time	4	3	2	1	0
A (=7)		0	1	1	1
B (=5)		0	1	0	1
pState(present)	S1	S3	S2	S2	S0 (init)
nState(next)		S1	S3	S2	S2
		!A & !B	A & B	A ^ B	A & B
F (sum=12)	1	1	0	0	0
Cout	0	1	1	1	0