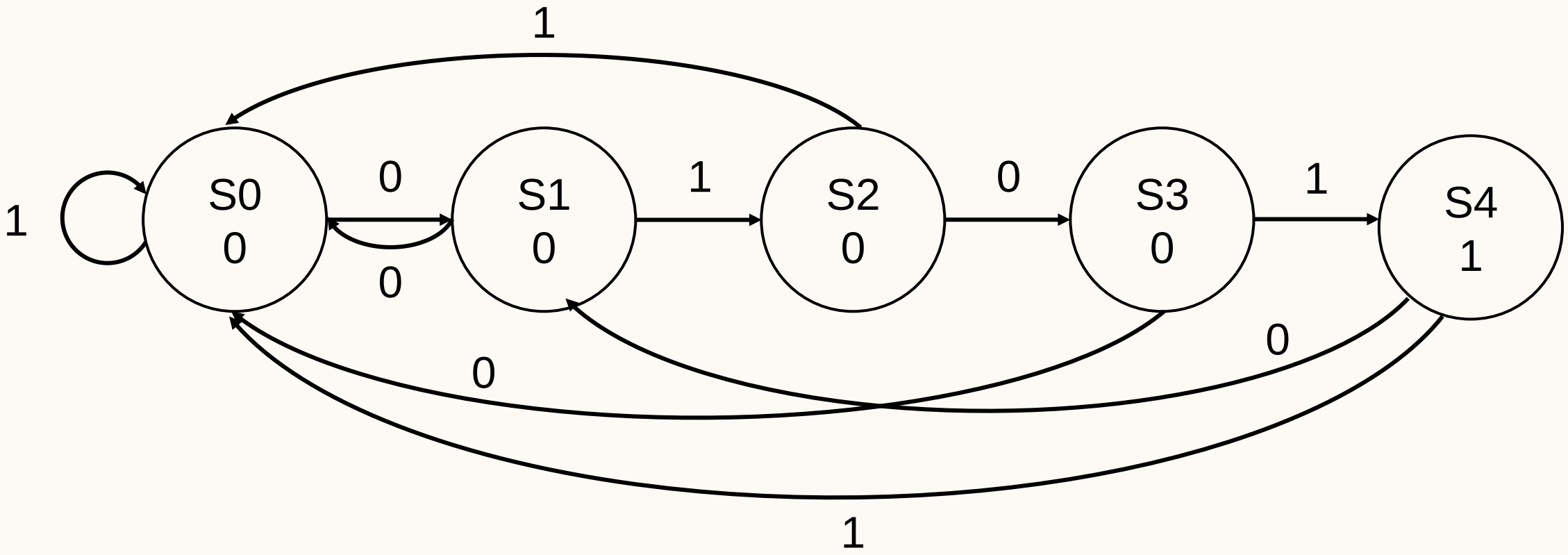
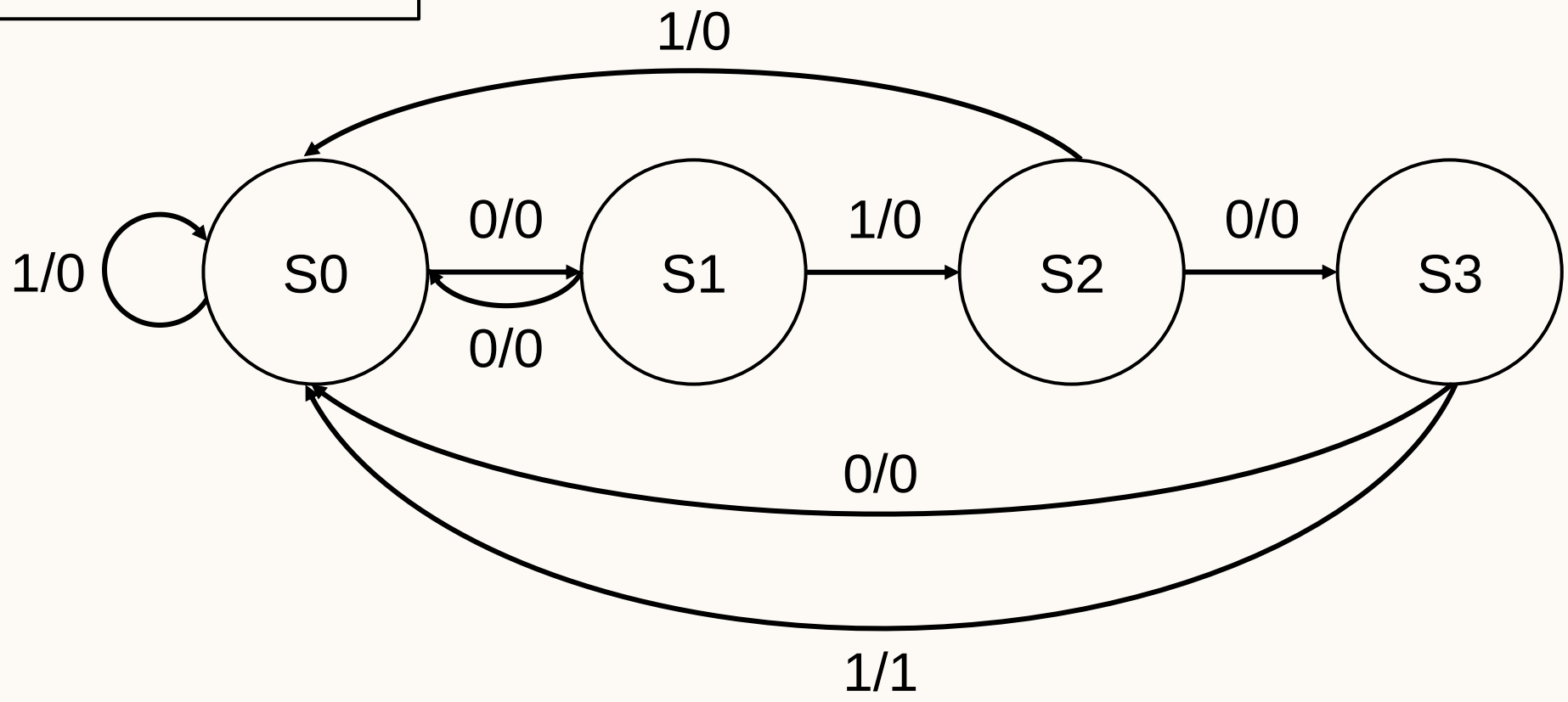
Input = digit entered
Output = unlocked?



Input = digit entered
Output = unlocked?



Sa_old	Sb_old	In	Sa_new	Sb_new	Out
0	0	0	0	1	0
0	0	1	0	0	0
0	1	0	0	0	0
0	1	1	1	0	0
1	0	0	1	1	0
1	0	1	0	0	0
1	1	0	0	0	0
1	1	1	0	0	1

Sa = MSB of state

Sb = LSB of state

In = bit entered

Out = unlocked?

new MSB

Sa Sb \ In	0	1
00	0	0
01	0	1
11	0	0
10	1	0

new LSB

Sa Sb \ In	0	1
00	1	0
01	0	0
11	0	0
10	1	0

Out

Sa Sb \ In	0	1
00	0	0
01	0	0
11	0	1
10	0	0

$(\neg Sa \wedge Sb \wedge In) \vee (Sa \wedge \neg Sb \wedge \neg In)$

$(\neg Sb \wedge \neg In)$

$(Sa \wedge Sb \wedge In)$

Sa = old MSB, Sb = old LSB