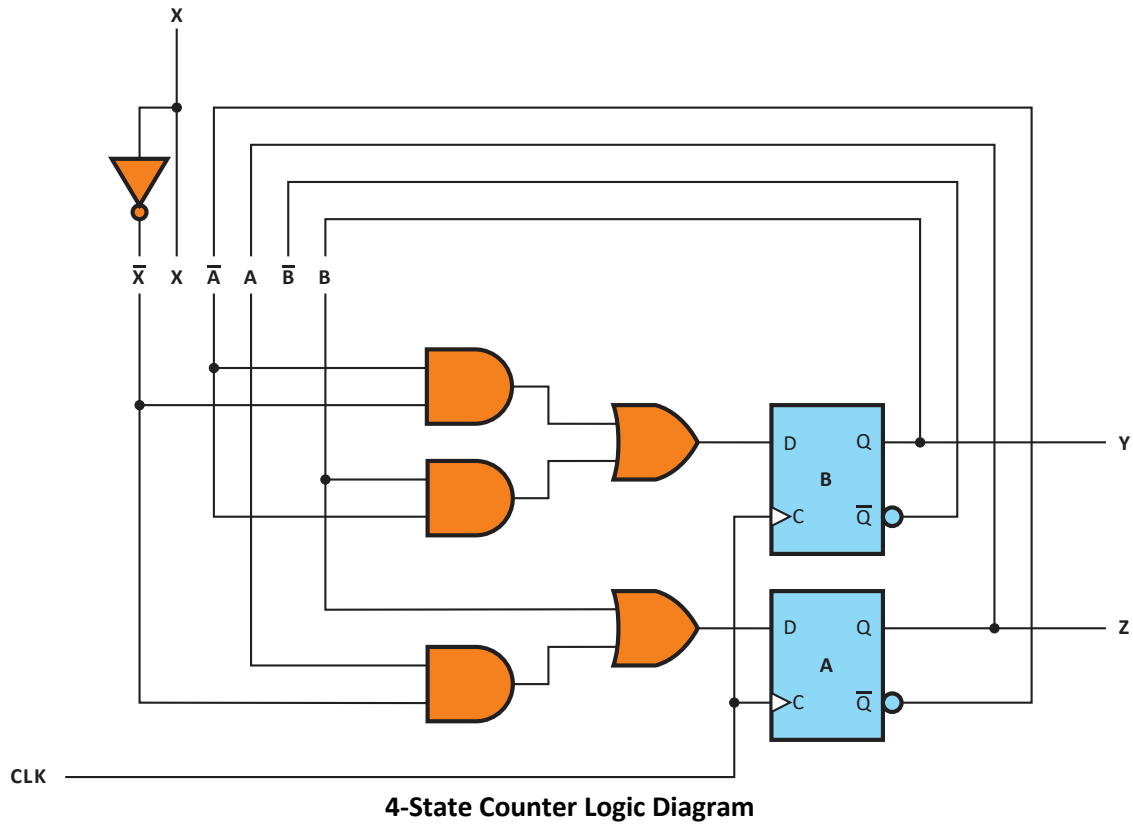
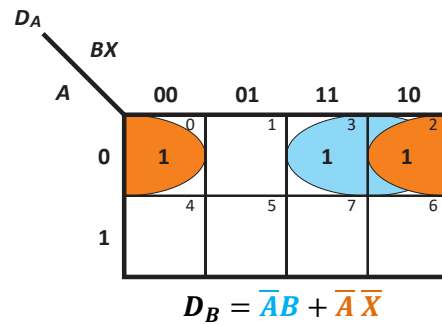
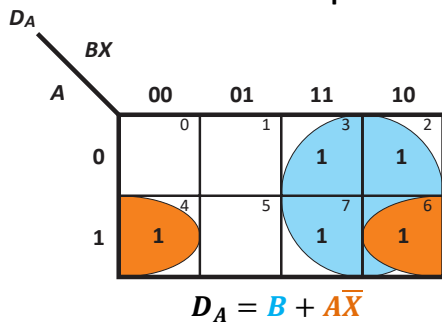


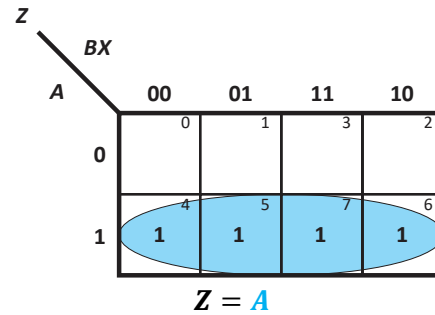
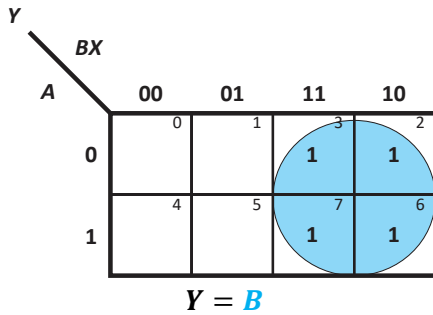


1. Next State Decoder and Output Equations

- $D_A = B + A\bar{X}$
- $D_B = \bar{A}B + \bar{A}\bar{X}$
- $Y = B$
- $Z = A$

2. Next State Decoder and Output K-Maps



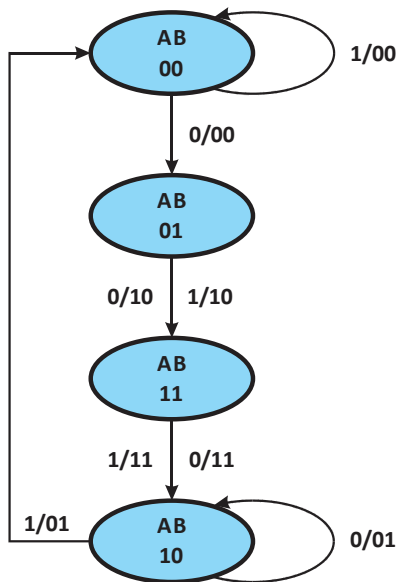


3. The Present-State-Next-State Table

Present State		Input		Next State Decoder		Next State		Output	
State	A	B	X	D_A	D_B	A	B	Y	Z
a	0	0	0	0	1	0	1	0	0
	0	0	1	0	0	0	0	0	0
b	0	1	0	1	1	1	1	1	0
	0	1	1	1	1	1	1	1	0
c	1	0	0	1	0	1	0	0	1
	1	0	1	0	0	0	0	0	1
d	1	1	0	1	0	1	0	1	1
	1	1	1	1	0	1	0	1	1

Present State Next State Table

4. The State Diagram



State Diagram