

Task 1

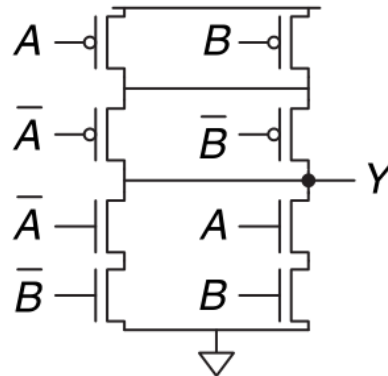
Build a CMOS circuit in Verilog for the 2-1 multiplexer that consists of only six transistors. Show its operation in a testbench.

Task 2

Build CMOS circuits in Verilog for the 2-input AND, OR, XOR, XNOR, NAND, NOR gates. Show its operation in a testbench.

Task 3

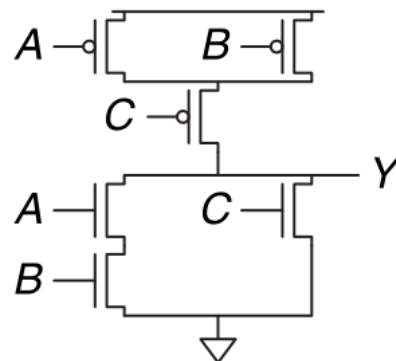
Build the following circuit in Logisim



The circuit should have two inputs, A and B.
Your simulation should show the truth table for this circuit.

Task 4

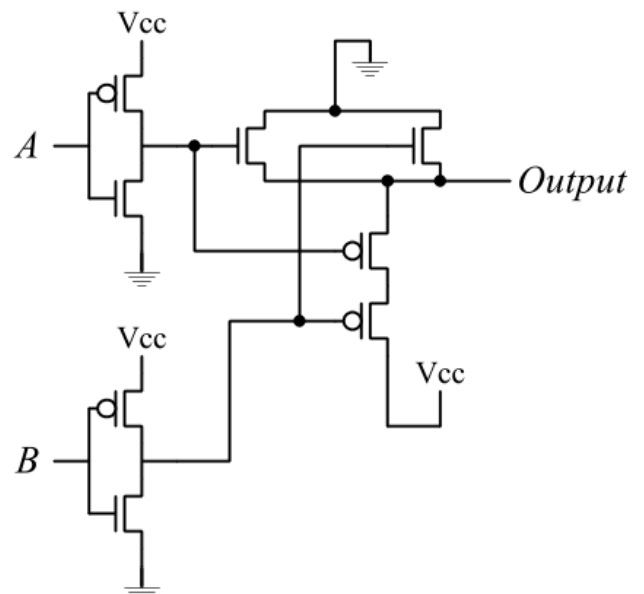
Build the following circuit in Logisim



The circuit should have three inputs, A, B, C.
Your simulation should show the truth table for this circuit.

Task 5

Build the following circuit in Logisim



The circuit should have two inputs, A and B. Your simulation should show the truth table for this circuit.