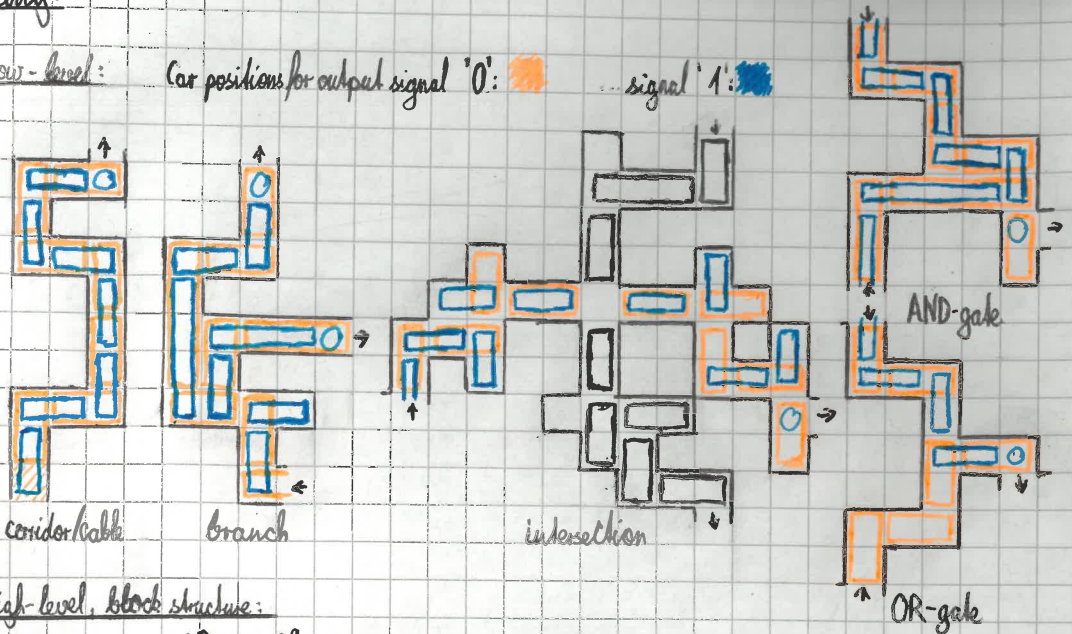
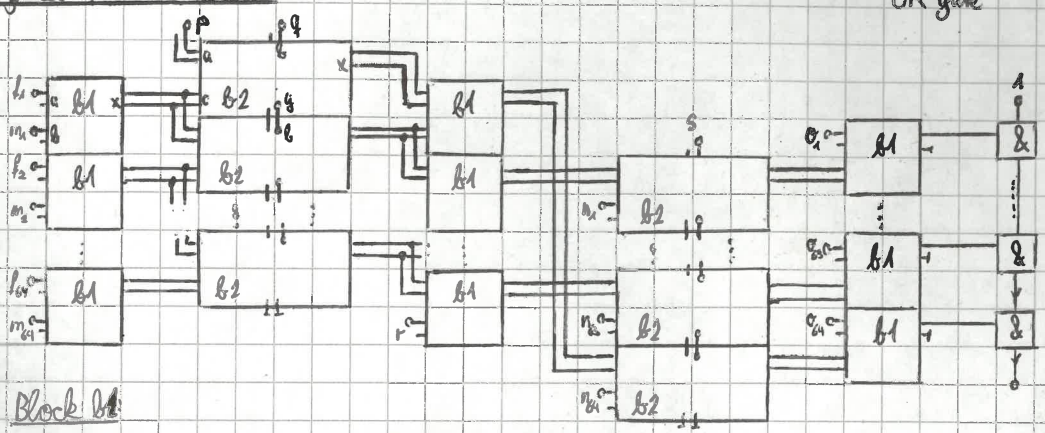
Parking:

low-level: Car positions for output signal '0': signal '1':



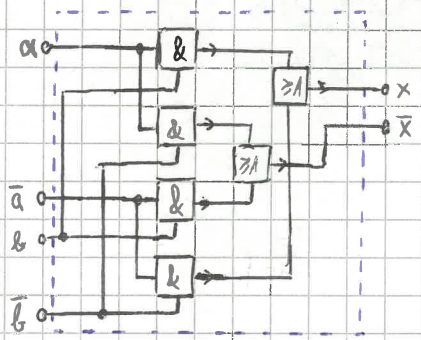
high-level, block structure:



- Block b1:

Inputs: a, b

Output: x



$x = (a \wedge b) \vee (\bar{a} \wedge \bar{b}) = a \Leftrightarrow b$

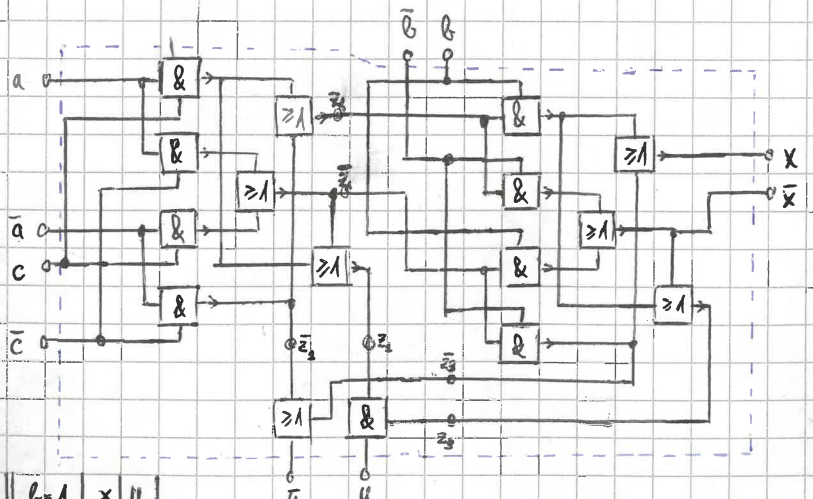
$\bar{x} = (\bar{a} \wedge b) \vee (a \wedge \bar{b}) = a \Leftrightarrow b$

x	b	$\bar{b}$
a	1	0
$\bar{a}$	0	1

- Block b2:

Inputs: a, b, c

Outputs: x, y



a	c	b=0	x	y	b=1	x	y
0	0		0	0		1	0
0	1		1	0		0	1
1	0		1	0		0	1
1	1		0	1		1	1

$z_1 = a \Leftrightarrow c$ $z_2 = a \vee c$

$z_3 = z_1 \vee b$ $x = z_1 \Leftrightarrow b$

$y = z_2 \wedge z_3$