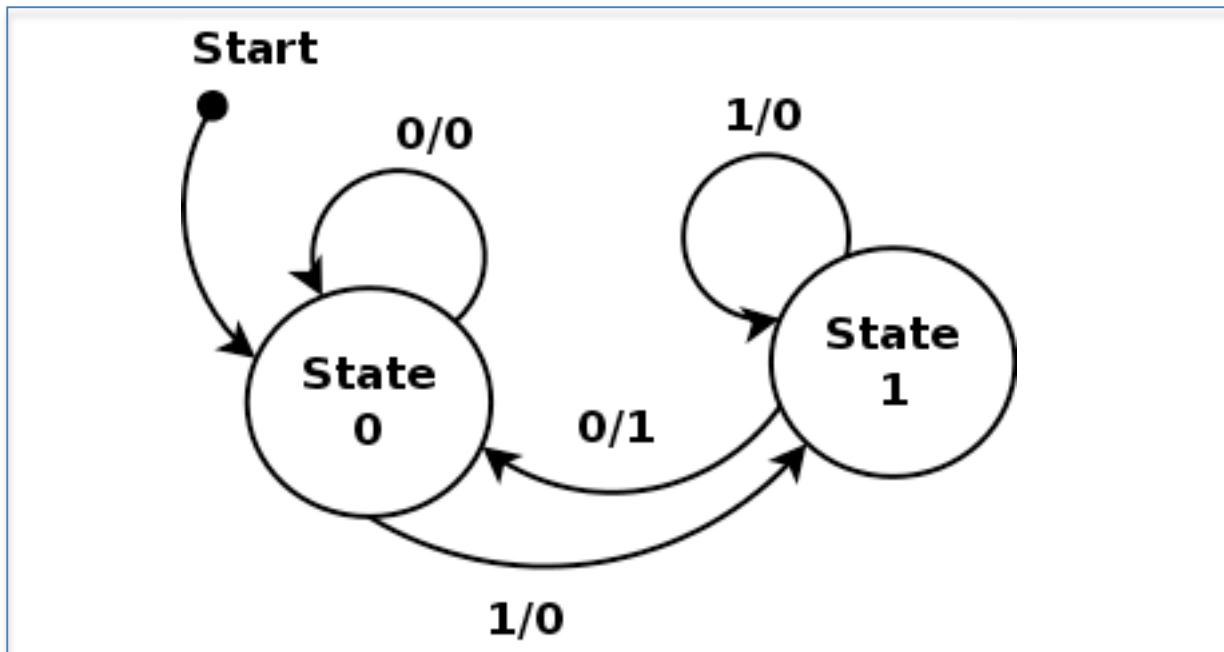


## CS270 Recitation 12 “Help Session for State Machine”

**Goals:** Design a Logisim circuit that implements the simple state machine shown below:



Here are a few clarifications that may help you, and questions you should be able to answer:

- What is the sequence of bits that is detected by this state machine?
- State should be stored in D-latches, how many do you need?
- The truth table is combinational logic similar to what you have already done.
- You must use a D-latch the output, since it's on a transition.
- Optimization is allowed and encouraged, the fewer gates the better!

<i>Input</i>	<i>Current State</i>	<i>Output</i>	<i>Next State</i>
<i>0</i>	<i>0</i>		
<i>0</i>	<i>1</i>		
<i>1</i>	<i>0</i>		
<i>1</i>	<i>1</i>		

After completing the truth table and answering the questions above, create a Logisim circuit called R12.circ and turn it in to the Canvas drop box.