

Circuit Simulation Project

<https://esim.fossee.in/circuit-simulation-project>

Name of the participant : Damodar Darshan Kolla

Title of the circuit : Sequence Detector Circuit

Theory/Description :

A sequence detector is a sequential state machine that takes an input string of bits and generates an output 1 whenever the target sequence has been detected. In a Mealy machine, output depends on the present state and the external input (x).

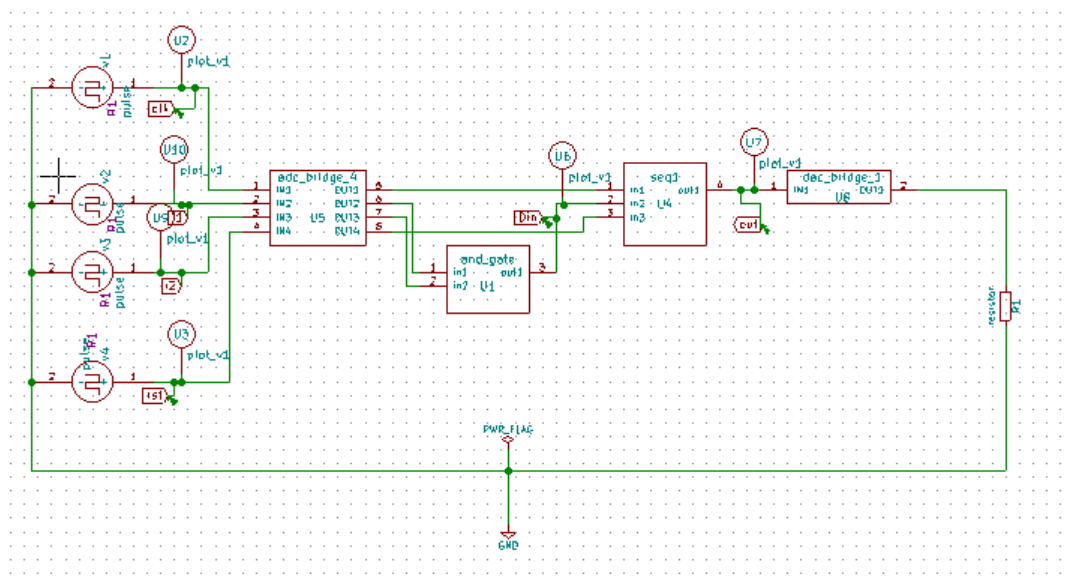
There are two types of sequence detectors:

