

add1

in(7:0)

out(7:0)

add1

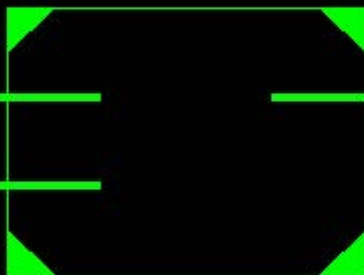
addimm

immediate(7:0)

in(7:0)

out(7:0)

addimm



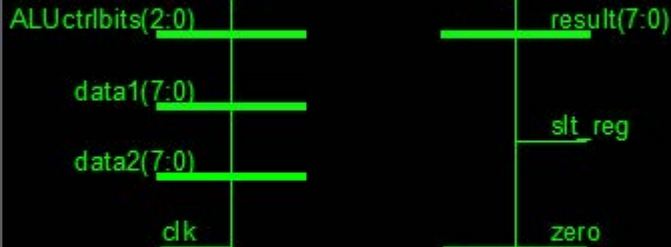
ALU

in(7:0)

zero

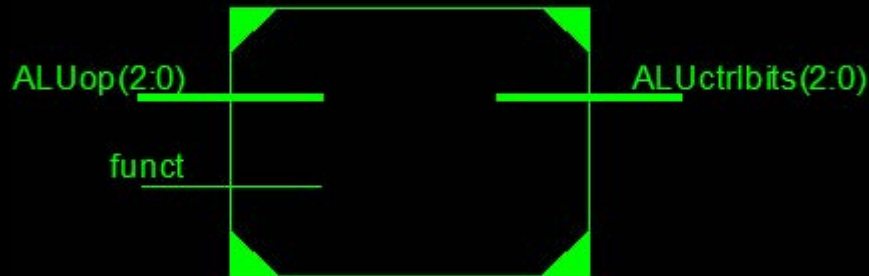
ALU

ALUctrl



ALUctrl

ALUctrlunit



ALUctrlunit

ctrl

inst1(2:0)

ALUop(2:0)

memToReg(1:0)

nextctrl(1:0)

sltctrl(1:0)

