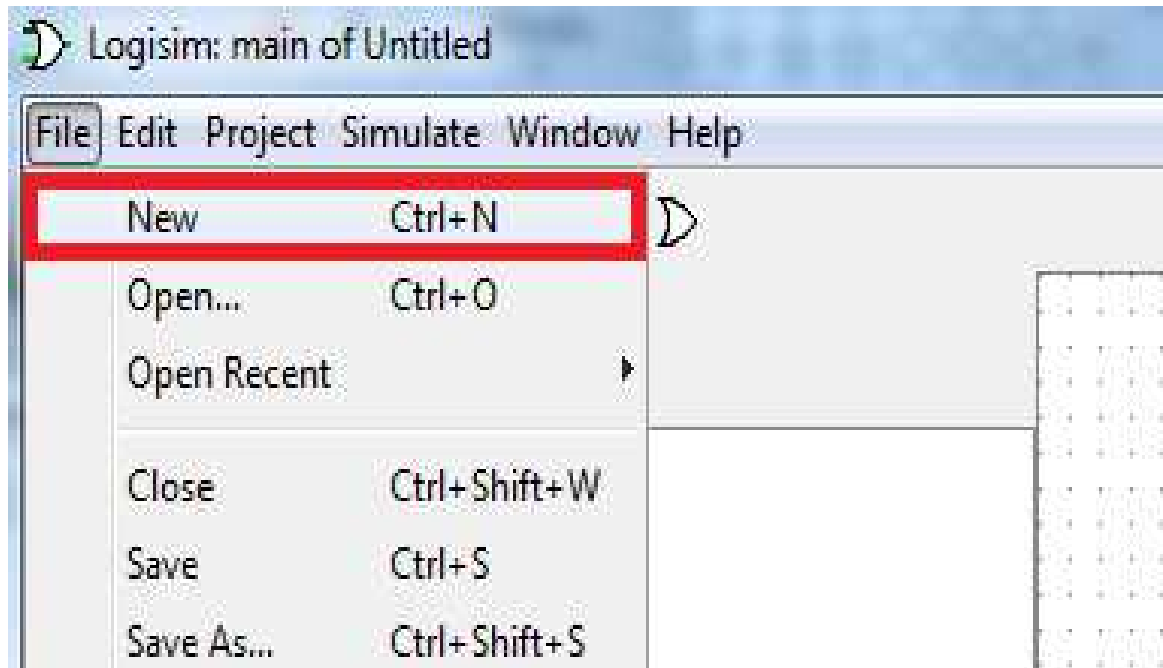