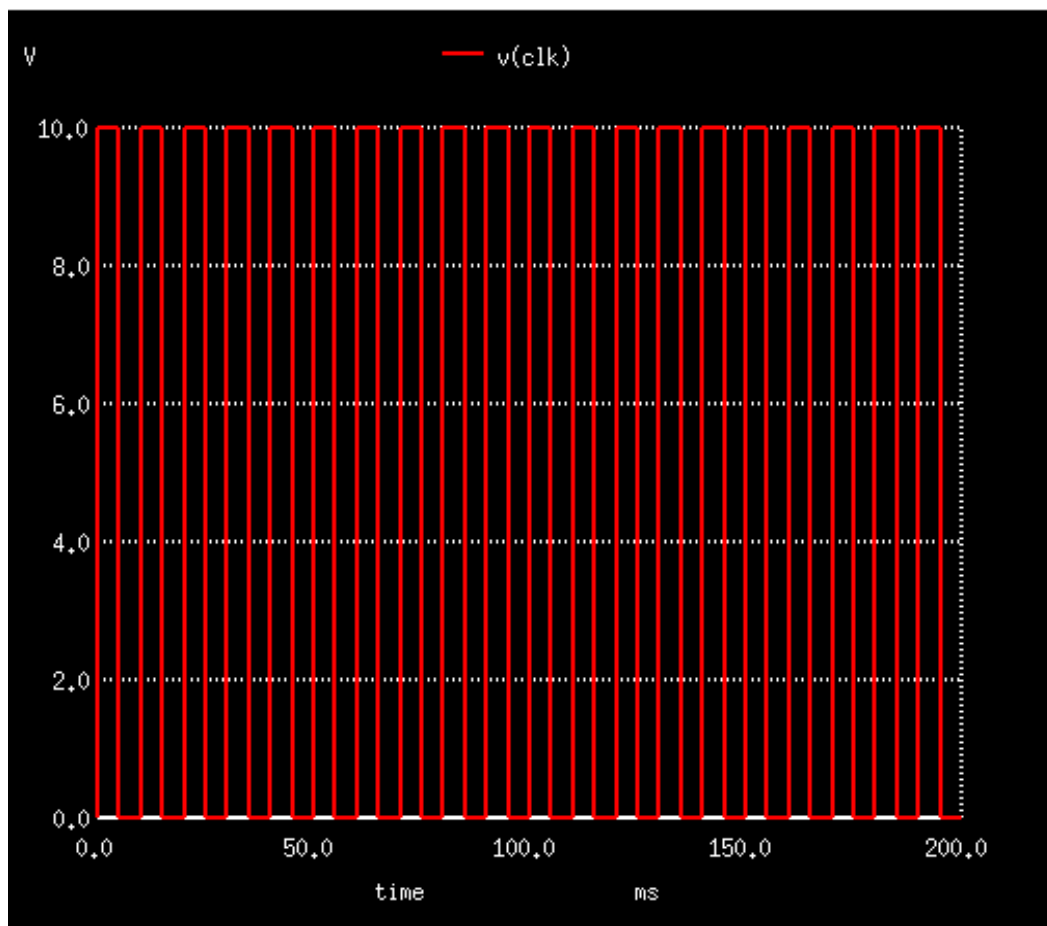
Overlapping

Nonoverlapping

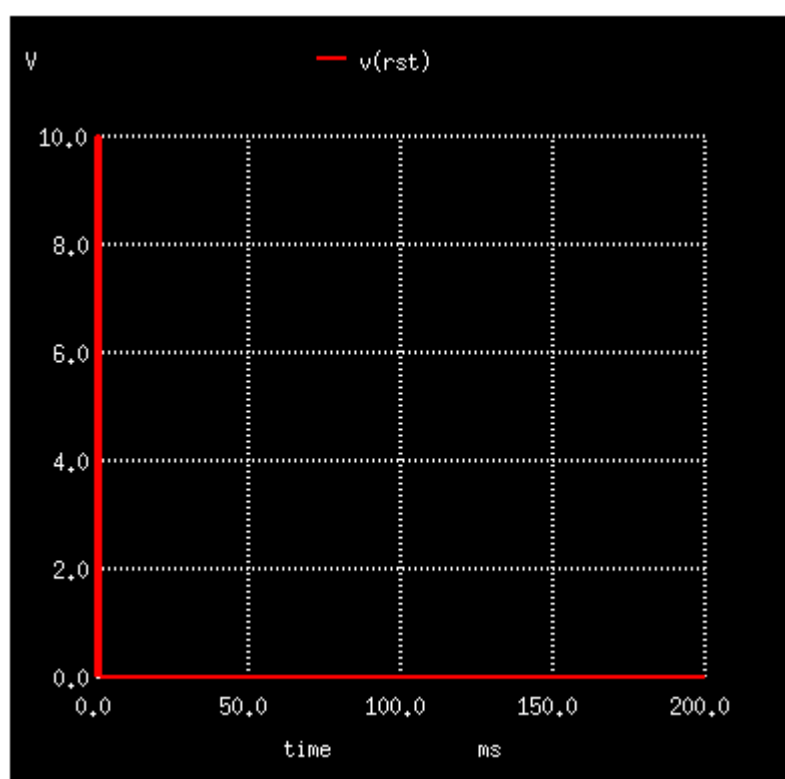
The following detector is an overlapping circuit and **detects the sequence of '000'**.

