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//Console transcript (Braden Miller & Scott Pearson)
vsim -gui work.sisc_tb
# vsim -gui work.sisc_tb
# Start time: 16:06:52 on Apr 06,2025
# Loading work.sisc_tb
# Loading work.sisc
# Loading work.rf
# Loading work.alu
# Loading work.statreg
# Loading work.mux32
# Loading work.ctrl
# Loading work.pc
# Loading work.br
# Loading work.im
# Loading work.ir
run -all
# IR=00000000 PC=xxxx R1=00000000 R2=00000000 R3=00000000 ALU OP=0000
BR_SEL=0 PC_WRITE=0 PC_SEL=0
# IR=00000000 PC=0000 R1=00000000 R2=00000000 R3=00000000 ALU_OP=0000
BR_SEL=0 PC_WRITE=0 PC_SEL=0
# IR=00000000 PC=0000 R1=00000000 R2=00000000 R3=00000000 ALU_OP=0000
BR_SEL=0 PC_WRITE=1 PC_SEL=0
# IR=00000000 PC=0001 R1=00000000 R2=00000000 R3=00000000 ALU_OP=0000
BR_SEL=0 PC_WRITE=0 PC_SEL=0
# IR=00000000 PC=0001 R1=00000000 R2=00000000 R3=00000000 ALU_OP=0000
BR_SEL=0 PC_WRITE=1 PC_SEL=0
# IR=21100001 PC=0002 R1=00000000 R2=00000000 R3=00000000 ALU OP=0000
BR_SEL=0 PC_WRITE=0 PC_SEL=0
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- # IR=21100001 PC=0002 R1=00000000 R2=00000000 R3=00000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=0002 R1=00000000 R2=00000000 R3=00000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=0002 R1=00000000 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=0002 R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=11211000 PC=0003 R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=11211000 PC=0003 R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=11211000 PC=0003 R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=11211000 PC=0003 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=1b322000 PC=0004 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=1b322000 PC=0004 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0001 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=1b322000 PC=0004 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=1b322000 PC=0004 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0
- # IR=12412000 PC=0005 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12412000 PC=0005 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12412000 PC=0005 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

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# IR=12412000 PC=0005 R1=00000001 R2=00000002 R3=00000008 ALU_OP=0000 BR_SEL=0 PC_WRITE=1 PC_SEL=0
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# IR=1a443000 PC=0006 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=1a443000 PC=0006 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=1a443000 PC=0006 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=1a443000 PC=0006 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0

# IR=17234000 PC=0007 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=17234000 PC=0007 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=17234000 PC=0007 R1=00000001 R2=00000002 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=17234000 PC=0007 R1=00000001 R2=00fffff7 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0

# IR=14220000 PC=0008 R1=00000001 R2=00fffff7 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC WRITE=0 PC SEL=0

# IR=14220000 PC=0008 R1=00000001 R2=00fffff7 R3=00000008 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=14220000 PC=0008 R1=00000001 R2=00fffff7 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC WRITE=0 PC SEL=0

