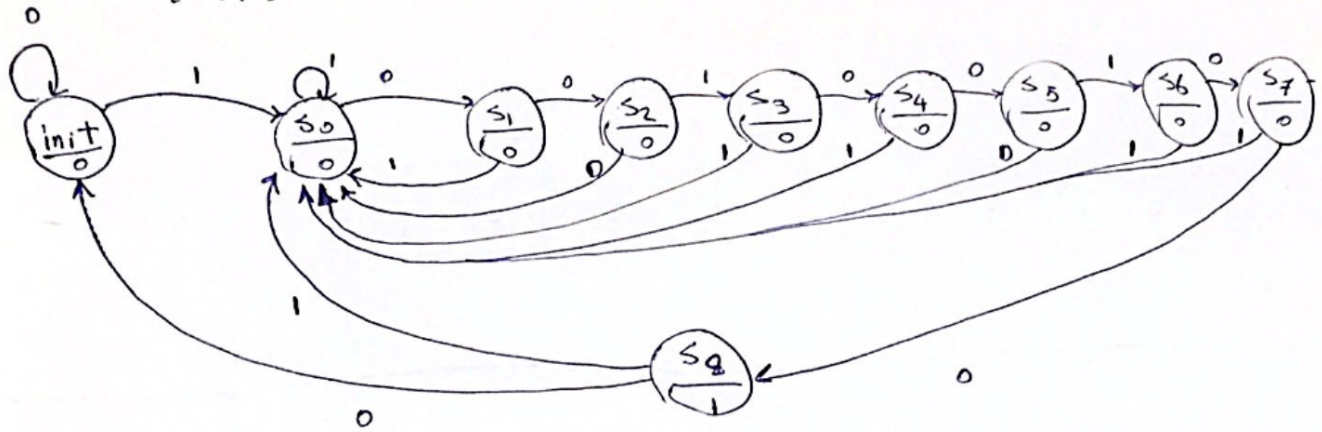


100 100 100  
0 1 2 3 4 5 6 7 8



$D_3 D_2 P_1 D_0 +$

$Q_3 Q_2 Q_1 Q_0$	$Y=0$	$Y=1$	$Z$
init 0000	0000	0001	0
s0 0001	0010	0001	0
s1 0010	0011	0001	0
s2 0011	0001	0100	0
s3 0100	0101	0001	0
s4 0101	0110	0001	0
s5 0110	0001	0111	0
s6 0111	1000	0001	0
s7 1000	1001	0001	0
s8 1001	0000	0001	1

32 10	00	01	11	10
00	0	0	X	1
01	0	0	X	0
11	0	1	X	X
10	0	0	X	X

$X=0$

32 10	00	01	11	10
00			X	
01			X	
11			X	X
10			X	X

$X=1$

$D_{3+}$  Kmap

$$D_{3+} = \bar{X} Q_3 \bar{Q}_1 \bar{Q}_0 + \bar{X} Q_2 Q_1 Q_0$$

32 10	00	01	11	10
00		1	X	
01		1	X	
11			X	X
10			X	X

$X=0$

32 10	00	01	11	10
00			X	
01			X	
11	1		X	X
10		1	X	X

$X=1$

$D_{2+}$  Kmap

$$D_{2+} = \bar{X} Q_2 \bar{Q}_1 + X \bar{Q}_3 \bar{Q}_2 Q_1 Q_0 + X Q_2 Q_1 \bar{Q}_0$$

32 10	00	01	11	10
00			X	
01	1	1	X	X
11			X	X
10	1		X	X

$X=0$

32 10	00	01	11	10
00			X	
01		1	X	
11			X	X
10			X	X

$X=1$

$D_{1+}$  Kmap

$$D_{1+} = X Q_2 \bar{Q}_1 Q_0 + X \bar{Q}_3 \bar{Q}_2 Q_1 \bar{Q}_0 + \bar{X} \bar{Q}_3 \bar{Q}_1 Q_0$$

32 10	00	01	11	10
00		1	X	1
01			X	
11	1		X	X
10	1	1	X	X

$X=0$

32 10	00	01	11	10
00	1	1	X	1
01	1	1	X	1
11		1	X	X
10	1	1	X	X

$X=1$

$D_{0+}$  Kmap

$$D_{0+} = Q_1 \bar{Q}_0 + Q_3 \bar{Q}_2 \bar{Q}_1 \bar{Q}_0 + \bar{X} \bar{Q}_3 \bar{Q}_1 Q_0 + \bar{X} Q_2 \bar{Q}_1 \bar{Q}_0 + X \bar{Q}_1 + X Q_2 Q_0$$

32

	00	01	11	10
10			X	
00			X	1
01			Y	Y
11			Y	Y
10			Y	Y

$$Z = Q_3 Q_0$$