# Test Program: Bubble Sort

# rs: 0x00000000, rt: 0x00000000

#

# ADDIU $29, $29, -56

#

# ERROR: ALUop code not recognized: xxxxx

#

# read at mem[0x80020000] = 0x27bdffc8

#

# DX\_IR: 0xzzzzzzzz, DX\_PC: 0x80020000, DX\_Ctrl: 0xxxxxx,

#

# DX\_Final\_PC: 0x80020000, XM\_IR: 0x00000000, XM\_PC: 0x00000000, XM\_Ctrl: 0x00000,

#

# XM\_O: 0x00000000, eBranAddr: 0x80020000, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001d

#

# ERROR: ALUop code not recognized: xxxxx

#

# SW $31, 52($29)

#

# ERROR: ALUop code not recognized: xxxxx

#

# read at mem[0x80020004] = 0xafbf0034

#

# DX\_IR: 0x27bdffc8, DX\_PC: 0x80020004, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020004, XM\_IR: 0xzzzzzzzz, XM\_PC: 0x80020000, XM\_Ctrl: 0xxxxxx,

#

# XM\_O: 0x00000000, eBranAddr: 0x8001ff24, eJmpAddr: 0x8ef7ff20

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001f

#

# SW $30, 48($29)

#

# read at mem[0x80020008] = 0xafbe0030

#

# DX\_IR: 0xafbf0034, DX\_PC: 0x80020008, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020008, XM\_IR: 0x27bdffc8, XM\_PC: 0x80020004, XM\_Ctrl: 0x02046,

#

# XM\_O: 0xffffffe5, eBranAddr: 0x800200d8, eJmpAddr: 0x8efc00d0

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001e

#

# ADDU $30, $29, $ 0

#

# read at mem[0x8002000c] = 0x03a0f021

#

# DX\_IR: 0xafbe0030, DX\_PC: 0x8002000c, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x8002000c, XM\_IR: 0xafbf0034, XM\_PC: 0x80020008, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000051, eBranAddr: 0x800200cc, eJmpAddr: 0x8ef800c0

#

# rising edge

#

# rs: 0x0000001d, rt: 0x00000000

#

# ADDIU $ 2, $ 0, 12

#

# read at mem[0x80020010] = 0x2402000c

#

# DX\_IR: 0x03a0f021, DX\_PC: 0x80020010, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x80020010, XM\_IR: 0xafbe0030, XM\_PC: 0x8002000c, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000004d, eBranAddr: 0x8001c094, eJmpAddr: 0x8e83c084

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 16($30)

#

# read at mem[0x80020014] = 0xafc20010

#

# DX\_IR: 0x2402000c, DX\_PC: 0x80020014, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020014, XM\_IR: 0x03a0f021, XM\_PC: 0x80020010, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x0000001d, eBranAddr: 0x80020044, eJmpAddr: 0x80080030

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 0, 9

#

# read at mem[0x80020018] = 0x24020009

#

# DX\_IR: 0xafc20010, DX\_PC: 0x80020018, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020018, XM\_IR: 0x2402000c, XM\_PC: 0x80020014, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x0000000c, eBranAddr: 0x80020058, eJmpAddr: 0x8f080040

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 20($30)

#

# read at mem[0x8002001c] = 0xafc20014

#

# DX\_IR: 0x24020009, DX\_PC: 0x8002001c, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x8002001c, XM\_IR: 0xafc20010, XM\_PC: 0x80020018, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000002e, eBranAddr: 0x80020040, eJmpAddr: 0x80080024

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 0, 4

#

# read at mem[0x80020020] = 0x24020004

#

# DX\_IR: 0xafc20014, DX\_PC: 0x80020020, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020020, XM\_IR: 0x24020009, XM\_PC: 0x8002001c, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000009, eBranAddr: 0x80020070, eJmpAddr: 0x8f080050

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 24($30)

#

# read at mem[0x80020024] = 0xafc20018

#

# DX\_IR: 0x24020004, DX\_PC: 0x80020024, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020024, XM\_IR: 0xafc20014, XM\_PC: 0x80020020, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000032, eBranAddr: 0x80020034, eJmpAddr: 0x80080010

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 0, 99

#

# read at mem[0x80020028] = 0x24020063

#

# DX\_IR: 0xafc20018, DX\_PC: 0x80020028, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020028, XM\_IR: 0x24020004, XM\_PC: 0x80020024, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000004, eBranAddr: 0x80020088, eJmpAddr: 0x8f080060

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 28($30)

#

# read at mem[0x8002002c] = 0xafc2001c

#

# DX\_IR: 0x24020063, DX\_PC: 0x8002002c, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x8002002c, XM\_IR: 0xafc20018, XM\_PC: 0x80020028, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000036, eBranAddr: 0x800201b8, eJmpAddr: 0x8008018c

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 0, 120

#

# read at mem[0x80020030] = 0x24020078

#

# DX\_IR: 0xafc2001c, DX\_PC: 0x80020030, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020030, XM\_IR: 0x24020063, XM\_PC: 0x8002002c, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000063, eBranAddr: 0x800200a0, eJmpAddr: 0x8f080070

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 32($30)

#

# read at mem[0x80020034] = 0xafc20020

#

# DX\_IR: 0x24020078, DX\_PC: 0x80020034, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020034, XM\_IR: 0xafc2001c, XM\_PC: 0x80020030, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000003a, eBranAddr: 0x80020214, eJmpAddr: 0x800801e0

