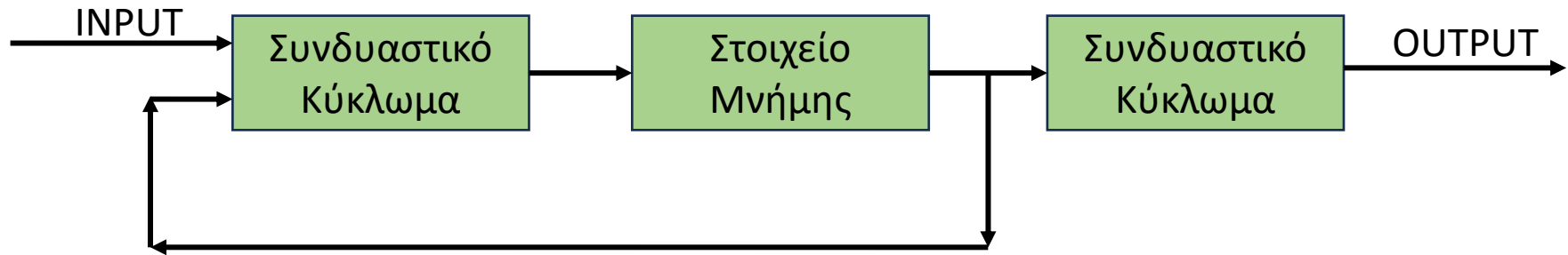


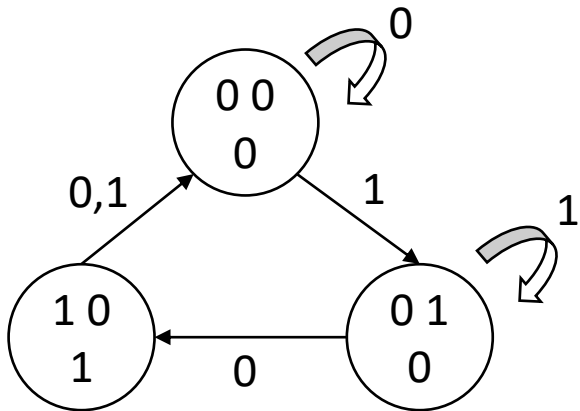
Σύγχρονα Ακολουθιακά Κυκλώματα
Finite State Machine
Ασκήσεις



Moore State Machine

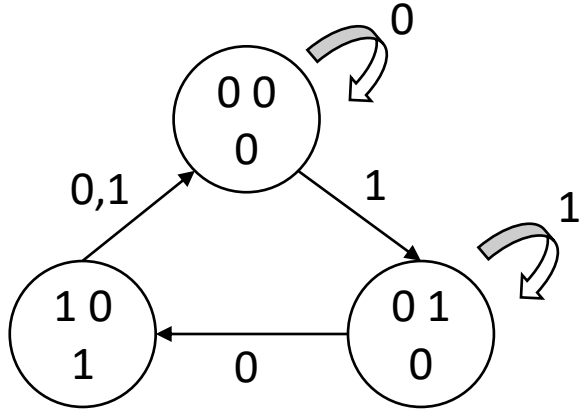


Διάγραμμα Κατάστασης



Present State		Input	Next State		Output
A	B		A+	B+	
0	0	0	0	0	0
0	0	1	0	1	0
0	1	0	1	0	0
0	1	1	0	1	0
1	0	0	0	0	1
1	0	1	0	0	1
1	1	0	-	-	-
1	1	1	-	-	-