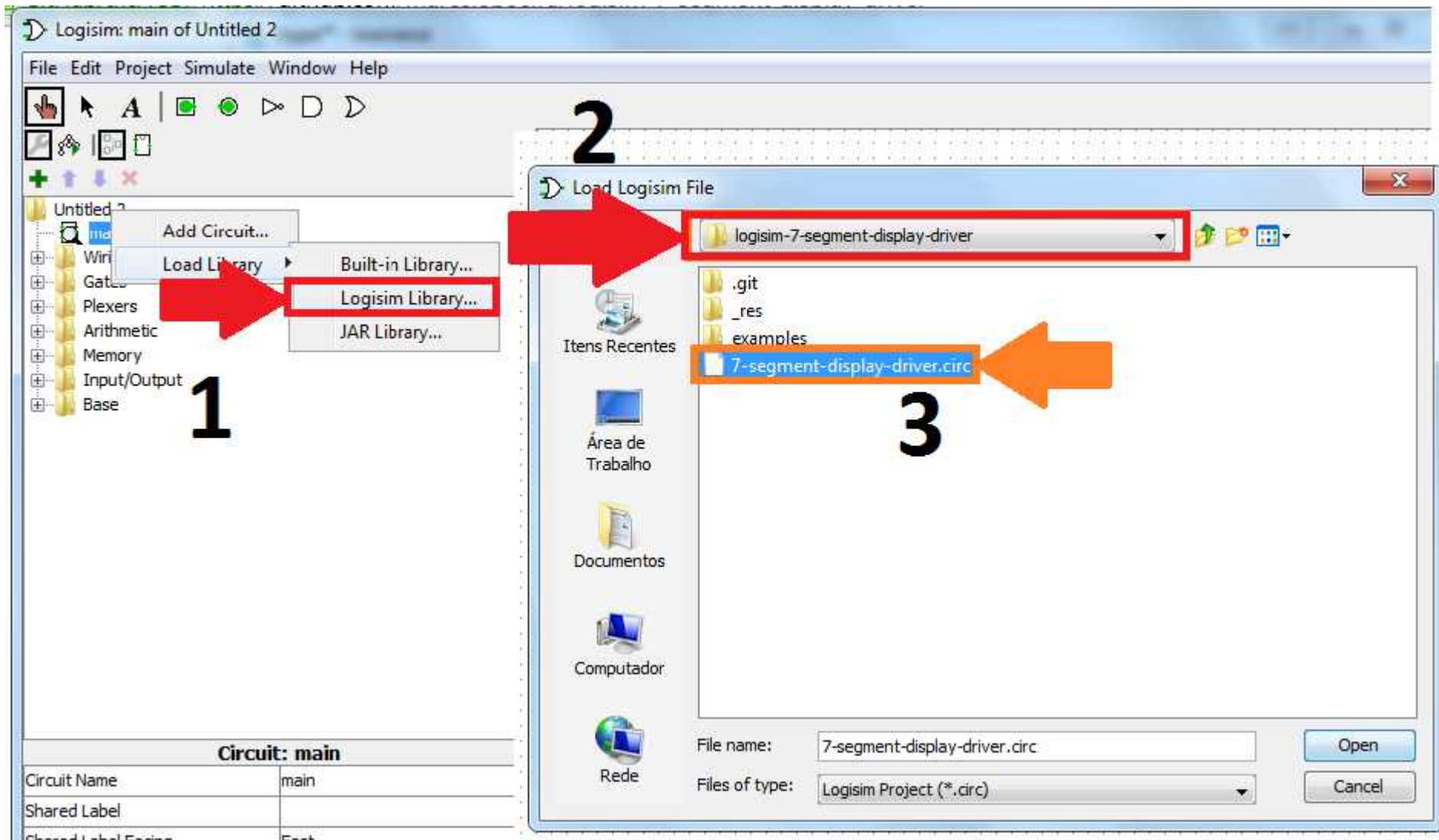