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 0, 1

#

# read at mem[0x80020038] = 0x24020001

#

# DX\_IR: 0xafc20020, DX\_PC: 0x80020038, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020038, XM\_IR: 0x24020078, XM\_PC: 0x80020034, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000078, eBranAddr: 0x800200b8, eJmpAddr: 0x8f080080

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 36($30)

#

# read at mem[0x8002003c] = 0xafc20024

#

# DX\_IR: 0x24020001, DX\_PC: 0x8002003c, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x8002003c, XM\_IR: 0xafc20020, XM\_PC: 0x80020038, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000003e, eBranAddr: 0x80020040, eJmpAddr: 0x80080004

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 0, 3

#

# read at mem[0x80020040] = 0x24020003

#

# DX\_IR: 0xafc20024, DX\_PC: 0x80020040, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020040, XM\_IR: 0x24020001, XM\_PC: 0x8002003c, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000001, eBranAddr: 0x800200d0, eJmpAddr: 0x8f080090

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 40($30)

#

# read at mem[0x80020044] = 0xafc20028

#

# DX\_IR: 0x24020003, DX\_PC: 0x80020044, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020044, XM\_IR: 0xafc20024, XM\_PC: 0x80020040, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000042, eBranAddr: 0x80020050, eJmpAddr: 0x8008000c

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 0, 10

#

# read at mem[0x80020048] = 0x2402000a

#

# DX\_IR: 0xafc20028, DX\_PC: 0x80020048, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020048, XM\_IR: 0x24020003, XM\_PC: 0x80020044, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000003, eBranAddr: 0x800200e8, eJmpAddr: 0x8f0800a0

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 44($30)

#

# read at mem[0x8002004c] = 0xafc2002c

#

# DX\_IR: 0x2402000a, DX\_PC: 0x8002004c, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x8002004c, XM\_IR: 0xafc20028, XM\_PC: 0x80020048, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000046, eBranAddr: 0x80020074, eJmpAddr: 0x80080028

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $30, 16

#

# read at mem[0x80020050] = 0x27c20010

#

# DX\_IR: 0xafc2002c, DX\_PC: 0x80020050, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020050, XM\_IR: 0x2402000a, XM\_PC: 0x8002004c, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x0000000a, eBranAddr: 0x80020100, eJmpAddr: 0x8f0800b0

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDU $ 4, $ 2, $ 0

#

# read at mem[0x80020054] = 0x00402021

#

# DX\_IR: 0x27c20010, DX\_PC: 0x80020054, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020054, XM\_IR: 0xafc2002c, XM\_PC: 0x80020050, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000004a, eBranAddr: 0x80020094, eJmpAddr: 0x8f080040

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000000

#

# ADDIU $ 5, $ 0, 8

#

# read at mem[0x80020058] = 0x24050008

#

# DX\_IR: 0x00402021, DX\_PC: 0x80020058, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x80020058, XM\_IR: 0x27c20010, XM\_PC: 0x80020054, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x0000002e, eBranAddr: 0x800280dc, eJmpAddr: 0x81008084

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000005

#

# JAL 0x80020080

#

# read at mem[0x8002005c] = 0x0c008020

#

# DX\_IR: 0x24050008, DX\_PC: 0x8002005c, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x8002005c, XM\_IR: 0x00402021, XM\_PC: 0x80020058, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000002, eBranAddr: 0x8002007c, eJmpAddr: 0x80140020

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# NOP

#

# read at mem[0x80020060] = 0x00000000

#

# DX\_IR: 0x0c008020, DX\_PC: 0x80020060, DX\_Ctrl: 0x08067,

#

# DX\_Final\_PC: 0x80020080, XM\_IR: 0x24050008, XM\_PC: 0x8002005c, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000008, eBranAddr: 0x800000e0, eJmpAddr: 0x80020080

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# ADDU $ 2, $ 0, $ 0

#

# read at mem[0x80020064] = 0x00001021

#

# DX\_IR: 0x00000000, DX\_PC: 0x80020064, DX\_Ctrl: 0x08067,

#

# DX\_Final\_PC: 0x80000000, XM\_IR: 0x0c008020, XM\_PC: 0x80020060, XM\_Ctrl: 0x08067,

#

# XM\_O: 0x00000008, eBranAddr: 0x80020064, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# ADDU $29, $30, $ 0

#

# read at mem[0x80020068] = 0x03c0e821

#

# DX\_IR: 0x00001021, DX\_PC: 0x80020068, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x80020068, XM\_IR: 0x00000000, XM\_PC: 0x80020064, XM\_Ctrl: 0x08067,

#

# XM\_O: 0x00000008, eBranAddr: 0x800240ec, eJmpAddr: 0x80004084

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000000

#

# LW $31, 52($29)

#

# read at mem[0x8002006c] = 0x8fbf0034

#

# DX\_IR: 0x03c0e821, DX\_PC: 0x8002006c, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x8002006c, XM\_IR: 0x00001021, XM\_PC: 0x80020068, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000000, eBranAddr: 0x8001a0f0, eJmpAddr: 0x8f03a084

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001f

#

# LW $30, 48($29)

#

# read at mem[0x80020070] = 0x8fbe0030

#

# DX\_IR: 0x8fbf0034, DX\_PC: 0x80020070, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020070, XM\_IR: 0x03c0e821, XM\_PC: 0x8002006c, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x0000001e, eBranAddr: 0x80020140, eJmpAddr: 0x8efc00d0

