Correction de l'exercice n°3 du TD1

$$\begin{split} S_a &= 0, 2, 3, 5, 6, 7, 8, 9, A, C, E, F \\ S_b &= 0, 1, 2, 3, 4, 7, 8, 9, A, D \\ S_c &= 0, 1, 3, 4, 5, 6, 7, 8, 9, A, B, D \\ S_d &= 0, 2, 3, 5, 6, 8, 9, B, C, D, E \\ S_e &= 0, 2, 6, 8, A, B, C, D, E, F \\ S_f &= 0, 4, 5, 6, 8, 9, A, B, C, E, F \\ S_g &= 2, 3, 4, 5, 6, 8, 9, A, B, D, E, F \end{split}$$

N	e_3	e_2	e_1	e_0	S_a	S_b	S_c	S_d	S_e	S_f	S_g
0	0	0	0	0	1	1	1	1	1	1	0
1	0	0	0	1	0	1	1	0	0	0	0
2	0	0	1	0	1	1	0	1	1	0	1
3	0	0	1	1	1	1	1	1	0	0	1
4	0	1	0	0	0	1	1	0	0	0	1
5	0	1	0	1	1	0	1	1	0	1	1
6	0	1	1	0	1	0	1	1	1	1	1
7	0	1	1	1	1	1	1	0	0	0	0
8	1	0	0	0	1	1	1	1	1	1	1
9	1	0	0	1	1	1	1	1	0	1	1
A	1	0	1	0	1	1	1	0	1	1	1
В	1	0	1	1	0	0	1	1	1	1	1
$^{\rm C}$	1	1	0	0	1	0	0	1	1	1	0
D	1	1	0	1	0	1	1	1	1	0	1
E	1	1	1	0	1	0	0	1	1	1	1
F	1	1	1	1	1	0	0	0	1	1	1

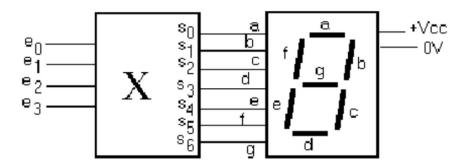


Figure 1: Circuit d'un afficheur 7 segments

$$\begin{array}{l} S_a = (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot e_0) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot e_0) (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline$$

$$S_b = (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot e_0) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot e_0) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot e_0) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_1}$$

$$S_c = (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot e_0) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot e_0) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_$$

$$S_d =$$

$$(\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot e_0) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot e_0) + (\overline{e_3} \cdot e_2 \cdot e_1 \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot e_0) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1}$$

$$S_e = (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot \overline{e_0}) + (\overline{e_3} \cdot e_2 \cdot e_1 \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot e_1 \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot e_1 \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_1} \cdot \overline{e_0} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_1} \cdot \overline{e_0} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_1} \cdot \overline{e_0}$$

$$S_f = (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot e_0) + (\overline{e_3} \cdot e_2 \cdot e_1 \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_$$

$$\begin{split} S_g &= (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot e_1 \cdot e_0) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot e_0) + (\overline{e_3} \cdot e_2 \cdot \overline{e_1} \cdot \overline{e_0}) + (\overline{e_3} \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_2} \cdot \overline{e_1} \cdot \overline{e_0}) + (e_3 \cdot \overline{e_1} \cdot \overline$$