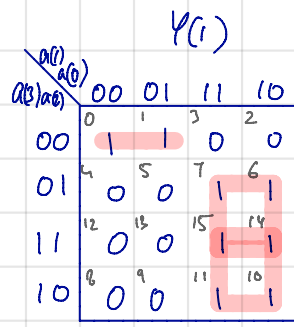


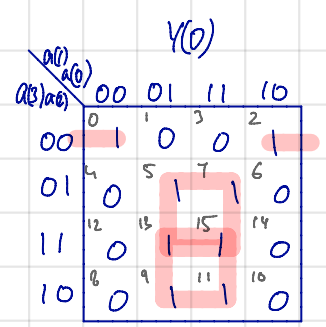
Assignment # 8

SHUBHANG MEHROTRA

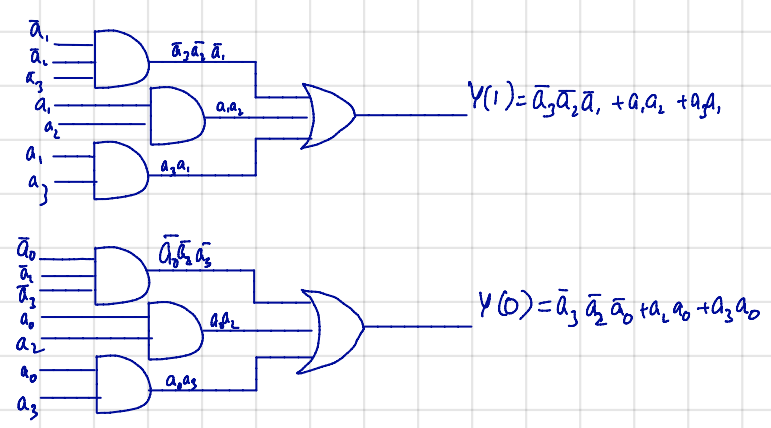
<u>4.2</u>	$a(3)$	$a(2)$	$a(1)$	$a(0)$	$Y(1)$	$Y(0)$
0	0	0	0	0	1	1
1	0	0	0	1	1	0
2	0	0	1	0	0	1
3	0	0	1	1	0	0
4	0	1	0	0	0	0
5	0	1	0	1	0	1
6	0	1	1	0	1	0
7	0	1	1	1	1	1
8	1	0	0	0	0	0
9	1	0	0	1	0	1
10	1	0	1	0	1	0
11	1	0	1	1	1	1
12	1	1	0	0	0	0
13	1	1	0	1	0	1
14	1	1	1	0	1	0
15	1	1	1	1	1	1



$$Y(1) = \bar{a}_3 \bar{a}_2 \bar{a}_1 + a_1 a_2 + a_3 a_1$$

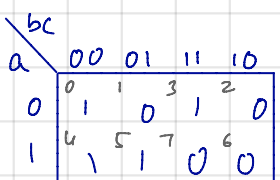


$$Y(0) = \bar{a}_3 \bar{a}_2 \bar{a}_0 + a_2 a_0 + a_3 a_0$$



4.6, 4.8, 4.9, 4.22 in Attached VHDLs

<u>4.9</u>	a	b	c	Y
0	0	0	0	1
1	0	0	1	
2	0	1	0	
3	0	1	1	1
4	1	0	0	1
5	1	0	1	1
6	1	1	0	
7	1	1	1	



$$Y = a\bar{b} + \bar{b}\bar{c} + \bar{a}bc$$

4.22 3:7 Binary-to-Thermometer code

{0}	0	0	0	0	0	0	0	0
{1}	0	0	1	0	0	0	0	1
{2}	0	1	0	0	0	0	1	1
{3}	0	1	1	0	0	0	1	1
{4}	1	0	0	0	0	1	1	1
{5}	1	0	1	0	0	1	1	1
{6}	1	1	0	0	1	1	1	1
{7}	1	1	1	1	1	1	1	1