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001e

#

# ADDIU $29, $29, 56

#

# read at mem[0x80020074] = 0x27bd0038

#

# DX\_IR: 0x8fbe0030, DX\_PC: 0x80020074, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020074, XM\_IR: 0x8fbf0034, XM\_PC: 0x80020070, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000051, eBranAddr: 0x80020134, eJmpAddr: 0x8ef800c0

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001d

#

# JR $31

#

# read at mem[0x80020078] = 0x03e00008

#

# DX\_IR: 0x27bd0038, DX\_PC: 0x80020078, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020078, XM\_IR: 0x8fbe0030, XM\_PC: 0x80020074, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x0000004d, eBranAddr: 0x80020158, eJmpAddr: 0x8ef400e0

#

# rising edge

#

# rs: 0x0000001f, rt: 0x00000000

#

# NOP

#

# read at mem[0x8002007c] = 0x00000000

#

# DX\_IR: 0x03e00008, DX\_PC: 0x8002007c, DX\_Ctrl: 0x08006,

#

# DX\_Final\_PC: 0x8f800020, XM\_IR: 0x27bd0038, XM\_PC: 0x80020078, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000055, eBranAddr: 0x8002009c, eJmpAddr: 0x8f800020

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# ADDIU $29, $29, -24

#

# read at mem[0x80020080] = 0x27bdffe8

#

# DX\_IR: 0x00000000, DX\_PC: 0x80020080, DX\_Ctrl: 0x08006,

#

# DX\_Final\_PC: 0x80000000, XM\_IR: 0x03e00008, XM\_PC: 0x8002007c, XM\_Ctrl: 0x08006,

#

# XM\_O: 0x0000001f, eBranAddr: 0x80020080, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001d

#

# SW $30, 20($29)

#

# read at mem[0x80020084] = 0xafbe0014

#

# DX\_IR: 0x27bdffe8, DX\_PC: 0x80020084, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020084, XM\_IR: 0x00000000, XM\_PC: 0x80020080, XM\_Ctrl: 0x08006,

#

# XM\_O: 0x00000000, eBranAddr: 0x80020024, eJmpAddr: 0x8ef7ffa0

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001e

#

# ADDU $30, $29, $ 0

#

# read at mem[0x80020088] = 0x03a0f021

#

# DX\_IR: 0xafbe0014, DX\_PC: 0x80020088, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020088, XM\_IR: 0x27bdffe8, XM\_PC: 0x80020084, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000005, eBranAddr: 0x800200d8, eJmpAddr: 0x8ef80050

#

# rising edge

#

# rs: 0x0000001d, rt: 0x00000000

#

# SW $ 4, 24($30)

#

# read at mem[0x8002008c] = 0xafc40018

#

# DX\_IR: 0x03a0f021, DX\_PC: 0x8002008c, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x8002008c, XM\_IR: 0xafbe0014, XM\_PC: 0x80020088, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000031, eBranAddr: 0x8001c110, eJmpAddr: 0x8e83c084

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000004

#

# SW $ 5, 28($30)

#

# read at mem[0x80020090] = 0xafc5001c

#

# DX\_IR: 0xafc40018, DX\_PC: 0x80020090, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020090, XM\_IR: 0x03a0f021, XM\_PC: 0x8002008c, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x0000001d, eBranAddr: 0x800200f0, eJmpAddr: 0x8f100060

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000005

#

# SW $ 0, 0($30)

#

# read at mem[0x80020094] = 0xafc00000

#

# DX\_IR: 0xafc5001c, DX\_PC: 0x80020094, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020094, XM\_IR: 0xafc40018, XM\_PC: 0x80020090, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000036, eBranAddr: 0x80020104, eJmpAddr: 0x8f140070

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000000

#

# J 0x8002017c

#

# read at mem[0x80020098] = 0x0800805f

#

# DX\_IR: 0xafc00000, DX\_PC: 0x80020098, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020098, XM\_IR: 0xafc5001c, XM\_PC: 0x80020094, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000003a, eBranAddr: 0x80020098, eJmpAddr: 0x8f000000

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# NOP

#

# read at mem[0x8002009c] = 0x00000000

#

# DX\_IR: 0x0800805f, DX\_PC: 0x8002009c, DX\_Ctrl: 0x08006,

#

# DX\_Final\_PC: 0x8002017c, XM\_IR: 0xafc00000, XM\_PC: 0x80020098, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000001e, eBranAddr: 0x80000218, eJmpAddr: 0x8002017c

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# ADDIU $ 2, $ 0, 1

#

# read at mem[0x800200a0] = 0x24020001

#

# DX\_IR: 0x00000000, DX\_PC: 0x800200a0, DX\_Ctrl: 0x08006,

#

# DX\_Final\_PC: 0x80000000, XM\_IR: 0x0800805f, XM\_PC: 0x8002009c, XM\_Ctrl: 0x08006,

#

# XM\_O: 0x00000000, eBranAddr: 0x800200a0, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# SW $ 2, 4($30)

#

# read at mem[0x800200a4] = 0xafc20004

#

# DX\_IR: 0x24020001, DX\_PC: 0x800200a4, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x800200a4, XM\_IR: 0x00000000, XM\_PC: 0x800200a0, XM\_Ctrl: 0x08006,