ALUsrc

beqctrl

jalctrl

jctrl

jrctrl

memctrl

memRead

memWrite

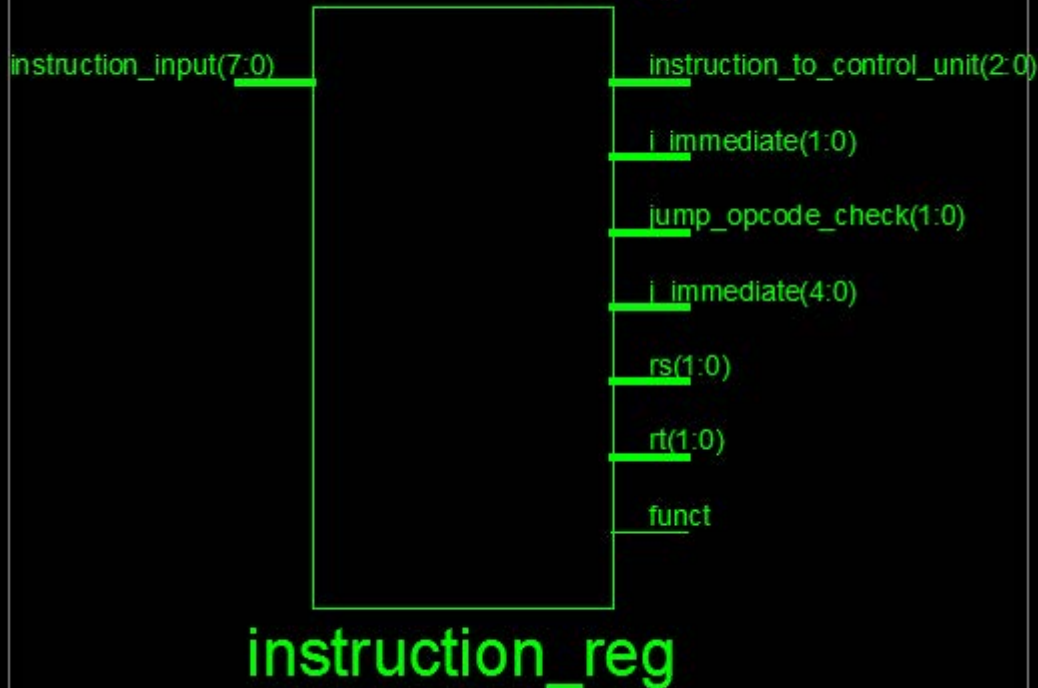
rctrl

regWrite

inst2

ctrl

instruction_reg



memory

dataMemWrite(7:0)

instructions(7:0)

input_addr(7:0)

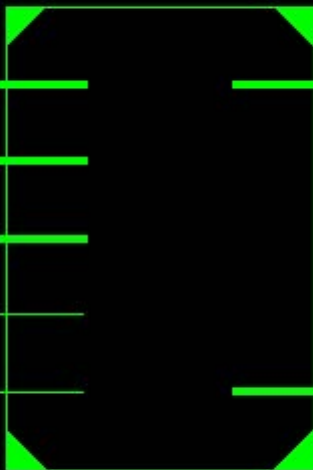
pc(7:0)

memRead

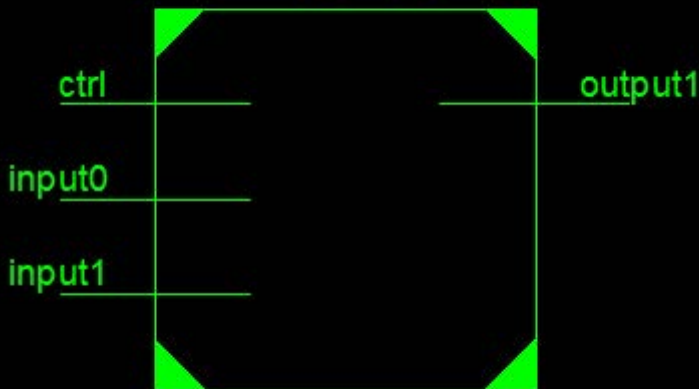
memWrite

readData(7:0)

