

input X
output Y

Present State	next state		Y
	\bar{X}	X	
S0	S0	S1	0
S1	S0	S0	1

encoding of states

	F
S0	0
S1	1

2-dimensional table

F	\bar{X}	X	Y
0	0	1	0
1	0	0	1

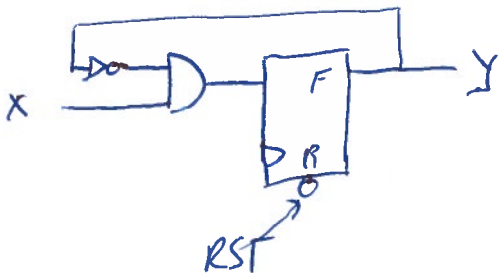
1-dimensional table

F	X	F+	Y
0	0	0	0
0	1	1	0
1	1	0	1
1	0	0	1

input of D-flipflop is same as required F+ after active edge of clock

D_F	\bar{X}	X	D_F
0	0	1	$D_F = \bar{F} \cdot X$
1	0	0	

Y	\bar{X}	X	Y
0	0	0	$Y = F$
1	1	1	



encoding of states

	F
S0	1
S1	0

2-dimensional table

F	\bar{X}	X	Y
1	1	0	0
0	1	1	1

1-dimensional table

FX	F+	Y
00	1	1
01	1	1
11	0	0
10	0	0

D_F	\bar{X}	X	D_F
1	1	1	$D_F = \bar{F} + \bar{X}$
1	1	0	

Y	\bar{X}	X	Y
1	1	1	$Y = \bar{F}$
0	0	0	