#

# XM\_O: 0x00000000, eBranAddr: 0x800200a8, eJmpAddr: 0x80080004

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# J 0x80020154

#

# read at mem[0x800200a8] = 0x08008055

#

# DX\_IR: 0xafc20004, DX\_PC: 0x800200a8, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x800200a8, XM\_IR: 0x24020001, XM\_PC: 0x800200a4, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000001, eBranAddr: 0x800200b8, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# NOP

#

# read at mem[0x800200ac] = 0x00000000

#

# DX\_IR: 0x08008055, DX\_PC: 0x800200ac, DX\_Ctrl: 0x08006,

#

# DX\_Final\_PC: 0x80020154, XM\_IR: 0xafc20004, XM\_PC: 0x800200a8, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000022, eBranAddr: 0x80000200, eJmpAddr: 0x80020154

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# LW $ 2, 4($30)

#

# read at mem[0x800200b0] = 0x8fc20004

#

# DX\_IR: 0x00000000, DX\_PC: 0x800200b0, DX\_Ctrl: 0x08006,

#

# DX\_Final\_PC: 0x80000000, XM\_IR: 0x08008055, XM\_PC: 0x800200ac, XM\_Ctrl: 0x08006,

#

# XM\_O: 0x00000000, eBranAddr: 0x800200b0, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 2, -1

#

# read at mem[0x800200b4] = 0x2442ffff

#

# DX\_IR: 0x8fc20004, DX\_PC: 0x800200b4, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200b4, XM\_IR: 0x00000000, XM\_PC: 0x800200b0, XM\_Ctrl: 0x08006,

#

# XM\_O: 0x00000000, eBranAddr: 0x800200c4, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000002

#

# SLL $ 2, $ 2, $ 2

#

# read at mem[0x800200b8] = 0x00021080

#

# DX\_IR: 0x2442ffff, DX\_PC: 0x800200b8, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x800200b8, XM\_IR: 0x8fc20004, XM\_PC: 0x800200b4, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x800200b4, eJmpAddr: 0x810bfffc

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# LW $ 3, 24($30)

#

# read at mem[0x800200bc] = 0x8fc30018

#

# DX\_IR: 0x00021080, DX\_PC: 0x800200bc, DX\_Ctrl: 0x00366,

#

# DX\_Final\_PC: 0x800200bc, XM\_IR: 0x2442ffff, XM\_PC: 0x800200b8, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000001, eBranAddr: 0x800242bc, eJmpAddr: 0x80084200

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# ADDU $ 2, $ 3, $ 2

#

# read at mem[0x800200c0] = 0x00621021

#

# DX\_IR: 0x8fc30018, DX\_PC: 0x800200c0, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200c0, XM\_IR: 0x00021080, XM\_PC: 0x800200bc, XM\_Ctrl: 0x00366,

#

# XM\_O: 0xxxxxxxxx, eBranAddr: 0x80020120, eJmpAddr: 0x8f0c0060

#

# rising edge

#

# rs: 0x00000003, rt: 0x00000002

#

# LW $ 3, 0($ 2)

#

# read at mem[0x800200c4] = 0x8c430000

#

# DX\_IR: 0x00621021, DX\_PC: 0x800200c4, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x800200c4, XM\_IR: 0x8fc30018, XM\_PC: 0x800200c0, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000036, eBranAddr: 0x80024148, eJmpAddr: 0x81884084

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000003

#

# LW $ 2, 4($30)

#

# read at mem[0x800200c8] = 0x8fc20004

#

# DX\_IR: 0x8c430000, DX\_PC: 0x800200c8, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200c8, XM\_IR: 0x00621021, XM\_PC: 0x800200c4, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000005, eBranAddr: 0x800200c8, eJmpAddr: 0x810c0000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# SLL $ 2, $ 2, $ 2

#

# read at mem[0x800200cc] = 0x00021080

#

# DX\_IR: 0x8fc20004, DX\_PC: 0x800200cc, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200cc, XM\_IR: 0x8c430000, XM\_PC: 0x800200c8, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000002, eBranAddr: 0x800200dc, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# LW $ 4, 24($30)

#

# read at mem[0x800200d0] = 0x8fc40018

#

# DX\_IR: 0x00021080, DX\_PC: 0x800200d0, DX\_Ctrl: 0x00366,

#

# DX\_Final\_PC: 0x800200d0, XM\_IR: 0x8fc20004, XM\_PC: 0x800200cc, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x800242d0, eJmpAddr: 0x80084200

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000004

#

# ADDU $ 2, $ 4, $ 2

#

# read at mem[0x800200d4] = 0x00821021

#

# DX\_IR: 0x8fc40018, DX\_PC: 0x800200d4, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200d4, XM\_IR: 0x00021080, XM\_PC: 0x800200d0, XM\_Ctrl: 0x00366,

#

# XM\_O: 0xxxxxxxxx, eBranAddr: 0x80020134, eJmpAddr: 0x8f100060

#

# rising edge

#

# rs: 0x00000004, rt: 0x00000002

#

# LW $ 2, 0($ 2)

#

# read at mem[0x800200d8] = 0x8c420000

#

# DX\_IR: 0x00821021, DX\_PC: 0x800200d8, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x800200d8, XM\_IR: 0x8fc40018, XM\_PC: 0x800200d4, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000036, eBranAddr: 0x8002415c, eJmpAddr: 0x82084084

