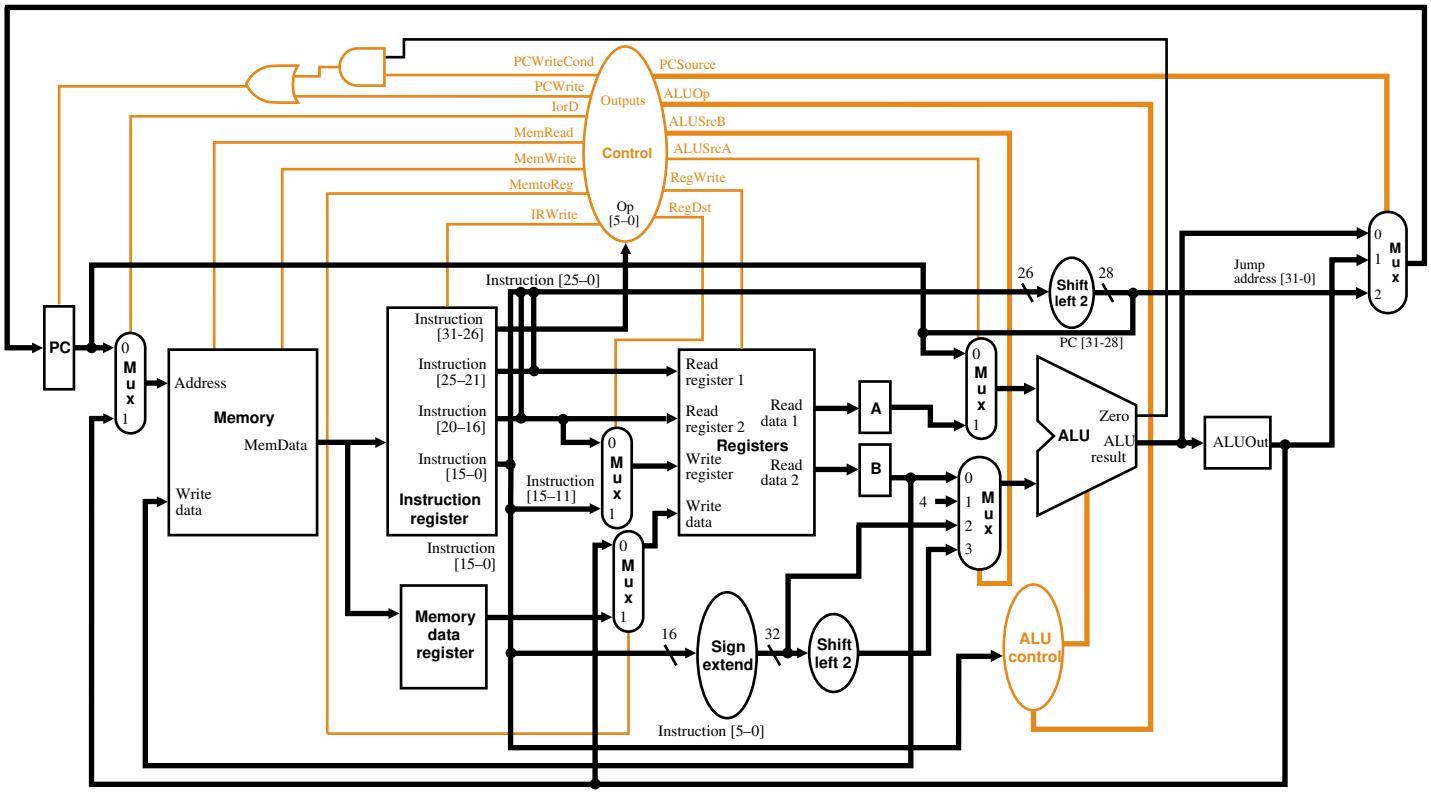
PCWriteCond
PCWrite
IorD
MemRead
MemWrite
MemtoReg
IRWrite
Outputs
Control
Op
[5–0]
PCSource
ALUOp
ALUSrcB
ALUSrcA
RegWrite
RegDst
Instruction [25–0]
26
Shift
left 2
28
PC [31-28]
Jump
address [31-0]
PC
0
M
u
x
1
Address
Memory
MemData
Write
data
Instruction
[31-26]
Instruction
[25–21]
Instruction
[20–16]
Instruction
[15–0]
Instruction
register
Instruction
[15–0]
Instruction
[15–11]
Read
register 1
Read
register 2
Registers
Write
register
Write
data
Read
data 1
Read
data 2
A
B
4
Zero
ALU
ALU
result
ALUOut
Memory
data
register
16
Sign
extend
32
Shift
left 2
ALU
control
Instruction [5–0]