Circuit Diagram(s) :

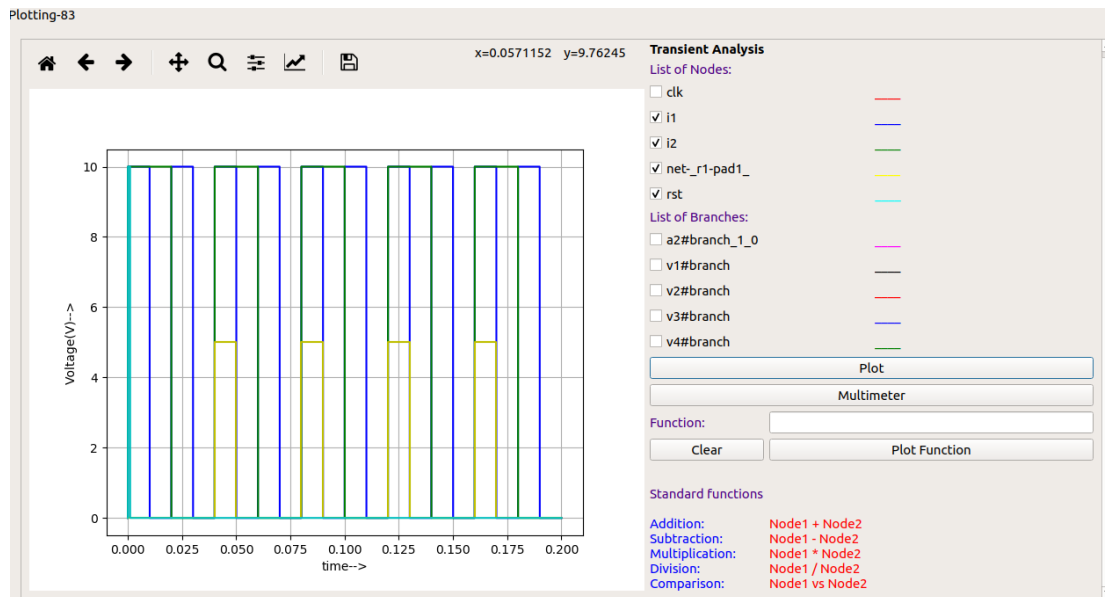


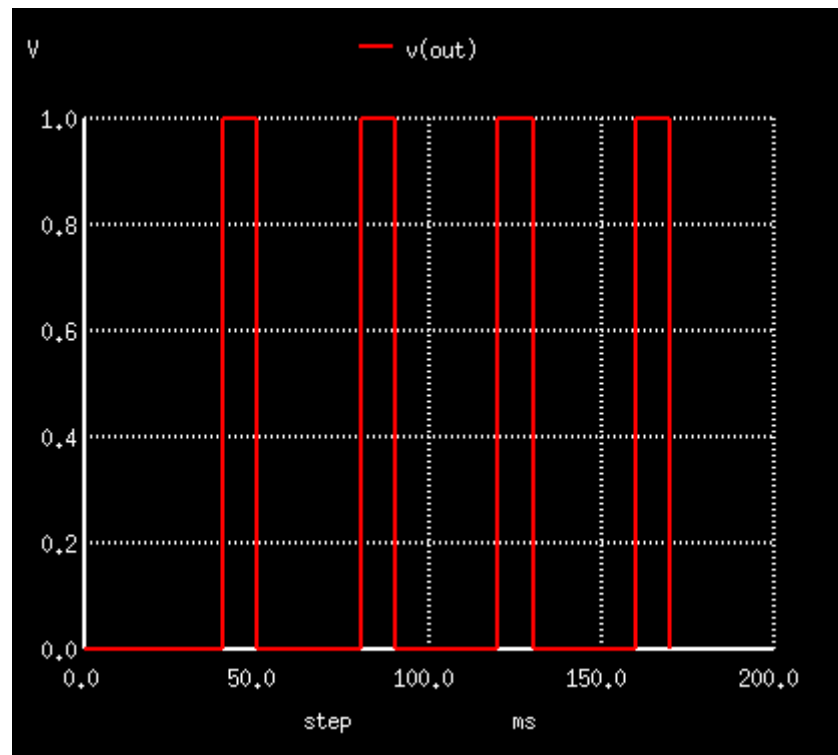


Clock Input



Results (Input, Output waveforms and/or Multimeter readings) :





Output is high when the sequence is detected

Source/Reference(s) :

https://www.youtube.com/watch?v=HXG_YPVNI5M&t=302s

https://spoken-tutorial.org/tutorial-search/?search_foss=eSim&search_language=English