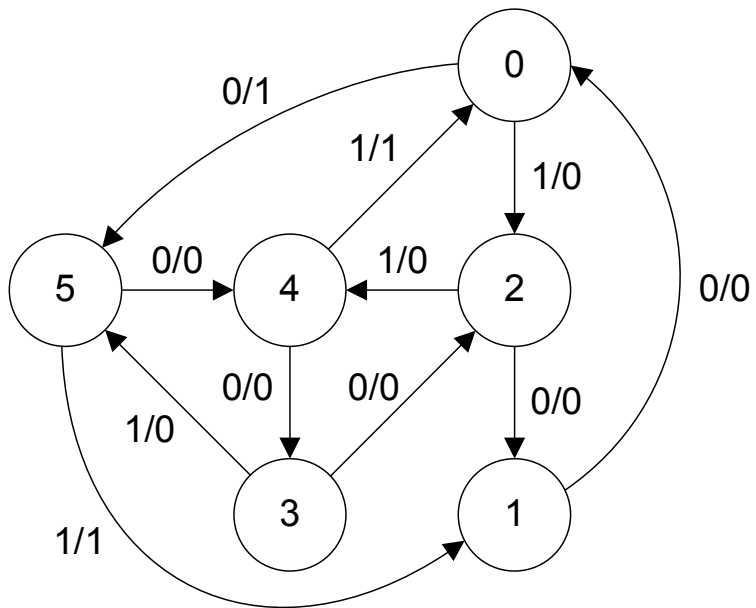
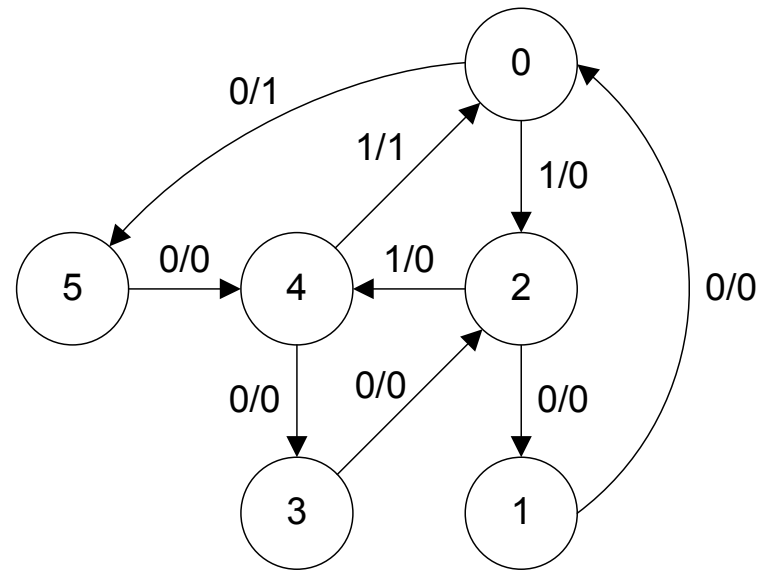
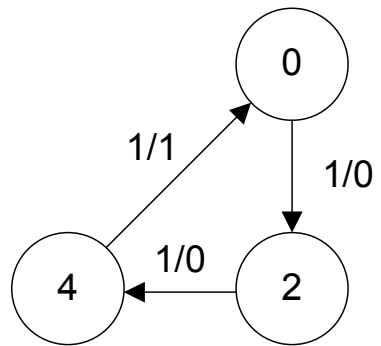


Rancangan Rangkaian Berurut

- Dimulai dengan membuat kalimat yang menyatakan perilaku dari rangkaian (spesifikasi).
- Dituangkan kedalam bentuk Diagram Keadaan atau Tabel Keadaan.
- Penyederhanaan dengan :
 - Metoda Pencocokan Baris
 - Metoda Peta Pasangan



KEADAAN SEKARANG	KEADAAN BERIKUT		KELUARAN SEKARANG	
	X = 0	X = 1	X = 0	X = 1
0	5	2	1	0
1	0	3	0	0
2	1	4	0	0
3	2	5	0	0
4	3	0	0	0
5	4	1	0	1

KEADAAN SEKARANG A B C	KEADAAN BERIKUT A+ B+ C+		KELUARAN Z	
	X = 0	X = 1	X = 0	X = 1
0 0 0	1 0 1	0 1 0	1	0
0 0 1	0 0 0	0 1 1	0	0
0 1 0	0 0 1	1 0 0	0	0
0 1 1	0 1 0	1 0 1	0	0
1 0 0	0 1 1	0 0 0	0	0
1 0 1	1 0 0	0 0 1	0	1