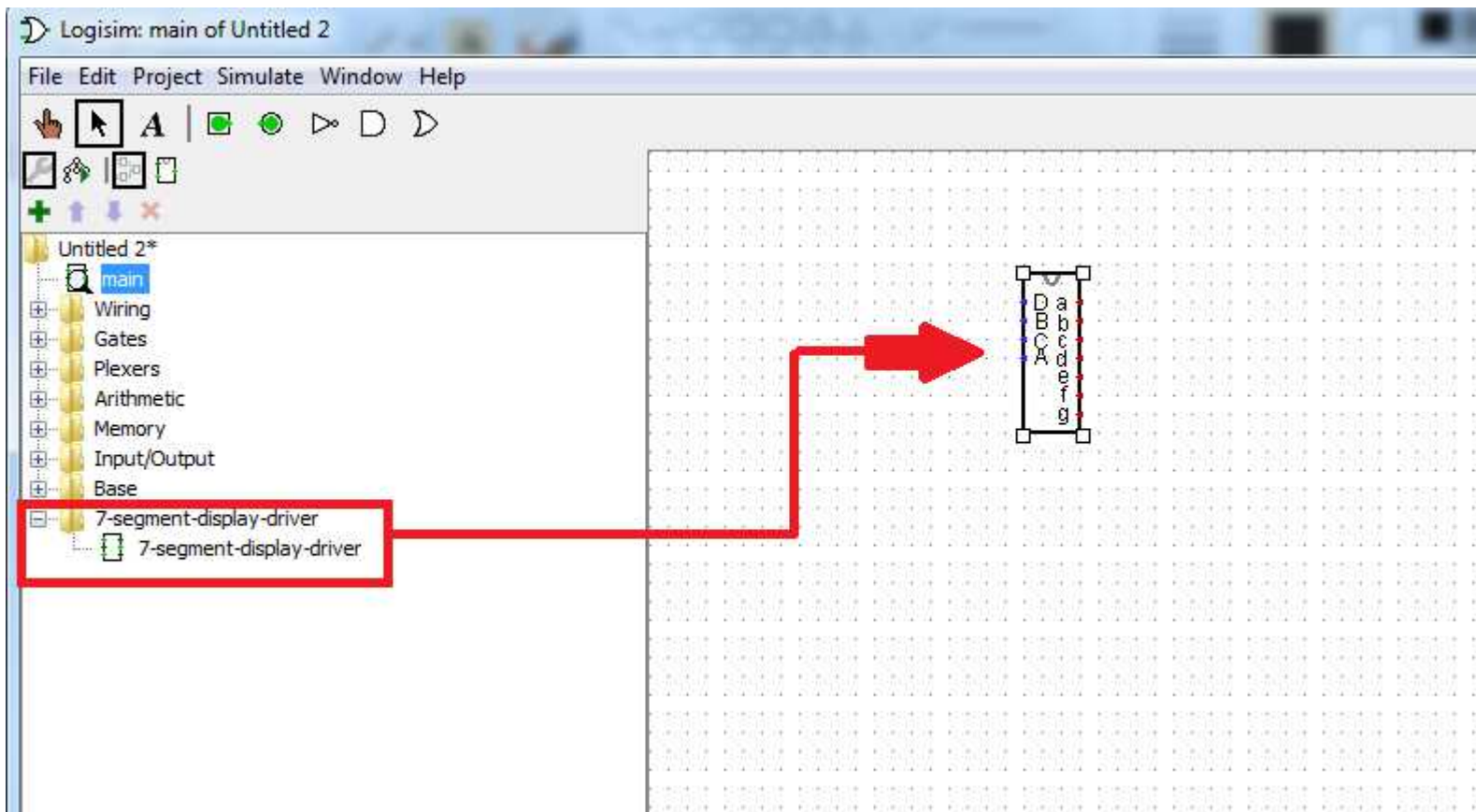
7-segment driver



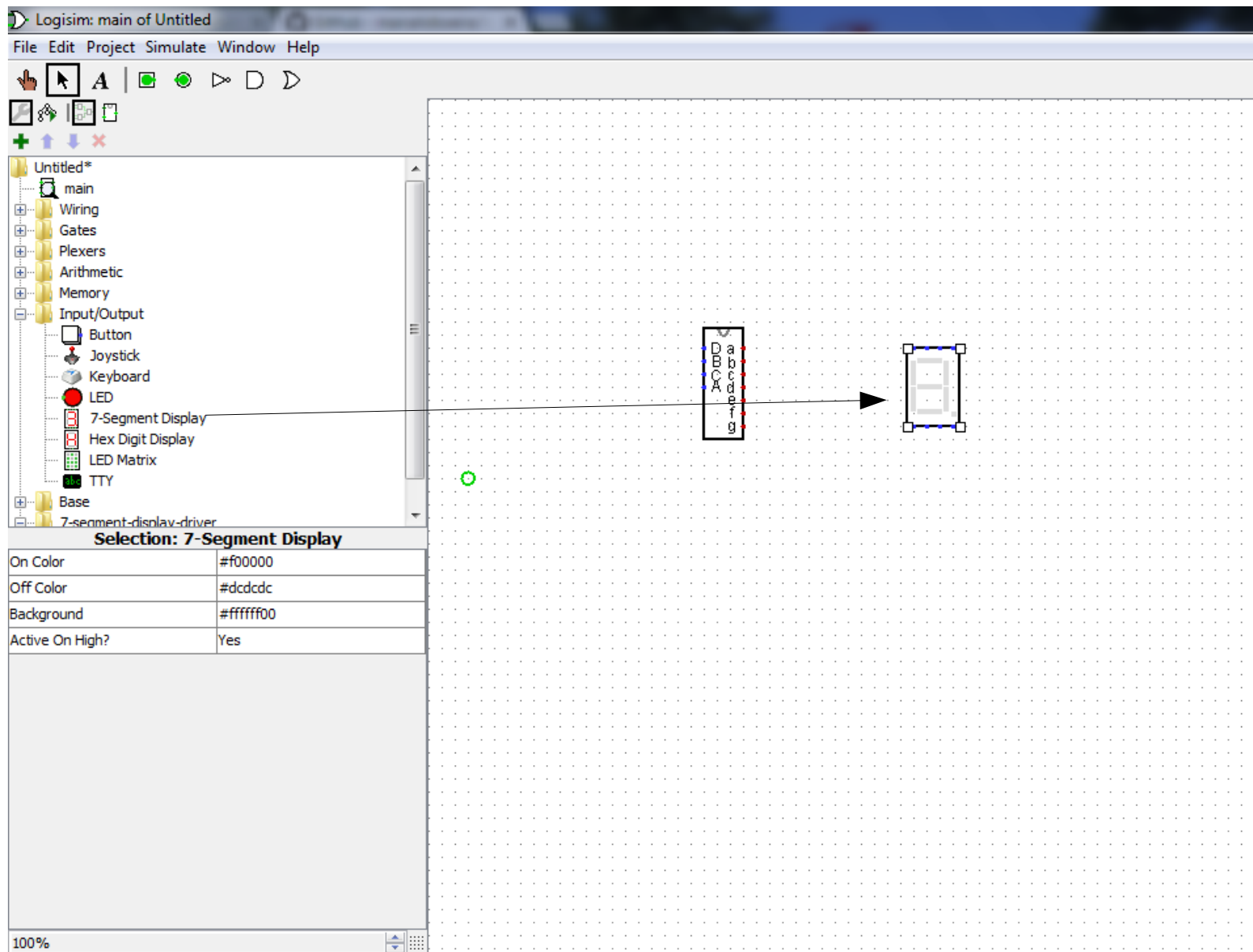
7-segment driver



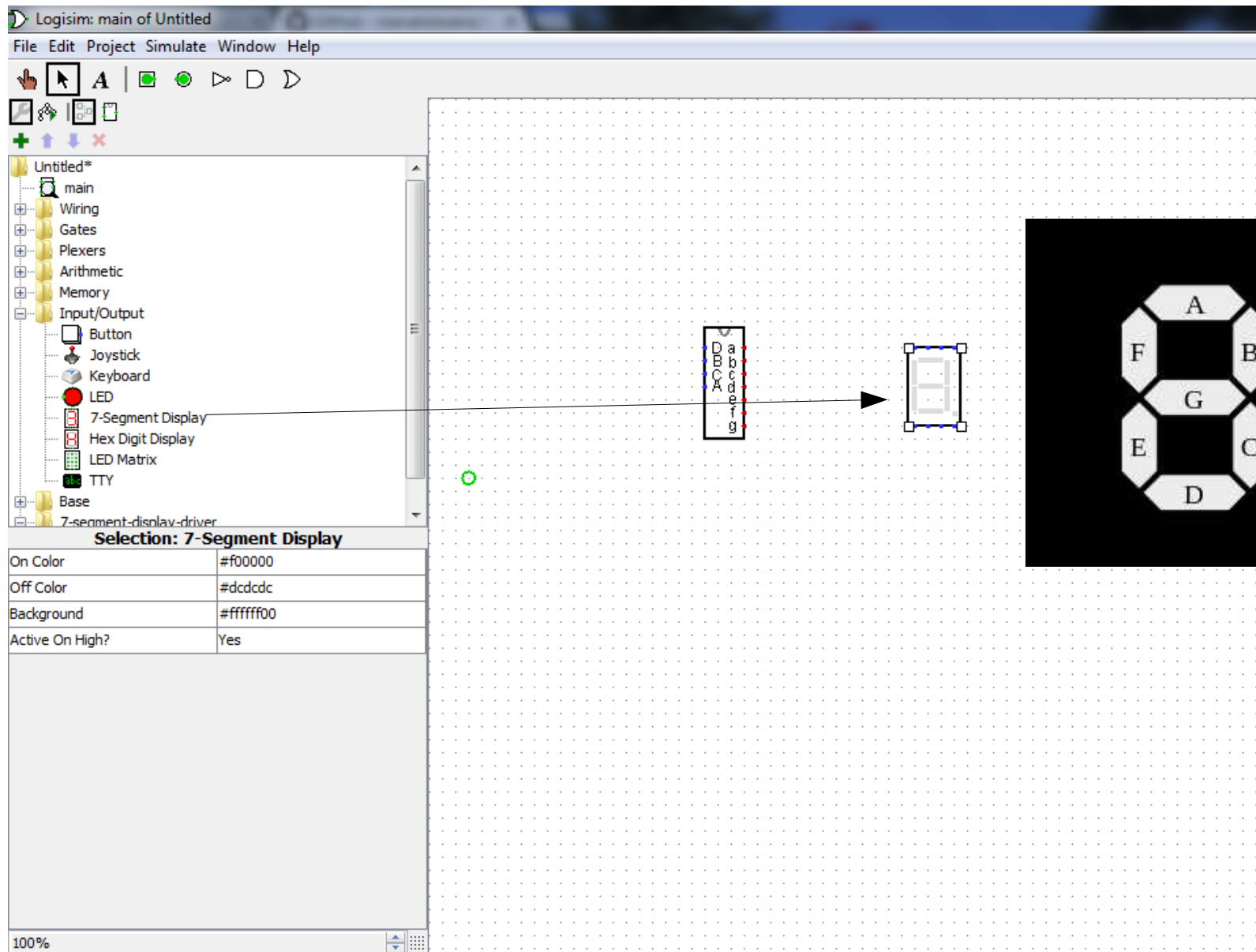
7-segment driver



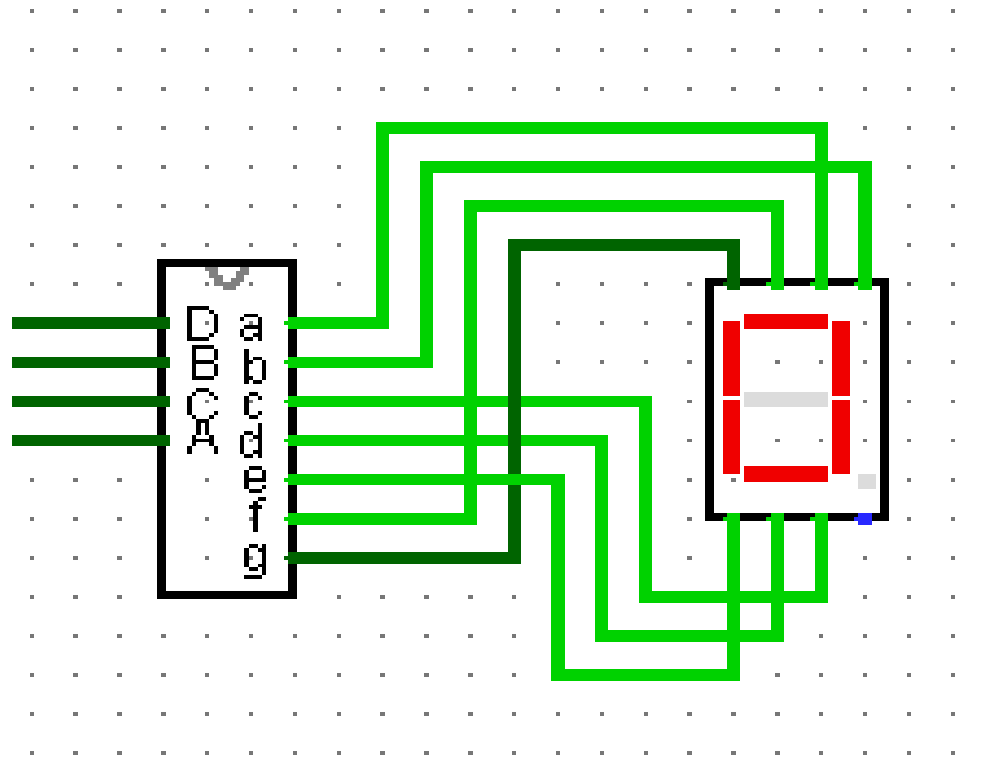
7-segment driver



7-segment driver



7-segment driver



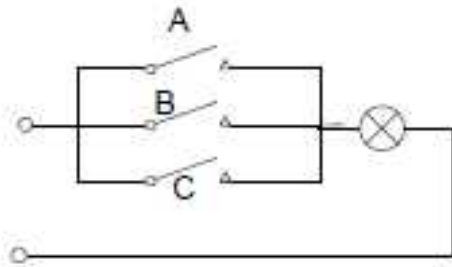
