

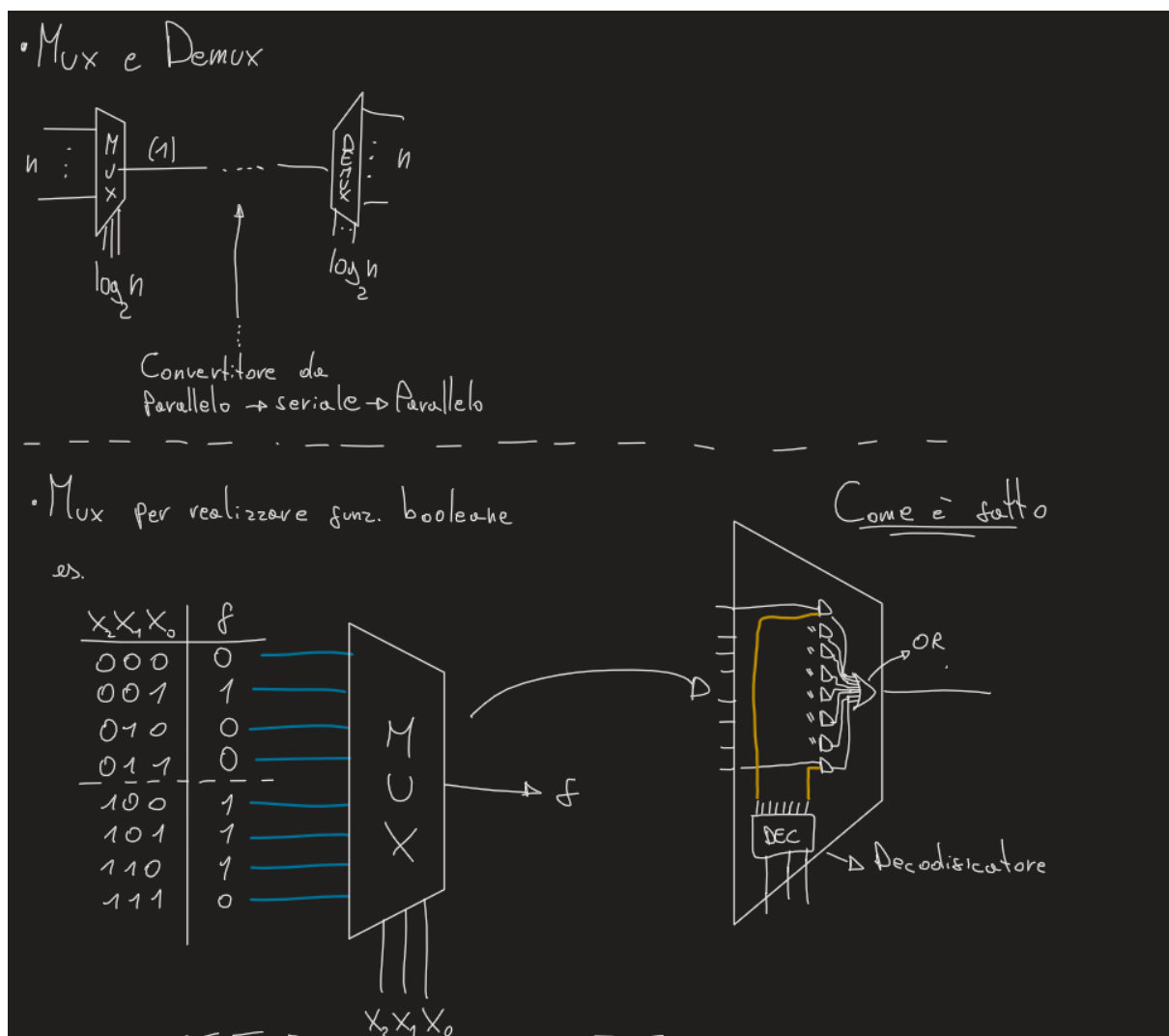
Lezione 11

Mux e Demux e decodificatore

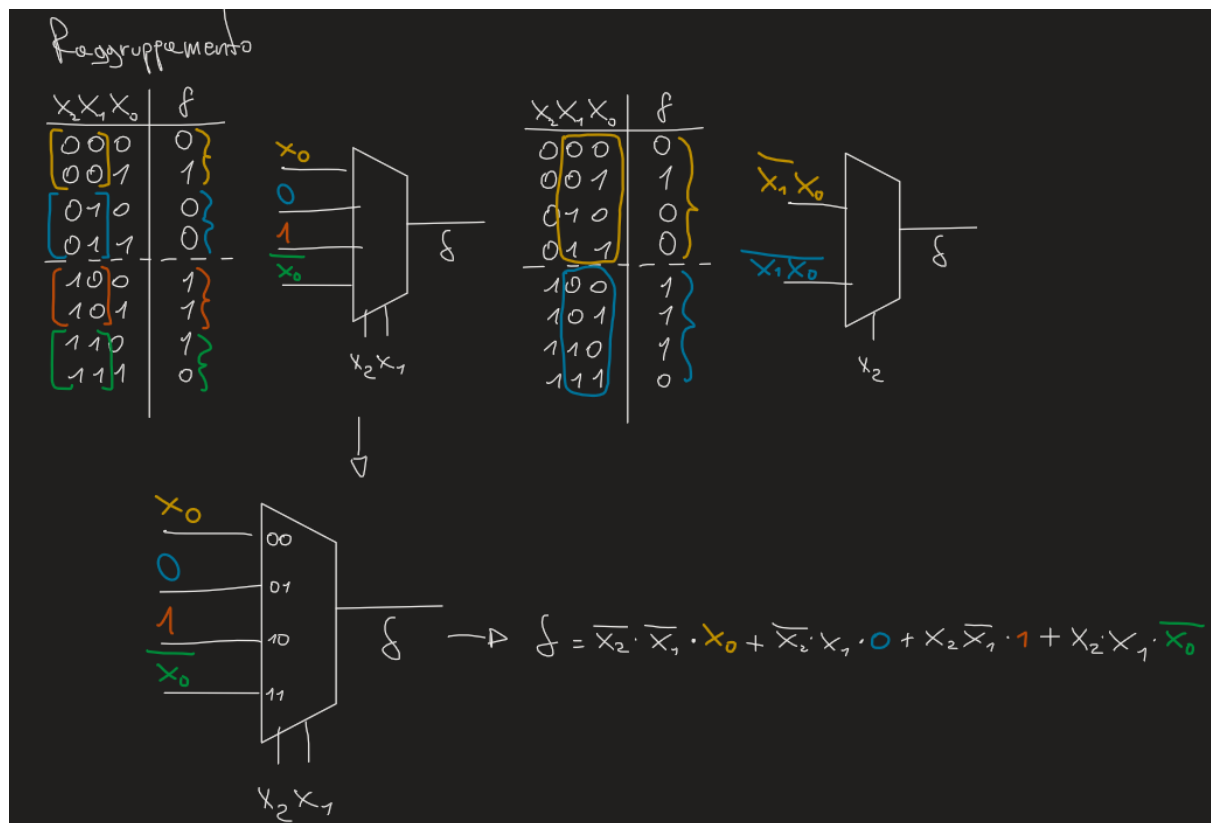
Raggruppamento nel mux/demux

Esercizi

Mux e Demux e decodificatore



Raggruppamento nel mux/demux

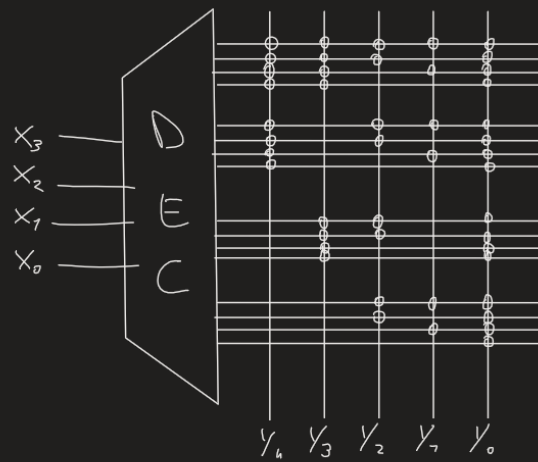


Esercizi

Esercizio

Sum. 4 var in ingresso in C_{a2} x che produce $Y = -2x - 1 \rightarrow$ Realiz. ROM, PLA, MUX

