

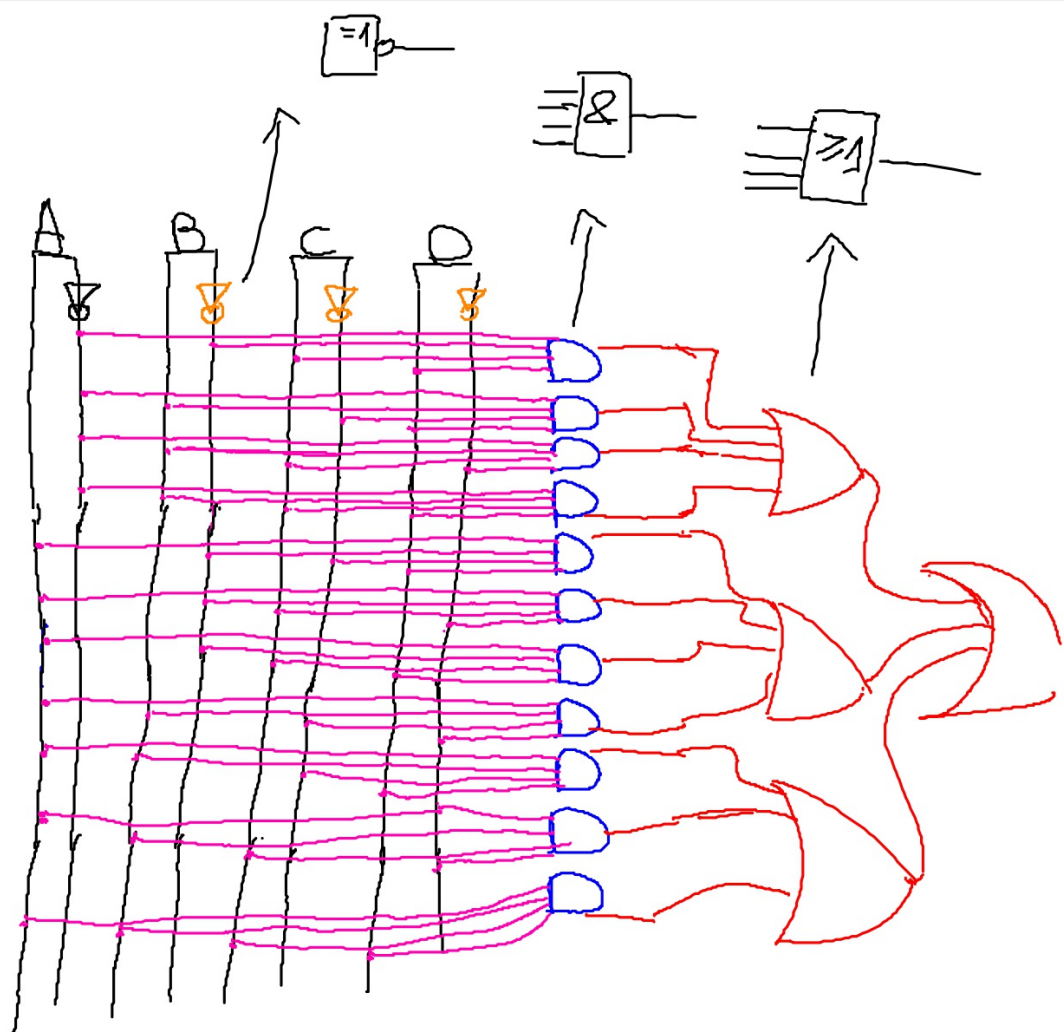
$2^m = 2^4 = 16$ combinaciones diferentes

6.2 Tabla de verdad $\longrightarrow$ Función lógica

Entradas				Salida
a _{2³}	b _{2²}	c _{2¹}	d _{2⁰}	S
0	0	0	0	0
1	0	0	1	0
2	0	1	0	0
3	0	1	1	1
4	1	0	0	0
5	1	0	1	1
6	1	1	0	1
7	1	1	1	1
8	1	0	0	0
9	1	0	1	1
10	1	1	0	1
11	1	1	1	1
12	1	1	0	1
13	1	1	1	1
14	1	1	0	1
15	1	1	1	1

$$\begin{aligned}
 S = & \overline{a} \overline{b} c d + \overline{a} b \overline{c} d + \overline{a} b c \overline{d} + \overline{a} b c d \\
 & + \overline{a} b c d + \overline{a} b c d + \overline{a} b c d + \\
 & + \overline{a} b c d + \overline{a} b c d + \overline{a} b c d + \\
 & + \overline{a} b c d.
 \end{aligned}$$

