作业221024

1. $E = AB + ACD$

$F = \overline{BCD}\ \overline{BD}\ \overline{BC} = BCD + \bar{B}\bar{D} + \bar{B}\bar{C}$

$G = \overline{C\bar{D}}\ \overline{\bar{C}D} = C\bar{D} + \bar{C}D = C \oplus D$

$H = \bar{D}$

A	B	C	D	E	F	G	H
0	0	0	0	0	1	0	1
0	0	0	1	0	1	1	0
0	0	1	0	0	1	1	0
0	0	1	1	0	0	0	0
0	1	0	0	0	0	0	1
0	1	0	1	0	0	1	0
0	1	1	0	0	0	1	0
0	1	1	1	0	1	0	0
1	0	0	0	0	1	0	1
1	0	0	1	0	1	1	0
1	0	1	0	0	1	1	1
1	0	1	1	1	0	0	0
1	1	0	0	1	0	0	0
1	1	0	1	1	0	1	0
1	1	1	0	1	0	1	0
1	1	1	1	1	1	0	0

输入8421码，输出余3码

2. $y_3 = x_3$, $y_2 = x_2 \oplus x_3$, $y_1 = x_1 \oplus \overline{\overline{Mx_2}\cdot\overline{My_2}}$, $y_0 = x_0 \oplus \overline{\overline{Mx_1}\cdot\overline{My_1}}$

$M=0$时, $y_1 = x_1 \oplus x_2 \oplus x_3$, $y_0 = x_0 \oplus x_1 \oplus x_2 \oplus x_3$;

M	x_0	x_1	x_2	x_3	y_0	y_1	y_2	y_3
0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	1	1	1
0	0	0	1	0	1	1	1	0
0	0	0	1	1	0	0	0	1
0	0	1	0	0	1	1	0	0
0	0	1	0	1	0	0	1	1
0	0	1	1	0	0	0	1	0
0	0	1	1	1	1	1	0	1
1	0	0	0	0	1	0	0	0
1	0	0	0	1	0	1	1	1
1	0	0	1	0	0	1	1	0
1	0	0	1	1	1	0	0	1
1	0	1	0	0	0	1	0	0
1	0	1	0	1	1	0	1	1
1	0	1	1	0	1	0	1	0
1	0	1	1	1	0	1	0	1
1	0	0	0	0	0	0	0	0
1	0	0	0	1	0	0	0	1
1	0	0	1	0	0	0	1	1
1	0	0	1	1	0	0	1	0
1	0	1	0	0	0	1	1	0
1	0	1	0	1	0	1	1	1
1	0	1	1	0	0	1	0	1
1	0	1	1	1	0	1	0	0
1	1	0	0	0	1	1	0	0
1	1	0	0	1	1	0	0	1
1	1	0	1	0	1	1	0	0
1	1	0	1	1	1	1	0	0
1	1	1	0	0	0	1	1	0
1	1	1	0	1	0	1	1	1
1	1	1	1	0	0	0	1	0
1	1	1	1	1	0	0	0	1

输入格雷码，输出8421码

$M=1$时 $y_1 = x_2 \oplus x_3$
$y_2 = x_1 \oplus x_0$

输入8421码，输出格雷码