	x_3	x_2	x_1	x_0	Y	y_4	y_3	y_2	y_1	y_0
0	0	0	0	0	-1	1	1	1	1	1
1	0	0	0	1	-3	1	1	1	0	1
2	0	0	1	0	-5	1	1	0	1	1
3	0	0	1	1	-7	1	1	0	0	1
4	0	1	0	0	-9	1	0	1	1	1
5	0	1	0	1	-11	1	0	1	0	1
6	0	1	1	0	-13	1	0	0	1	1
7	0	1	1	1	-15	1	0	0	0	1
-8	1	0	0	0	15	0	1	1	1	1
-7	1	0	0	1	13	0	1	1	0	1
-6	1	0	1	0	11	0	1	0	1	1
-5	1	0	1	1	9	0	1	0	0	1
-4	1	1	0	0	7	0	0	1	1	1
-3	1	1	0	1	5	0	0	1	0	1
-2	1	1	1	0	3	0	0	0	1	1
-1	1	1	1	1	1	0	0	0	0	1



$$y_4 = \overline{x_3}$$

$$y_3 = \overline{x_2}$$

$$y_2 = \overline{x_1}$$

$$y_1 = \overline{x_0}$$

$$y_0 = 1$$

Es 6. Compito E → esame 10/11/2016

a	b	c	d	Z ₂	Z ₁	Z ₀
0	0	0	0	0	1	0
0	0	0	1	0	0	1
0	0	1	0	1	0	0
0	0	1	1	1	1	1
0	1	0	0	0	0	0
0	1	0	1	0	0	0
0	1	1	0	1	0	0
0	1	1	1	0	0	0
1	0	0	0	0	1	0
1	0	0	1	0	0	1
1	0	1	0	0	0	1
1	0	1	1	1	1	1
1	1	0	0	1	1	1
1	1	0	1	0	0	1
1	1	1	0	0	0	1
1	1	1	1	0	1	1

PLA
E
Mux
4-A-1

cd	00	01	11	10
ab	0	0	1	1
01	0	0	1	1
11	1	0	0	0
10	0	0	1	0

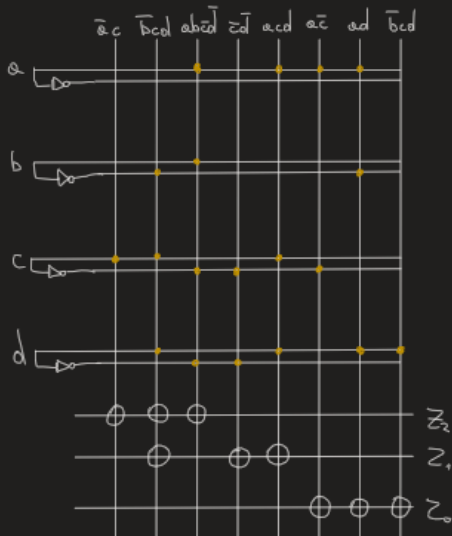
$$Z_2 = \bar{a}c + \bar{b}cd + ab\bar{c}\bar{d}$$

cd	00	01	11	10
ab	1	0	1	0
01	1	0	1	0
11	1	0	1	0
10	1	0	1	0

$$Z_1 = \bar{c}\bar{d} + \bar{b}cd + acd$$

cd	00	01	11	10
ab	0	1	1	0
01	0	0	0	0
11	1	1	1	0
10	1	1	1	0

$$Z_0 = a\bar{c} + ad + \bar{b}d$$



a	b	c	d	Z ₂	Z ₁	Z ₀
0	0	0	0	0	1	0
0	0	0	1	0	0	1
0	0	1	0	1	0	0
0	0	1	1	1	1	1
0	1	0	0	0	0	0
0	1	0	1	0	0	0
0	1	1	0	1	0	0
0	1	1	1	0	0	0
1	0	0	0	0	1	0
1	0	0	1	0	0	1
1	0	1	0	0	0	1
1	0	1	1	1	1	1
1	1	0	0	1	1	1
1	1	0	1	0	0	1
1	1	1	0	0	0	1
1	1	1	1	0	1	1

a	b	c	d	Z ₂	Z ₁	Z ₀
0	0	0	0	0	1	0
0	0	0	1	0	0	1
0	0	1	0	1	0	0
0	0	1	1	1	1	1
0	1	0	0	0	0	0
0	1	0	1	0	0	0
0	1	1	0	1	0	0
0	1	1	1	0	0	0
1	0	0	0	0	1	0
1	0	0	1	0	0	1
1	0	1	0	0	0	1
1	0	1	1	1	1	1
1	1	0	0	1	1	1
1	1	0	1	0	0	1
1	1	1	0	0	0	1
1	1	1	1	0	1	1

