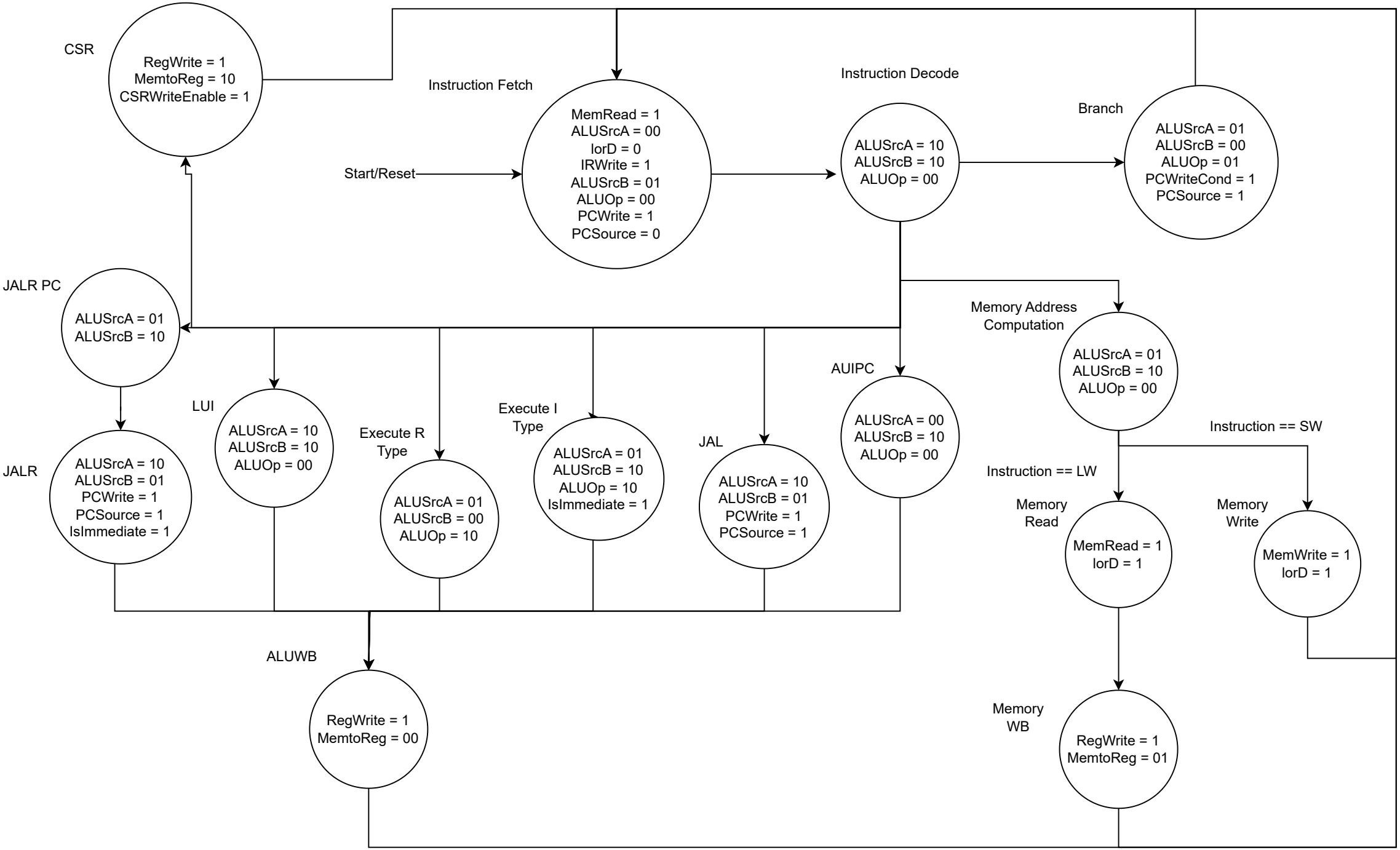
CSR
RegWrite = 1
MemtoReg = 10
CSRWriteEnable = 1
Instruction Fetch
MemRead = 1
ALUSrcA = 00
IorD = 0
IRWrite = 1
ALUSrcB = 01
ALUOp = 00
PCWrite = 1
PCSource = 0
Start/Reset
Instruction Decode
ALUSrcA = 10
ALUSrcB = 10
ALUOp = 00
Branch
ALUSrcA = 01
ALUSrcB = 00
ALUOp = 01
PCWriteCond = 1
PCSource = 1
JALR PC
ALUSrcA = 01
ALUSrcB = 10
Memory Address Computation
ALUSrcA = 01
ALUSrcB = 10
ALUOp = 00
AUIPC
ALUSrcA = 00
ALUSrcB = 10
ALUOp = 00
LUI
ALUSrcA = 10
ALUSrcB = 10
ALUOp = 00
Execute R Type
ALUSrcA = 01
ALUSrcB = 00
ALUOp = 10
Execute I Type
ALUSrcA = 01
ALUSrcB = 10
ALUOp = 10
IsImmediate = 1
JAL
ALUSrcA = 10
ALUSrcB = 01
PCWrite = 1
PCSource = 1
JALR
ALUSrcA = 10
ALUSrcB = 01
PCWrite = 1
PCSource = 1
IsImmediate = 1
Instruction == SW
Instruction == LW
Memory Read
MemRead = 1
IorD = 1
Memory Write
MemWrite = 1
IorD = 1
ALUWB
RegWrite = 1
MemtoReg = 00
Memory WB
RegWrite = 1
MemtoReg = 01