Moore State Machine



A+	x	0	1
00	AB	0	0
01	AB	1	0
11	AB	-	-
10	AB	0	0

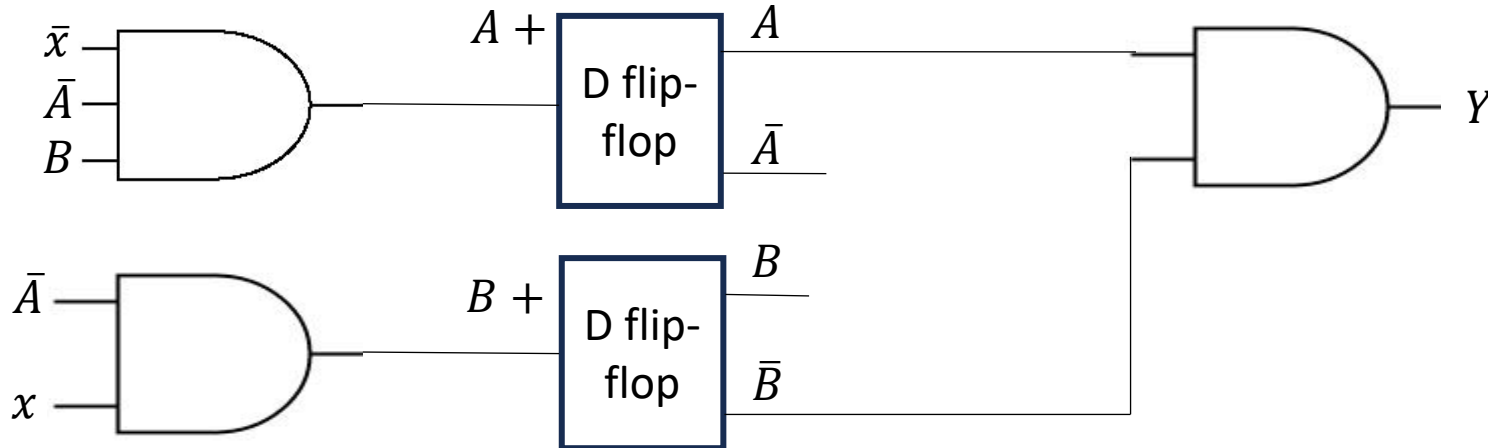
$$A += \bar{A}B\bar{x}$$

B+	x	0	1
00	AB	0	1
01	AB	0	1
11	AB	-	-
10	AB	0	0

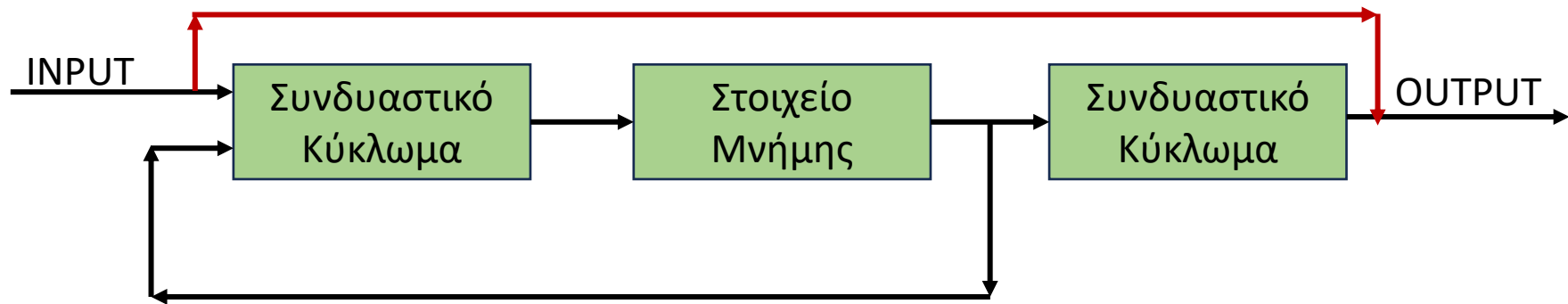
$$B += \bar{A}x$$

Y	x	0	1
00	AB	0	0
01	AB	0	0
11	AB	-	-
10	AB	1	1

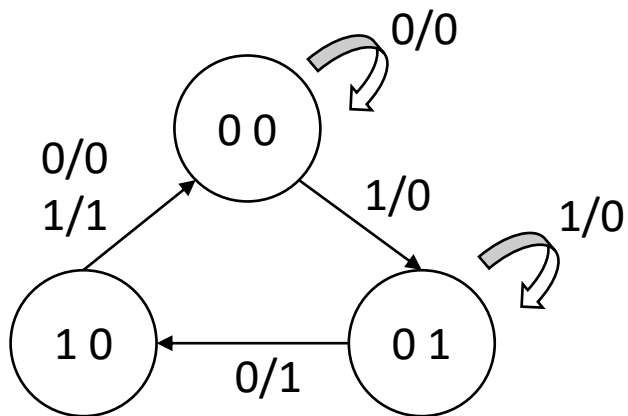
$$Y = A\bar{B}$$



Mealy State Machine



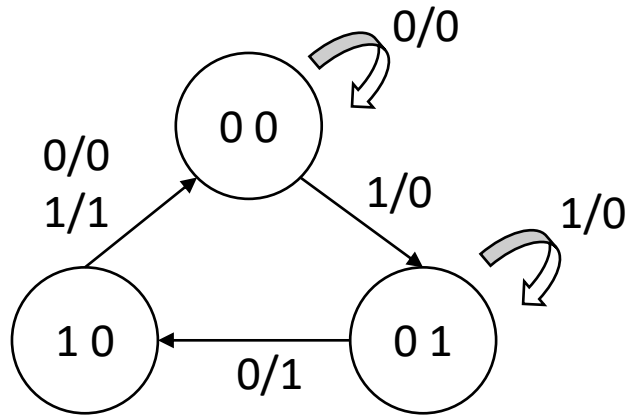
Διάγραμμα Κατάστασης



Present State		Input	Next State		Output
A	B		A+	B+	
0	0	0	0	0	0
0	0	1	0	1	0
0	1	0	1	0	1
0	1	1	0	1	0
1	0	0	0	0	0
1	0	1	0	0	1
1	1	0	-	-	-
1	1	1	-	-	-

Finite State Machine

Moore State Machine



A+ AB	x	0	1
00		0	0
01		1	0
11		X	X
10		0	0

$$A += B\bar{x}$$

B+ AB	x	0	1
00		0	1
01		0	1
11		X	X
10		0	0

$$B += \bar{A}x$$

Y AB	x	0	1
00		0	0
01		1	0
11		-	-
10		0	1

$$Y = \bar{A}B\bar{x} + A\bar{B}x$$