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000002

#

# SLT $ 2, $ 2, $ 3

#

# read at mem[0x800200dc] = 0x0043102a

#

# DX\_IR: 0x8c420000, DX\_PC: 0x800200dc, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200dc, XM\_IR: 0x00821021, XM\_PC: 0x800200d8, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000006, eBranAddr: 0x800200dc, eJmpAddr: 0x81080000

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000003

#

# BEQ $ 2, $ 0, 0x80020148

#

# read at mem[0x800200e0] = 0x10400019

#

# DX\_IR: 0x0043102a, DX\_PC: 0x800200e0, DX\_Ctrl: 0x00166,

#

# DX\_Final\_PC: 0x800200e0, XM\_IR: 0x8c420000, XM\_PC: 0x800200dc, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000002, eBranAddr: 0x80024188, eJmpAddr: 0x810c40a8

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000000

#

# NOP

#

# read at mem[0x800200e4] = 0x00000000

#

# DX\_IR: 0x10400019, DX\_PC: 0x800200e4, DX\_Ctrl: 0x10e06,

#

# DX\_Final\_PC: 0x800200e4, XM\_IR: 0x0043102a, XM\_PC: 0x800200e0, XM\_Ctrl: 0x00166,

#

# XM\_O: 0x00000001, eBranAddr: 0x80020148, eJmpAddr: 0x81000064

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# LW $ 2, 4($30)

#

# read at mem[0x800200e8] = 0x8fc20004

#

# DX\_IR: 0x00000000, DX\_PC: 0x800200e8, DX\_Ctrl: 0x10e06,

#

# DX\_Final\_PC: 0x800200e8, XM\_IR: 0x10400019, XM\_PC: 0x800200e4, XM\_Ctrl: 0x10e06,

#

# XM\_O: 0x00000000, eBranAddr: 0x800200e8, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 2, -1

#

# read at mem[0x800200ec] = 0x2442ffff

#

# DX\_IR: 0x8fc20004, DX\_PC: 0x800200ec, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200ec, XM\_IR: 0x00000000, XM\_PC: 0x800200e8, XM\_Ctrl: 0x10e06,

#

# XM\_O: 0x00000001, eBranAddr: 0x800200fc, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000002

#

# SLL $ 2, $ 2, $ 2

#

# read at mem[0x800200f0] = 0x00021080

#

# DX\_IR: 0x2442ffff, DX\_PC: 0x800200f0, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x800200f0, XM\_IR: 0x8fc20004, XM\_PC: 0x800200ec, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x800200ec, eJmpAddr: 0x810bfffc

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# LW $ 3, 24($30)

#

# read at mem[0x800200f4] = 0x8fc30018

#

# DX\_IR: 0x00021080, DX\_PC: 0x800200f4, DX\_Ctrl: 0x00366,

#

# DX\_Final\_PC: 0x800200f4, XM\_IR: 0x2442ffff, XM\_PC: 0x800200f0, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000001, eBranAddr: 0x800242f4, eJmpAddr: 0x80084200

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# ADDU $ 2, $ 3, $ 2

#

# read at mem[0x800200f8] = 0x00621021

#

# DX\_IR: 0x8fc30018, DX\_PC: 0x800200f8, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x800200f8, XM\_IR: 0x00021080, XM\_PC: 0x800200f4, XM\_Ctrl: 0x00366,

#

# XM\_O: 0xxxxxxxxx, eBranAddr: 0x80020158, eJmpAddr: 0x8f0c0060

#

# rising edge

#

# rs: 0x00000003, rt: 0x00000002

#

# LW $ 2, 0($ 2)

#

# read at mem[0x800200fc] = 0x8c420000

#

# DX\_IR: 0x00621021, DX\_PC: 0x800200fc, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x800200fc, XM\_IR: 0x8fc30018, XM\_PC: 0x800200f8, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000036, eBranAddr: 0x80024180, eJmpAddr: 0x81884084

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000002

#

# SW $ 2, 8($30)

#

# read at mem[0x80020100] = 0xafc20008

#

# DX\_IR: 0x8c420000, DX\_PC: 0x80020100, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020100, XM\_IR: 0x00621021, XM\_PC: 0x800200fc, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000005, eBranAddr: 0x80020100, eJmpAddr: 0x81080000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# LW $ 2, 4($30)

#

# read at mem[0x80020104] = 0x8fc20004

#

# DX\_IR: 0xafc20008, DX\_PC: 0x80020104, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020104, XM\_IR: 0x8c420000, XM\_PC: 0x80020100, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000002, eBranAddr: 0x80020124, eJmpAddr: 0x8f080020

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 2, -1

#

# read at mem[0x80020108] = 0x2442ffff

#

# DX\_IR: 0x8fc20004, DX\_PC: 0x80020108, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020108, XM\_IR: 0xafc20008, XM\_PC: 0x80020104, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000026, eBranAddr: 0x80020118, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000002

#

# SLL $ 2, $ 2, $ 2

#

# read at mem[0x8002010c] = 0x00021080

#

# DX\_IR: 0x2442ffff, DX\_PC: 0x8002010c, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x8002010c, XM\_IR: 0x8fc20004, XM\_PC: 0x80020108, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x80020108, eJmpAddr: 0x810bfffc

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# LW $ 3, 24($30)