	XA			
BC	00	01	11	10
00	1	1	1	
01			1	
11		X	X	1
10		X	X	1

$$T_A = \bar{X}.\bar{B}.\bar{C} + X.A + X.B$$

	XA			
BC	00	01	11	10
00		1		1
01				1
11		X	X	1
10	1	X	X	1

$$T_B = \bar{X}.A.\bar{C} + X.\bar{A} + B.\bar{C}$$

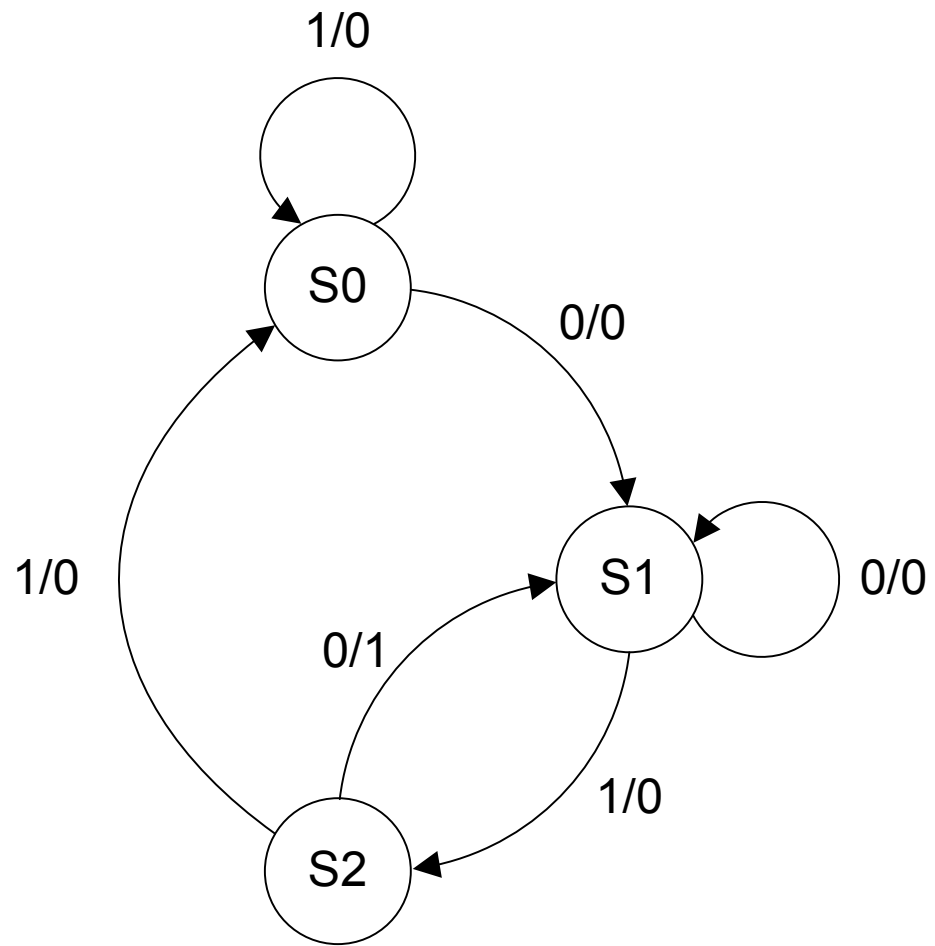
	XA			
BC	00	01	11	10
00	1	1		
01	1	1		
11	1	X	X	
10	1	X	X	

$$T_C = \bar{X}$$

Rancangan Detektor Urutan

Rangkaian berfungsi untuk mendeteksi adanya data dengan urutan 010. Urutan seperti ini akan membuat keluaran Z menjadi 1.

INPUT X	0	1	1	0	1	0	1	0	0	1	1	1	0	1	0	1	1	0	0
OUTPUT Z	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0



KEADAAN SEKARANG	KEADAAN BERIKUT		KELUARAN SEKARANG	
	X = 0	X = 1	X = 0	X = 1
S0	S1	S0	0	0
S1	S1	S2	0	0
S2	S1	S0	1	0

AB	A+ B+		Z	
	X = 0	X = 1	X = 0	X = 1
00	01	00	0	0
01	01	10	0	0
10	01	00	1	0

A B	A+ B+		J _A K _A		J _B K _B	
	X = 0	X = 1	X = 0	X = 1	X = 0	X = 1
00	01	00	0X	0X	1X	0X
01	01	10	0X	1X	X0	X1
10	01	00	X1	X1	1X	0X

