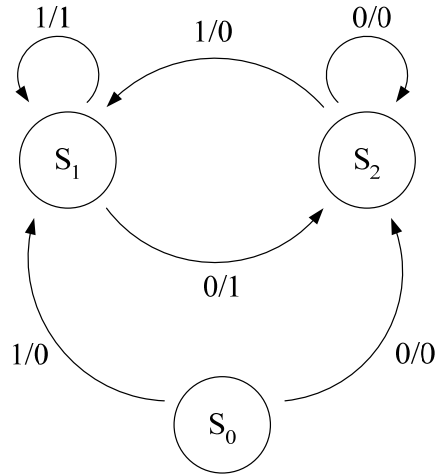


- Q7.** The state diagram shown below is a simple Mealy machine. Which of the following transitions is NOT possible in the diagram? Here, S_0 , S_1 , and S_2 are states. Each edge is labeled with “ j / k ” where j is the input and k is the output.



- a) $S_0 \rightarrow S_1 \rightarrow S_2 \rightarrow S_1 \rightarrow S_1 \rightarrow S_2$
- b) $S_0 \rightarrow S_1 \rightarrow S_2 \rightarrow S_1 \rightarrow S_2 \rightarrow S_0$
- c) $S_0 \rightarrow S_2 \rightarrow S_1 \rightarrow S_2 \rightarrow S_1 \rightarrow S_2$
- d) $S_0 \rightarrow S_2 \rightarrow S_2 \rightarrow S_1 \rightarrow S_2 \rightarrow S_2$