#

# read at mem[0x80020110] = 0x8fc30018

#

# DX\_IR: 0x00021080, DX\_PC: 0x80020110, DX\_Ctrl: 0x00366,

#

# DX\_Final\_PC: 0x80020110, XM\_IR: 0x2442ffff, XM\_PC: 0x8002010c, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000001, eBranAddr: 0x80024310, eJmpAddr: 0x80084200

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# ADDU $ 2, $ 3, $ 2

#

# read at mem[0x80020114] = 0x00621021

#

# DX\_IR: 0x8fc30018, DX\_PC: 0x80020114, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020114, XM\_IR: 0x00021080, XM\_PC: 0x80020110, XM\_Ctrl: 0x00366,

#

# XM\_O: 0xxxxxxxxx, eBranAddr: 0x80020174, eJmpAddr: 0x8f0c0060

#

# rising edge

#

# rs: 0x00000003, rt: 0x00000002

#

# LW $ 3, 4($30)

#

# read at mem[0x80020118] = 0x8fc30004

#

# DX\_IR: 0x00621021, DX\_PC: 0x80020118, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x80020118, XM\_IR: 0x8fc30018, XM\_PC: 0x80020114, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000036, eBranAddr: 0x8002419c, eJmpAddr: 0x81884084

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# SLL $ 3, $ 3, $ 2

#

# read at mem[0x8002011c] = 0x00031880

#

# DX\_IR: 0x8fc30004, DX\_PC: 0x8002011c, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x8002011c, XM\_IR: 0x00621021, XM\_PC: 0x80020118, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000005, eBranAddr: 0x8002012c, eJmpAddr: 0x8f0c0010

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000003

#

# LW $ 4, 24($30)

#

# read at mem[0x80020120] = 0x8fc40018

#

# DX\_IR: 0x00031880, DX\_PC: 0x80020120, DX\_Ctrl: 0x00366,

#

# DX\_Final\_PC: 0x80020120, XM\_IR: 0x8fc30004, XM\_PC: 0x8002011c, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x80026320, eJmpAddr: 0x800c6200

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000004

#

# ADDU $ 3, $ 4, $ 3

#

# read at mem[0x80020124] = 0x00831821

#

# DX\_IR: 0x8fc40018, DX\_PC: 0x80020124, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020124, XM\_IR: 0x00031880, XM\_PC: 0x80020120, XM\_Ctrl: 0x00366,

#

# XM\_O: 0xxxxxxxxx, eBranAddr: 0x80020184, eJmpAddr: 0x8f100060

#

# rising edge

#

# rs: 0x00000004, rt: 0x00000003

#

# LW $ 3, 0($ 3)

#

# read at mem[0x80020128] = 0x8c630000

#

# DX\_IR: 0x00831821, DX\_PC: 0x80020128, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x80020128, XM\_IR: 0x8fc40018, XM\_PC: 0x80020124, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000036, eBranAddr: 0x800261ac, eJmpAddr: 0x820c6084

#

# rising edge

#

# rs: 0x00000003, rt: 0x00000003

#

# SW $ 3, 0($ 2)

#

# read at mem[0x8002012c] = 0xac430000

#

# DX\_IR: 0x8c630000, DX\_PC: 0x8002012c, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x8002012c, XM\_IR: 0x00831821, XM\_PC: 0x80020128, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000007, eBranAddr: 0x8002012c, eJmpAddr: 0x818c0000

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000003

#

# LW $ 2, 4($30)

#

# read at mem[0x80020130] = 0x8fc20004

#

# DX\_IR: 0xac430000, DX\_PC: 0x80020130, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020130, XM\_IR: 0x8c630000, XM\_PC: 0x8002012c, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000003, eBranAddr: 0x80020130, eJmpAddr: 0x810c0000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# SLL $ 2, $ 2, $ 2

#

# read at mem[0x80020134] = 0x00021080

#

# DX\_IR: 0x8fc20004, DX\_PC: 0x80020134, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020134, XM\_IR: 0xac430000, XM\_PC: 0x80020130, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000002, eBranAddr: 0x80020144, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000002

#

# LW $ 3, 24($30)

#

# read at mem[0x80020138] = 0x8fc30018

#

# DX\_IR: 0x00021080, DX\_PC: 0x80020138, DX\_Ctrl: 0x00366,

#

# DX\_Final\_PC: 0x80020138, XM\_IR: 0x8fc20004, XM\_PC: 0x80020134, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x80024338, eJmpAddr: 0x80084200

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# ADDU $ 2, $ 3, $ 2

#

# read at mem[0x8002013c] = 0x00621021

#

# DX\_IR: 0x8fc30018, DX\_PC: 0x8002013c, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x8002013c, XM\_IR: 0x00021080, XM\_PC: 0x80020138, XM\_Ctrl: 0x00366,

#

# XM\_O: 0xxxxxxxxx, eBranAddr: 0x8002019c, eJmpAddr: 0x8f0c0060

#

# rising edge

#

# rs: 0x00000003, rt: 0x00000002

#

# LW $ 3, 8($30)

#

# read at mem[0x80020140] = 0x8fc30008

#

# DX\_IR: 0x00621021, DX\_PC: 0x80020140, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x80020140, XM\_IR: 0x8fc30018, XM\_PC: 0x8002013c, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000036, eBranAddr: 0x800241c4, eJmpAddr: 0x81884084

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# SW $ 3, 0($ 2)