Example folder

<https://github.com/marceloboeira/logisim-7-segment-display-driver>

7-segment driver

Hex	D	C	B	A		a	b	c	d	e	f	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	1	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	0	0	1	1
A	1	0	1	0		1	1	1	0	1	1	1
B	1	0	1	1		0	0	1	1	1	1	1
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

1 Realizovati logicku šemu kojom može da se pali sijalica sa tri različita mesta nezavisno

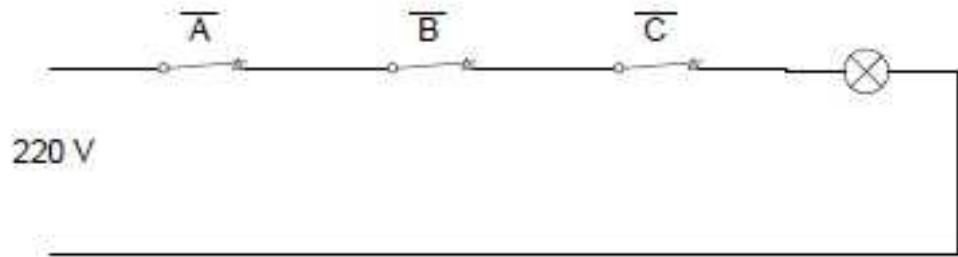


A	B	C	Y
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	1

		AB			
		00	01	11	10
C	0	0	1	1	1