A B	A+ B+		J _A K _A		J _B K _B	
	X = 0	X = 1	X = 0	X = 1	X = 0	X = 1
0 0	0 1	0 0	0 x	0 x	1 x	0 x
0 1	0 1	1 0	0 x	1 x	x 0	x 1
1 0	0 1	0 0	x 1	x 1	1 x	0 x
1 1	x x	x x	x x	x x	x x	x x

X \ AB		AB			
		00	01	11	10
X	0			x	x
	1		1	x	x

$$J_A = B.X$$

X \ AB		AB			
		00	01	11	10
X	0	x	x	x	1
	1	x	x	x	1

$$K_A = 1$$

X \ AB		AB			
		00	01	11	10
X	0	1	x	x	1
	1		x	x	

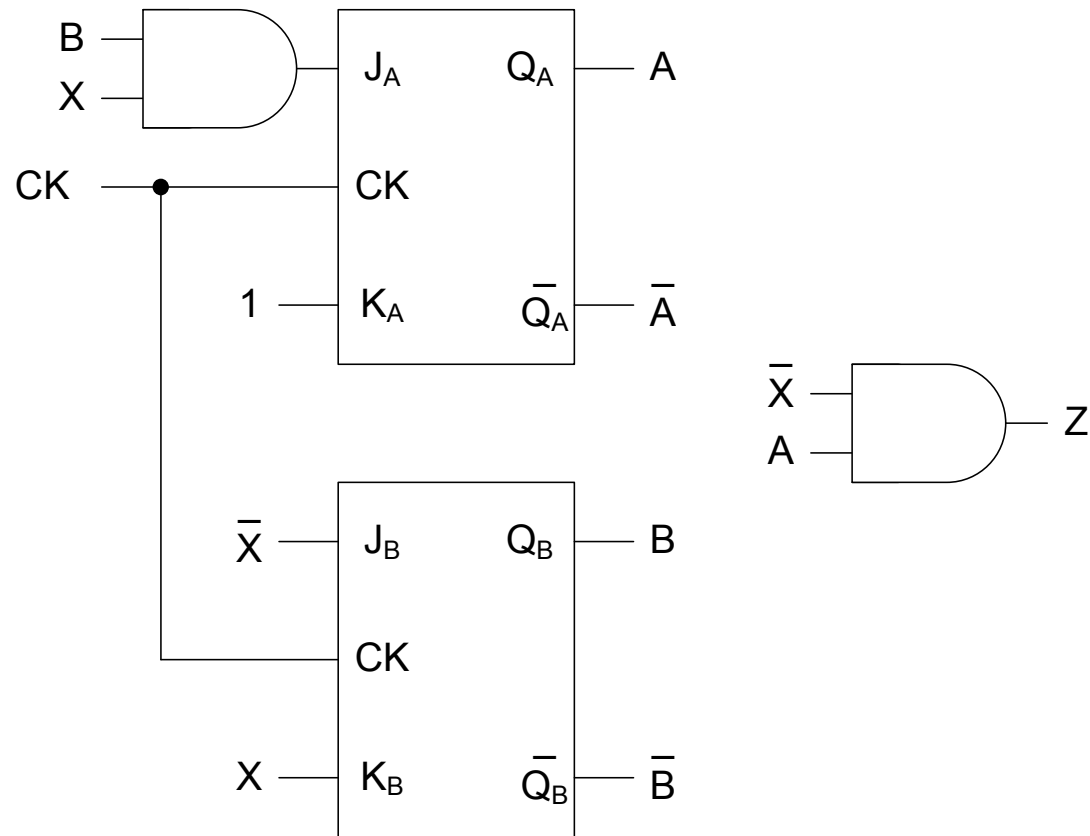
$$J_B = \bar{X}$$

X \ AB		AB			
		00	01	11	10
X	0	x		x	x
	1	x	1	x	x

$$K_B = X$$

X \ AB		AB			
		00	01	11	10
X	0			x	1
	1			x	

$$X = \bar{X}.A$$



Dengan flip-flop T

A B	A+ B+		T _A		T _B	
	X = 0	X = 1	X = 0	X = 1	X = 0	X = 1
0 0	0 1	0 0	0	0	1	0
0 1	0 1	1 0	0	1	0	1
1 0	0 1	0 0	1	1	1	0
1 1	x x	x x	x	x	x	x

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

$$J_A = B.x + A$$

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

$$K_A = \bar{B}.x + B.x$$