memory

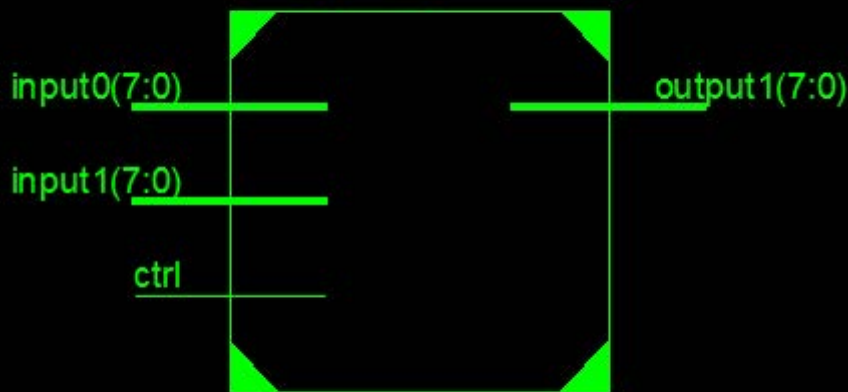


mux2_1_ctrl1



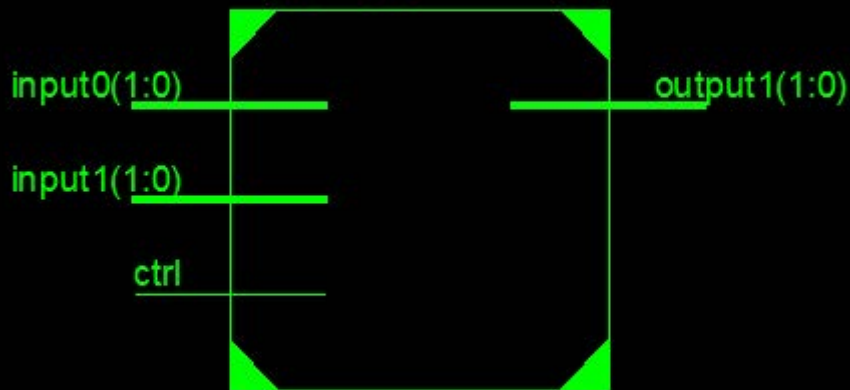
mux2_1_ctrl1

mux2_1_ctrl1_in2



mux2_1_ctrl1_in2

mux2_1_ctrl1_out1



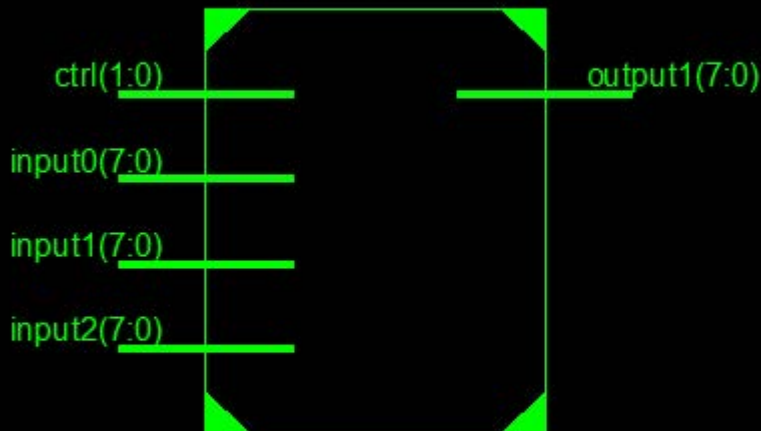
mux2_1_ctrl1_out1

mux2_1_ctrl3



mux2_1_ctrl3

mux3_1



mux3_1

pc

input1(7:0)

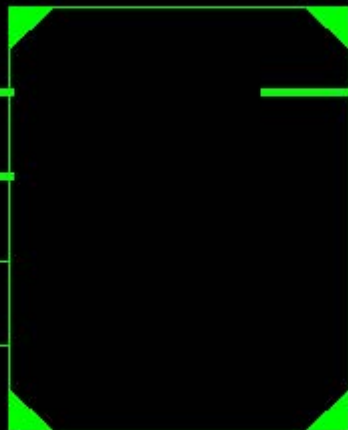
output1(7:0)

pc(7:0)

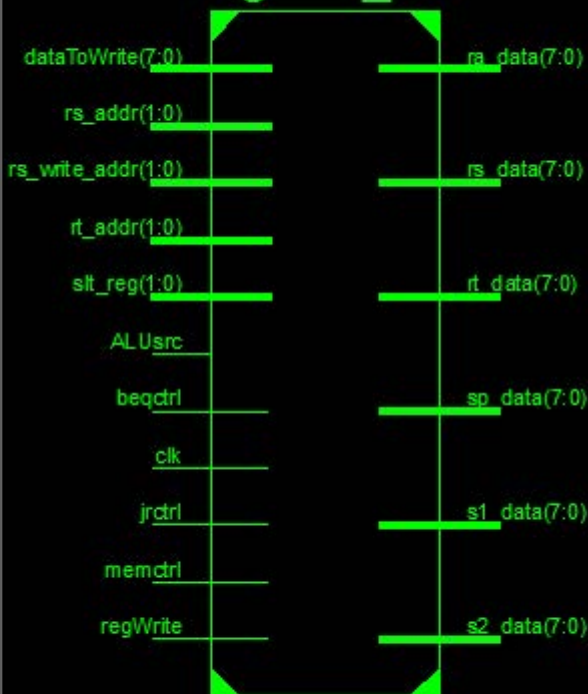
clk

reset

pc



register_file



register_file

signext_2to8



signext_2to8

signext_5to8



signext_5to8