

# 1726009 김승겸-컴퓨터구조 1반 과제물

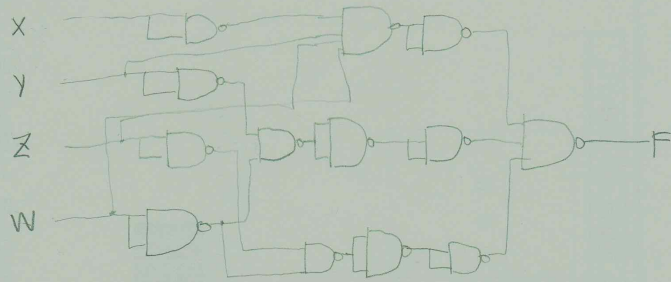
1726009 김승겸

1.  $xy \backslash zw$

00	01	11	10
00	1		
01		1	
11			
10			1

$y'w'$

$$F = y'w' + z'w' + x'yzw$$

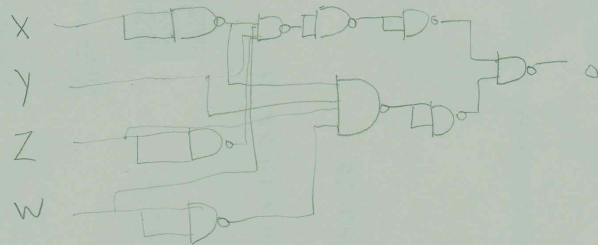


$xy \backslash zw$

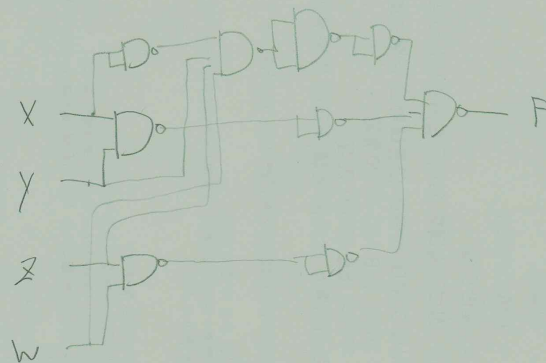
00	01	11	10
00			
01	1		
11			
10			1

$$d = x'y z'w + x'y zw'$$

$$= x'y (z'w + zw')$$



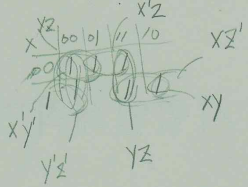
191 다른 값.



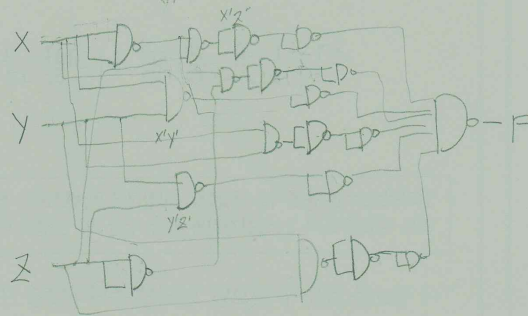
2.

X	Y	Z	F
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1

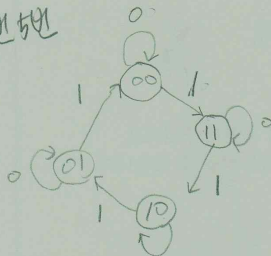
$$F(x, y, z) = \sum(0, 1, 3, 4, 6, 7)$$



$$F = x'y' + y'z' + x'z + xz' + xy + yz$$



3. 状态机



ABx	A	B	D <sub>A</sub>	D <sub>B</sub>	T <sub>A</sub>	T <sub>B</sub>
000	0	0	0	0	0	0
001	1	1	1	1	0	1
010	0	1	0	0	0	0
011	0	0	0	0	0	0
100	1	0	0	1	0	0
101	0	1	0	1	0	1
110	1	1	1	1	0	1
111	1	0	1	0	0	1

Q(t)	Q(t+1)	D
0	0	0
0	1	1
1	0	0
1	1	1

Bx	00	01	11	10
A	0	1	1	0
AB	0	1	1	0
AB'	0	1	0	0

Bx	00	01	11	10
A	0	1	1	0
Bx	0	1	1	0
Bx'	1	0	0	1

Bx	00	01	11	10
A	0	1	1	0
Bx	0	1	1	0
Bx'	1	0	0	1

Bx	00	01	11	10
A	0	1	1	0
Bx	0	1	1	0
Bx'	1	0	0	1

Q(t)	Q(t+1)	T
0	0	0
0	1	1
1	0	1
1	1	0

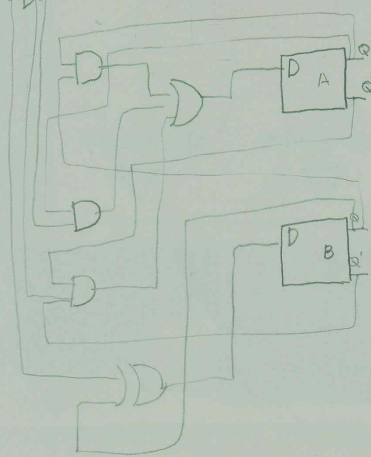
$$D_A = AB + Ax' + A'B'x$$

$$D_B = B \oplus x$$

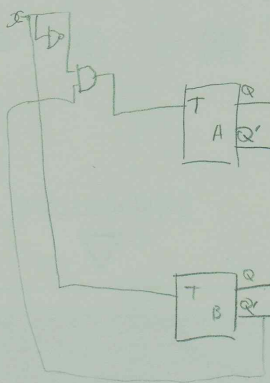
$$T_A = B'x$$

$$T_B = x$$

3. 状态机



状态机



$$\begin{array}{r}
 6. \quad 0111 \quad 1111 \quad 1111 \quad 1111 \\
 (1) + 1000 \quad 1111 \quad 1111 \quad 1111 \\
 \hline
 0000 \quad 1111 \quad 1111 \quad 1110
 \end{array}$$

오버플로 X

부호비트3을 제외한 자리 = 부호비트에서 발생하는 자리 일화/비일화

결과값: 0000 1111 1111 1110

$$\begin{array}{r}
 (2) \quad 0111 \quad 0000 \quad 0000 \quad 0000 \\
 + 1111 \quad 1111 \quad 1111 \quad 1111 \\
 \hline
 0110 \quad 1111 \quad 1111 \quad 1111
 \end{array}$$

오버플로 X

부호비트3을 제외한 자리 = 부호비트에서 발생하는 자리 일화/비일화

결과값: 0110 1111 1111 1111

$$7. \quad 111.1_2 = 7.5 = 1.111 \times 2^2$$



$$\begin{array}{r}
 \text{답: } -7.5_{10} = 1 \quad 10000001 \quad 1110000 \dots 0 \\
 + 2.0_{10} = 0 \quad 10000000 \quad 000 \dots 0
 \end{array}$$

$$\begin{array}{r}
 1 \quad 10000001 \quad 111000 \dots 0 \\
 0 \quad 10000000 \quad 000 \dots 0
 \end{array}$$

$$10.0_2 = 2.0 = 1.0 \times 2^1$$

B. DR

$$LD = D_0T_4 + D_1T_4 + D_2T_4 + D_3T_4$$

$$INR = D_6T_5$$

$$CLR =$$

PC

$$LD = D_4T_4 + D_5T_4 +$$

$$INR = R_7T_1 + RT_2 + D_6T_6 + RB_4 + RB_3 + RB_2 + RB_1$$

$$CLR = RT_1$$

$$+ PB_9$$

$$+ PB_8$$

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