

FSA Example

Input with two consecutive zeros but not three

State	Qa	Qb	Qc	input	Da	Db	Dc	output
0	0	0	0	0	0	0	1	0
	0	0	0	1	0	0	0	0
1	0	0	1	0	0	1	0	0
	0	0	1	1	0	0	0	0
2	0	1	0	0	1	0	1	1
	0	1	0	1	0	1	1	1
3	0	1	1	0	1	0	0	1
	0	1	1	1	0	1	1	1
4	1	0	0	0	0	1	0	1
	1	0	0	1	0	1	1	1
5	1	0	1	0	1	0	1	0
	1	0	1	1	1	0	1	0
N/A	1	1	0	0	d	d	d	d
	1	1	0	1	d	d	d	d
N/A	1	1	1	0	d	d	d	d
	1	1	1	1	d	d	d	d

Da	Qa'Qb'	Qa'Qb	QaQb	QaQb'
Qc'In'	0	0	0	0
Qc'In	1	0	0	1
QcIn	d	d	d	d
QcIn'	0	0	1	1

$$Da = In * Qb' + Qc * Qa$$

Db	Qa'Qb'	Qa'Qb	QaQb	QaQb'
Qc'In'	0	0	0	1
Qc'In	0	1	1	0
QcIn	d	d	d	d
QcIn'	1	1	0	0

$$Db = Qa' * Qc + In * Qb + QaQb'Qc'In'$$

Dc	Qa'Qb'	Qa'Qb	QaQb	QaQb'
Qc'In'	1	0	0	0
Qc'In	1	1	1	0
QcIn	d	d	d	d
QcIn'	1	1	0	0

$$Dc = Qa' * Qc + In * Qb + Qa' * Qb'$$

output	Qa'Qb'	Qa'Qb	QaQb	QaQb'
Qc'In'	0	0	0	0
Qc'In	1	1	1	1
QcIn	d	d	d	d
QcIn'	1	1	0	0

$$output = In + Qa' * Qc$$