	1	1	1	1	1

2 Realizovati logicku šemu za gašenje sijalice sa tri različita mesta nezavisno

<u>A</u>	<u>B</u>	<u>$\bar{C}$</u>	<u>Y</u>
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0



3

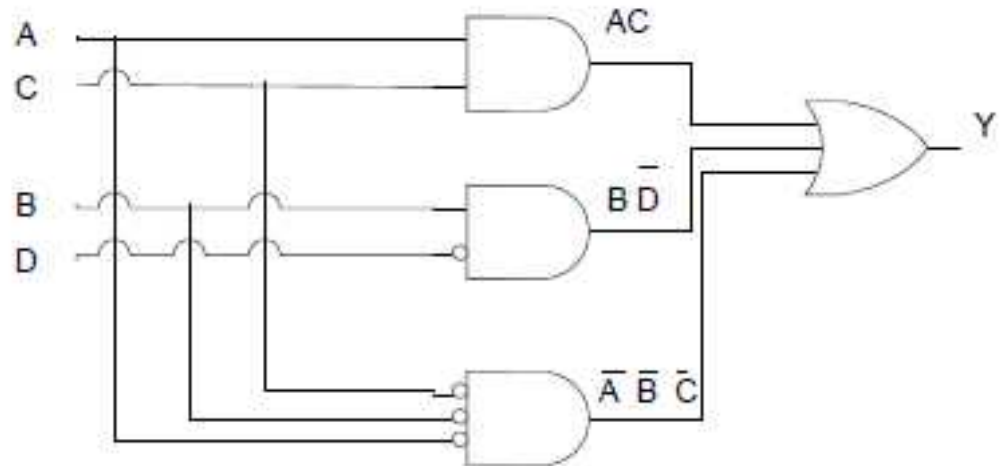
$Y = f(A.B.C.D)$ ima skup decimalnih indeksa
(0,1,4,6,10,11,12,14,15).