#

# read at mem[0x80020144] = 0xac430000

#

# DX\_IR: 0x8fc30008, DX\_PC: 0x80020144, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020144, XM\_IR: 0x00621021, XM\_PC: 0x80020140, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x00000005, eBranAddr: 0x80020164, eJmpAddr: 0x8f0c0020

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000003

#

# LW $ 2, 4($30)

#

# read at mem[0x80020148] = 0x8fc20004

#

# DX\_IR: 0xac430000, DX\_PC: 0x80020148, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020148, XM\_IR: 0x8fc30008, XM\_PC: 0x80020144, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000026, eBranAddr: 0x80020148, eJmpAddr: 0x810c0000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 2, 1

#

# read at mem[0x8002014c] = 0x24420001

#

# DX\_IR: 0x8fc20004, DX\_PC: 0x8002014c, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x8002014c, XM\_IR: 0xac430000, XM\_PC: 0x80020148, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000002, eBranAddr: 0x8002015c, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000002

#

# SW $ 2, 4($30)

#

# read at mem[0x80020150] = 0xafc20004

#

# DX\_IR: 0x24420001, DX\_PC: 0x80020150, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020150, XM\_IR: 0x8fc20004, XM\_PC: 0x8002014c, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x80020154, eJmpAddr: 0x81080004

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# LW $ 3, 28($30)

#

# read at mem[0x80020154] = 0x8fc3001c

#

# DX\_IR: 0xafc20004, DX\_PC: 0x80020154, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x80020154, XM\_IR: 0x24420001, XM\_PC: 0x80020150, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000003, eBranAddr: 0x80020164, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# LW $ 2, 0($30)

#

# read at mem[0x80020158] = 0x8fc20000

#

# DX\_IR: 0x8fc3001c, DX\_PC: 0x80020158, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020158, XM\_IR: 0xafc20004, XM\_PC: 0x80020154, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x00000022, eBranAddr: 0x800201c8, eJmpAddr: 0x8f0c0070

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# SUBU $ 3, $ 3, $ 2

#

# read at mem[0x8002015c] = 0x00621823

#

# DX\_IR: 0x8fc20000, DX\_PC: 0x8002015c, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x8002015c, XM\_IR: 0x8fc3001c, XM\_PC: 0x80020158, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x0000003a, eBranAddr: 0x8002015c, eJmpAddr: 0x8f080000

#

# rising edge

#

# rs: 0x00000003, rt: 0x00000002

#

# LW $ 2, 4($30)

#

# read at mem[0x80020160] = 0x8fc20004

#

# DX\_IR: 0x00621823, DX\_PC: 0x80020160, DX\_Ctrl: 0x00b66,

#

# DX\_Final\_PC: 0x80020160, XM\_IR: 0x8fc20000, XM\_PC: 0x8002015c, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x0000001e, eBranAddr: 0x800261ec, eJmpAddr: 0x8188608c

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# SLT $ 2, $ 2, $ 3

#

# read at mem[0x80020164] = 0x0043102a

#

# DX\_IR: 0x8fc20004, DX\_PC: 0x80020164, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020164, XM\_IR: 0x00621823, XM\_PC: 0x80020160, XM\_Ctrl: 0x00b66,

#

# XM\_O: 0x00000001, eBranAddr: 0x80020174, eJmpAddr: 0x8f080010

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000003

#

# BNE $ 2, $ 0, 0x800600b0

#

# read at mem[0x80020168] = 0x1440ffd1

#

# DX\_IR: 0x0043102a, DX\_PC: 0x80020168, DX\_Ctrl: 0x00166,

#

# DX\_Final\_PC: 0x80020168, XM\_IR: 0x8fc20004, XM\_PC: 0x80020164, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000022, eBranAddr: 0x80024210, eJmpAddr: 0x810c40a8

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000000

#

# NOP

#

# read at mem[0x8002016c] = 0x00000000

#

# DX\_IR: 0x1440ffd1, DX\_PC: 0x8002016c, DX\_Ctrl: 0x10f06,

#

# DX\_Final\_PC: 0x800200b0, XM\_IR: 0x0043102a, XM\_PC: 0x80020168, XM\_Ctrl: 0x00166,

#

# XM\_O: 0x00000001, eBranAddr: 0x800200b0, eJmpAddr: 0x8103ff44

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# LW $ 2, 0($30)

#

# read at mem[0x80020170] = 0x8fc20000

#

# DX\_IR: 0x00000000, DX\_PC: 0x80020170, DX\_Ctrl: 0x10f06,

#

# DX\_Final\_PC: 0x80020170, XM\_IR: 0x1440ffd1, XM\_PC: 0x8002016c, XM\_Ctrl: 0x10f06,

#

# XM\_O: 0x00000001, eBranAddr: 0x80020170, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# ADDIU $ 2, $ 2, 1

#

# read at mem[0x80020174] = 0x24420001

#

# DX\_IR: 0x8fc20000, DX\_PC: 0x80020174, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020174, XM\_IR: 0x00000000, XM\_PC: 0x80020170, XM\_Ctrl: 0x10f06,

#

# XM\_O: 0x00000000, eBranAddr: 0x80020174, eJmpAddr: 0x8f080000

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000002

#

# SW $ 2, 0($30)

#

# read at mem[0x80020178] = 0xafc20000

#

# DX\_IR: 0x24420001, DX\_PC: 0x80020178, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x80020178, XM\_IR: 0x8fc20000, XM\_PC: 0x80020174, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x0000001e, eBranAddr: 0x8002017c, eJmpAddr: 0x81080004