# IR=14220000 PC=0008 R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0

# IR=19421000 PC=0009 R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=19421000 PC=0009 R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=19421000 PC=0009 R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=19421000 PC=0009 R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=15524000 PC=000a R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=15524000 PC=000a R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=15524000 PC=000a R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=15524000 PC=000a R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=16324000 PC=000b R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=16324000 PC=000b R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=16324000 PC=000b R1=00000001 R2=ff000008 R3=00000008 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=16324000 PC=000b R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0
- # IR=00000000 PC=000c R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=00000000 PC=000c R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=21100001 PC=000d R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=000d R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=000d R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=21100001 PC=000d R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=000d R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=12211000 PC=000e R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12211000 PC=000e R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12211000 PC=000e R1=00000001 R2=ff000008 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12211000 PC=000e R1=00000001 R2=00000000 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=12201000 PC=000f R1=00000001 R2=00000000 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12201000 PC=000f R1=00000001 R2=00000000 R3=fe000000 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12201000 PC=000f R1=00000001 R2=00000000 R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12201000 PC=000f R1=00000001 R2=ffffffff R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC WRITE=1 PC SEL=0
- # IR=18311000 PC=0010 R1=00000001 R2=ffffffff R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=18311000 PC=0010 R1=00000001 R2=ffffffff R3=fe000000 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=18311000 PC=0010 R1=00000001 R2=ffffffff R3=fe000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=18311000 PC=0010 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=11423000 PC=0011 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=11423000 PC=0011 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0001 BR\_SEL=0 PC WRITE=0 PC SEL=0
- # IR=11423000 PC=0011 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC WRITE=0 PC SEL=0
- # IR=11423000 PC=0011 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=00000000 PC=0012 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=00000000 PC=0012 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=11400000 PC=0013 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=11400000 PC=0013 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0001 BR\_SEL=0 PC WRITE=0 PC SEL=0
- # IR=11400000 PC=0013 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=11400000 PC=0013 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=6100001d PC=0014 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=1 PC WRITE=0 PC SEL=1
- # IR=6100001d PC=0014 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=6100001d PC=0014 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=21100001 PC=0015 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=0015 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21100001 PC=0015 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=21100001 PC=0015 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC WRITE=0 PC SEL=0
- # IR=21100001 PC=0015 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC WRITE=1 PC SEL=0
- # IR=21200004 PC=0016 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21200004 PC=0016 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0011 BR\_SEL=0 PC WRITE=0 PC SEL=0
- # IR=21200004 PC=0016 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21200004 PC=0016 R1=00000001 R2=ffffffff R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21200004 PC=0016 R1=00000001 R2=00000004 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000004 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000004 R3=80000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000004 R3=80000000 ALU\_OP=0010 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000004 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000003 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=51000005 PC=0018 R1=00000001 R2=00000003 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=1
- # IR=51000005 PC=0018 R1=00000001 R2=00000003 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=51000005 PC=0018 R1=00000001 R2=00000003 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0

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# IR=21320000 PC=0019 R1=00000001 R2=00000003 R3=80000000 ALU_OP=0000 BR SEL=0 PC WRITE=0 PC SEL=0
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# IR=21320000 PC=0019 R1=00000001 R2=00000003 R3=80000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=21320000 PC=0019 R1=00000001 R2=00000003 R3=80000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=21320000 PC=0019 R1=00000001 R2=00000003 R3=80000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=21320000 PC=0019 R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0

# IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0011 BR SEL=0 PC WRITE=0 PC SEL=0

# IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0

# IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0001 BR SEL=0 PC WRITE=0 PC SEL=0

# IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000003 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0

# IR=7100fffd PC=001c R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=1

- # IR=7100fffd PC=0019 R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=7100fffd PC=0019 R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000002 ALU\_OP=0000 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=1
- # IR=7100fffd PC=0019 R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=7100fffd PC=0019 R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0011 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=1
- # IR=7100fffd PC=001c R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=60000016 PC=001d R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=1 PC\_WRITE=1 PC\_SEL=1
- # IR=60000016 PC=0016 R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=60000016 PC=0016 R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=2122ffff PC=0017 R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000003 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=51000005 PC=0018 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=1
- # IR=51000005 PC=0018 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=51000005 PC=0018 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0010 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000002 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=1
- # IR=7100fffd PC=0019 R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=7100fffd PC=0019 R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=1
- # IR=7100fffd PC=001c R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=60000016 PC=001d R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR SEL=1 PC WRITE=1 PC SEL=1
- # IR=60000016 PC=0016 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=60000016 PC=0016 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000002 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=51000005 PC=0018 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=1

- # IR=51000005 PC=0018 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=51000005 PC=0018 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0010 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21320000 PC=0019 R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0010 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=21440001 PC=001a R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0001 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=12331000 PC=001b R1=00000001 R2=00000001 R3=00000001 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

- # IR=12331000 PC=001b R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=1
- # IR=7100fffd PC=001c R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=7100fffd PC=001c R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=60000016 PC=001d R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=1 PC\_WRITE=1 PC\_SEL=1
- # IR=60000016 PC=0016 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=60000016 PC=0016 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR SEL=0 PC WRITE=1 PC SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0011 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0010 BR SEL=0 PC WRITE=0 PC SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000001 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=2122ffff PC=0017 R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0
- # IR=51000005 PC=0018 R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=1
- # IR=51000005 PC=001d R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0
- # IR=51000005 PC=001d R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=1 PC\_SEL=0

# IR=f0000000 PC=001e R1=00000001 R2=00000000 R3=00000000 ALU\_OP=0000 BR\_SEL=0 PC\_WRITE=0 PC\_SEL=0

# Halt.

# \*\* Note: \$stop :

//iowa.uiowa.edu/shared/engineering/home/bmiller38/Documents/comp arch and org/part2/ctrl.v(204)

# Time: 2740 ns Iteration: 0 Instance: /sisc\_tb/uut/my\_ctrl