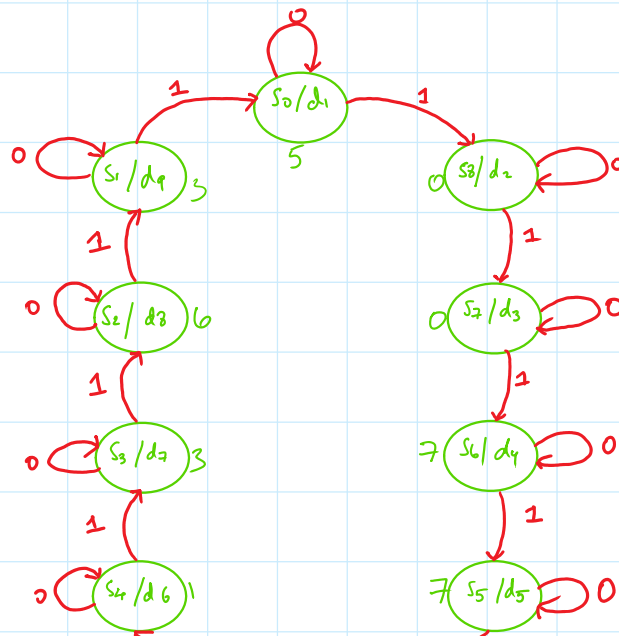


500771363

ID		Present State				Next State								Output			
		a	b	c	d	$w=0$ y_3	y_2	y_1	y_0	$w=1$ y_3	y_2	y_1	y_0	z_3	z_2	z_1	z_0
5	s_0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
3	s_1	0	0	0	1	1	0	0	0	0	1	1	1	0	0	1	1
6	s_2	0	0	1	0	0	1	1	1	0	1	1	0	0	1	1	0
3	s_3	0	0	1	1	0	1	1	0	0	1	0	1	0	0	1	1
1	s_4	0	1	0	0	0	1	0	1	0	1	0	0	0	0	0	1
7	s_5	0	1	0	1	0	1	0	0	0	0	1	1	0	1	1	1
7	s_6	0	1	1	0	0	0	1	1	0	0	1	0	0	1	1	1
0	s_7	0	1	1	1	0	0	1	0	0	0	0	1	0	0	0	0
0	s_8	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

FSM = 8



	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	1	1	d	0
$\bar{c}d$	1	1	d	d
$c\bar{d}$	1	0	d	d
cd	0	1	d	d

$$z_0 = \bar{a}\bar{c} + \bar{b}cd + bcd$$

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	0	d	0
$\bar{c}d$	1	1	d	d
$c\bar{d}$	1	0	d	d
cd	1	1	d	d

$$z_1 = \bar{a}\bar{c}d + \bar{a}b\bar{c} + bcd$$

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	1	0	d	0
$\bar{c}d$	0	1	d	d
$c\bar{d}$	0	0	d	d
cd	1	1	d	d

$$z_2 = \bar{a}\bar{b}d + b\bar{c}d + bcd$$

$$Z_0 = \bar{a}\bar{c} + \bar{b}cd + b\bar{c}\bar{d}$$

Y_0 :-

$w=0$

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	1	1	1
$\bar{c}d$	0	0	1	1
$c\bar{d}$	0	0	1	1
$c\bar{d}$	1	1	1	1

$$Y_0 = b\bar{c}\bar{d} + a\bar{b} + c\bar{d} ; Y_2 = \bar{a}d$$

$$Z_1 = \bar{a}\bar{c}d + \bar{a}\bar{b}c + b\bar{c}\bar{d}$$

$w=1$

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	0	1	0
$\bar{c}d$	1	1	1	1
$c\bar{d}$	1	1	1	1
$c\bar{d}$	0	0	1	1

$$Z_2 = \bar{a}\bar{b}\bar{d} + b\bar{c}d + b\bar{c}\bar{d}$$

Y_1 :-

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	0	1	0
$\bar{c}d$	0	0	1	1
$c\bar{d}$	1	1	1	1
$c\bar{d}$	1	1	1	1

$$Y_1 = \bar{a}c$$

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	0	1	0
$\bar{c}d$	1	1	1	1
$c\bar{d}$	0	0	1	1
$c\bar{d}$	1	1	1	1

$$Y_2 = \bar{c}d + c\bar{d}$$

Y_2 :-

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	1	1	0
$\bar{c}d$	0	1	1	1
$c\bar{d}$	1	0	1	1
$c\bar{d}$	1	0	1	0

$$Y_2 = b\bar{c} + c\bar{b}$$

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	1	1	0
$\bar{c}d$	1	0	1	1
$c\bar{d}$	1	0	1	1
$c\bar{d}$	1	0	1	1

$$Y_2 = b\bar{c}\bar{d} + \bar{a}\bar{b}d + \bar{a}\bar{b}c$$

Y_3 :-

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	0	0	1	0
$\bar{c}d$	1	0	1	1
$c\bar{d}$	0	0	1	1
$c\bar{d}$	0	0	1	1

$$Y_3 = \bar{a}\bar{b}\bar{c}d$$

	$\bar{a}\bar{b}$	$\bar{a}b$	ab	$a\bar{b}$
$\bar{c}\bar{d}$	1	0	1	0
$\bar{c}d$	0	0	1	1
$c\bar{d}$	0	0	1	1
$c\bar{d}$	0	0	1	1

$$Y_3 = \bar{a}\bar{b}\bar{c}\bar{d}$$