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# LW $ 3, 0($30)

#

# read at mem[0x8002017c] = 0x8fc30000

#

# DX\_IR: 0xafc20000, DX\_PC: 0x8002017c, DX\_Ctrl: 0x02086,

#

# DX\_Final\_PC: 0x8002017c, XM\_IR: 0x24420001, XM\_PC: 0x80020178, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000003, eBranAddr: 0x8002017c, eJmpAddr: 0x8f080000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000003

#

# LW $ 2, 28($30)

#

# read at mem[0x80020180] = 0x8fc2001c

#

# DX\_IR: 0x8fc30000, DX\_PC: 0x80020180, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020180, XM\_IR: 0xafc20000, XM\_PC: 0x8002017c, XM\_Ctrl: 0x02086,

#

# XM\_O: 0x0000001e, eBranAddr: 0x80020180, eJmpAddr: 0x8f0c0000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000002

#

# SLT $ 2, $ 3, $ 2

#

# read at mem[0x80020184] = 0x0062102a

#

# DX\_IR: 0x8fc2001c, DX\_PC: 0x80020184, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020184, XM\_IR: 0x8fc30000, XM\_PC: 0x80020180, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x0000001e, eBranAddr: 0x800201f4, eJmpAddr: 0x8f080070

#

# rising edge

#

# rs: 0x00000003, rt: 0x00000002

#

# BNE $ 2, $ 0, 0x800600a0

#

# read at mem[0x80020188] = 0x1440ffc5

#

# DX\_IR: 0x0062102a, DX\_PC: 0x80020188, DX\_Ctrl: 0x00166,

#

# DX\_Final\_PC: 0x80020188, XM\_IR: 0x8fc2001c, XM\_PC: 0x80020184, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x0000003a, eBranAddr: 0x80024230, eJmpAddr: 0x818840a8

#

# rising edge

#

# rs: 0x00000002, rt: 0x00000000

#

# NOP

#

# read at mem[0x8002018c] = 0x00000000

#

# DX\_IR: 0x1440ffc5, DX\_PC: 0x8002018c, DX\_Ctrl: 0x10f06,

#

# DX\_Final\_PC: 0x800200a0, XM\_IR: 0x0062102a, XM\_PC: 0x80020188, XM\_Ctrl: 0x00166,

#

# XM\_O: 0x00000000, eBranAddr: 0x800200a0, eJmpAddr: 0x8103ff14

#

# rising edge

#

# rs: 0x00000000, rt: 0x00000000

#

# ADDU $29, $30, $ 0

#

# read at mem[0x80020190] = 0x03c0e821

#

# DX\_IR: 0x00000000, DX\_PC: 0x80020190, DX\_Ctrl: 0x10f06,

#

# DX\_Final\_PC: 0x80020190, XM\_IR: 0x1440ffc5, XM\_PC: 0x8002018c, XM\_Ctrl: 0x10f06,

#

# XM\_O: 0x00000001, eBranAddr: 0x80020190, eJmpAddr: 0x80000000

#

# rising edge

#

# rs: 0x0000001e, rt: 0x00000000

#

# LW $30, 20($29)

#

# read at mem[0x80020194] = 0x8fbe0014

#

# DX\_IR: 0x03c0e821, DX\_PC: 0x80020194, DX\_Ctrl: 0x00066,

#

# DX\_Final\_PC: 0x80020194, XM\_IR: 0x00000000, XM\_PC: 0x80020190, XM\_Ctrl: 0x10f06,

#

# XM\_O: 0x00000000, eBranAddr: 0x8001a218, eJmpAddr: 0x8f03a084

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001e

#

# ADDIU $29, $29, 24

#

# read at mem[0x80020198] = 0x27bd0018

#

# DX\_IR: 0x8fbe0014, DX\_PC: 0x80020198, DX\_Ctrl: 0x02056,

#

# DX\_Final\_PC: 0x80020198, XM\_IR: 0x03c0e821, XM\_PC: 0x80020194, XM\_Ctrl: 0x00066,

#

# XM\_O: 0x0000001e, eBranAddr: 0x800201e8, eJmpAddr: 0x8ef80050

#

# rising edge

#

# rs: 0x0000001d, rt: 0x0000001d

#

# JR $31

#

# read at mem[0x8002019c] = 0x03e00008

#

# DX\_IR: 0x27bd0018, DX\_PC: 0x8002019c, DX\_Ctrl: 0x02046,

#

# DX\_Final\_PC: 0x8002019c, XM\_IR: 0x8fbe0014, XM\_PC: 0x80020198, XM\_Ctrl: 0x02056,

#

# XM\_O: 0x00000031, eBranAddr: 0x800201fc, eJmpAddr: 0x8ef40060

#

# rising edge

#

# rs: 0x0000001f, rt: 0x00000000

#

# NOP

#

# read at mem[0x800201a0] = 0x00000000

#

# DX\_IR: 0x03e00008, DX\_PC: 0x800201a0, DX\_Ctrl: 0x08006,

#

# DX\_Final\_PC: 0x8f800020, XM\_IR: 0x27bd0018, XM\_PC: 0x8002019c, XM\_Ctrl: 0x02046,

#

# XM\_O: 0x00000035, eBranAddr: 0x800201c0, eJmpAddr: 0x8f800020