

Practice

Design a synchronous binary up/down counter from 1 to 6, that detects multiples of 3.

Input: UP/DOWN

Output: Multiple3

FlipFlop: D

Write the state diagram

Write the state table with required inputs using flipflop D

Simplify combinational circuits for inputs of flipflops

Simplify the combinational circuit for the output

Draw the schematic of the circuit

Simulate the circuit using logisim