

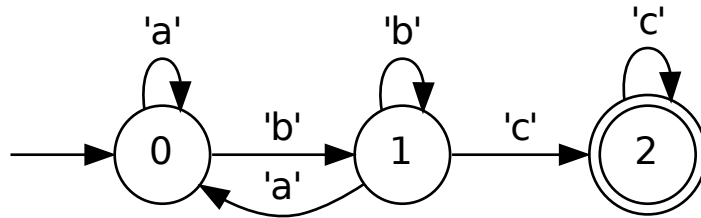
**PLC: Micro Assignment 1 [12.5 points]**

Due Thursday, Jan. 24, within first 3 minutes of class. You can volunteer to present one of your answers for 1 extra credit point.

1. Describe at least one similarity and one difference you perceive between computer languages and natural languages. Please do this in 4 sentences or so (around 100 words), with as correct English as you can: use complete sentences, and make sure your grammar is correct. [6 points]

*[turn over]*

2. Write out a run of the automaton below on the string “aababcc” (recall from class that a run is a sequence which alternates between states of the automaton and characters of the input sequence, starting with the start state, which is 0 in this case). [6 points]



3. (More challenging.) Draw an automaton that accepts all and only those strings  $s$  of 'a' and 'b' characters where the number of 'a' characters modulo 2 is equal to the number of 'b' characters modulo 2. [0.5 points, plus 0.5 extra credit points if no more than 9 people get this right.]