$\overline{a} \overline{b} c d$ (3)
 $\overline{a} b \overline{c} d$ (5)
 $\overline{a} b c \overline{d}$ (6)
 $\overline{a} b c d$ (7)
 $\overline{a} b c d$ (9)
 $\overline{a} b c d$ (10)
 $\overline{a} b c d$ (11)
 $\overline{a} b c d$ (12)
 $\overline{a} b c d$ (13)
 $\overline{a} b c d$ (14)
 $\overline{a} b c d$ (15)



7^a

Tabla de verdad $\longrightarrow$ Función lógica

Entradas			Salidas
A _{2^a}	B _{2^a}	C _{2^a}	S
0	0	0	0
1	0	1	0
2	0	1	0
3	0	1	1
4	1	0	1
5	1	0	1
6	1	1	0
7	1	1	0

$$S = \bar{A}BC + A\bar{B}\bar{C} + A\bar{B}C$$

8^e

Table de verité $\rightarrow$ Fonction logique

Entrées			Sortie
A	B	C	S
0	0	0	0
1	0	1	0
2	0	1	0
3	0	1	1
4	1	0	0
5	1	0	1
6	1	1	1
7	1	1	1

$$S = \bar{A}BC + A\bar{B}C + AB\bar{C} + ABC$$

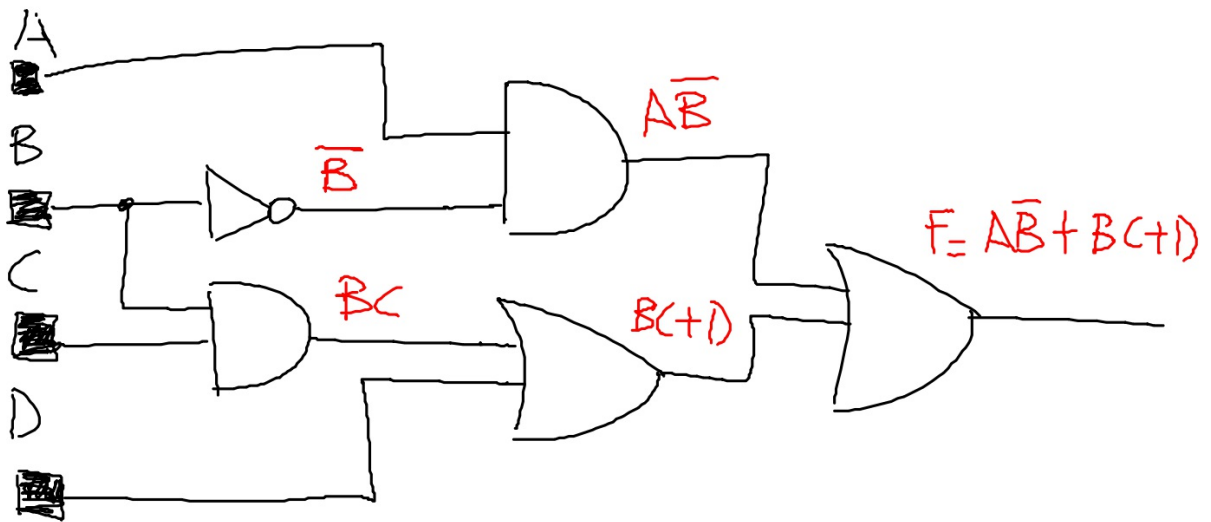
9^a

Table de verdad $\rightarrow$ Fonction logique

Entradas					Salidas
	A _{2³}	B _{2²}	C _{2¹}	D _{2⁰}	S
0	0	0	0	0	0
1	0	0	0	1	0
2	0	0	1	0	0
3	0	0	1	1	0
4	0	1	0	0	0
5	0	1	0	1	0
6	0	1	1	0	0
7	0	1	1	1	1
8	1	0	0	0	0
9	1	0	0	1	1
10	1	0	1	0	1
11	1	0	1	1	1
12	1	1	0	0	1
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	1

$$\begin{aligned}
 S = & \bar{A}BCD + A\bar{B}\bar{C}D + \\
 & + A\bar{B}C\bar{D} + A\bar{B}CD + AB\bar{C}\bar{D} + \\
 & + ABC\bar{D} + ABCD + ABCD
 \end{aligned}$$

$\Lambda 1^2$



Como pensar de :

BINARIO A DECIMAL

$$\begin{matrix} 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\ 1 & 0 & 1 & 1 & 0 \end{matrix}_2 = 22_{10}$$

DECIMAL A BINARIO

$$\begin{array}{r} 22 \div 2 \\ \hline 0 \leftarrow 11 \div 2 \\ \hline 1 \leftarrow 5 \div 2 \\ \hline 1 \leftarrow 2 \div 2 \\ \hline 0 \leftarrow 1 \end{array}$$

10110