a) minimizirati f-ju

b) realizovati f-ju pomocu logickih kola I, ILI, NE

AB \ CD	00	01	11	10
00	1	1	1	0
01	1	0	0	0
11	0	0	1	1
10	0	1	1	1

$$Y = AC + \overline{A}\overline{B}\overline{C} + B\overline{D}$$

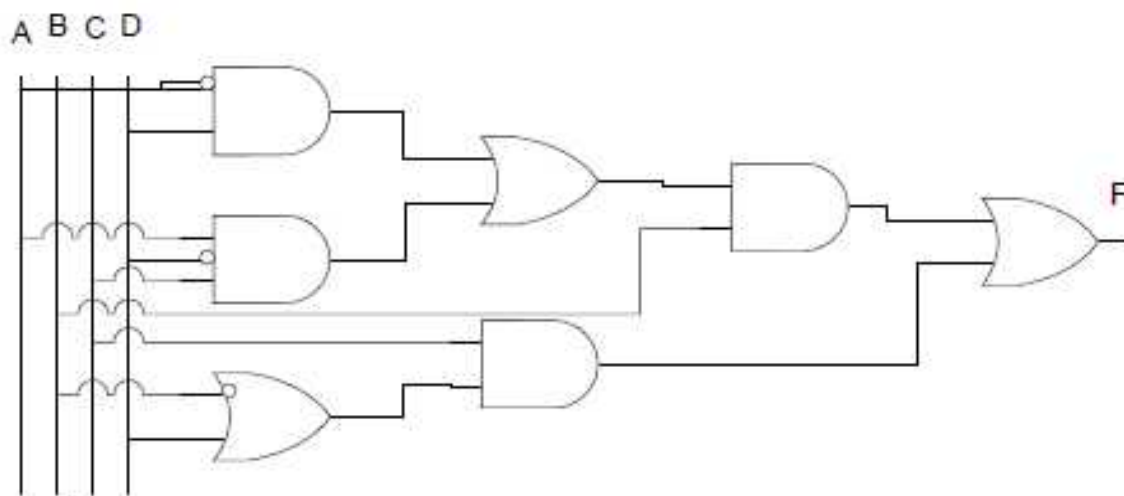


4

Naci minimalnu DF f-je

$F(A,B,C,D) = (0,1,5,7,8,9,13,14)$ i realizovati logičku mrežu sa elementarnim logičkim kolima

AB \ CD	00	01	11	10
00	1	0	0	1
01	1	1	1	1
11	0	1	0	0
10	0	0	1	0



$$F = \overline{C}D + \overline{B}C + \overline{A}BD + ABC\overline{D}$$

$$F = \overline{C}(D + \overline{B}) + B(\overline{A}D + AC\overline{D})$$

5

Data je f-ja $F(A,B,C,D) = (0,1,3,7,8,9,10,11,14,15)$.

Koristeći Karnoov dijagram odrediti:

- a) **MDNF** b) **MKNF** c) realizovati prekidačku mrežu sa **I, ILI i NE** kolima

CD \ AB	00	01	11	10
00	1	0	0	1
01	1	0	0	1
11	1	1	1	1
10	0	0	1	1

a) $F = \overline{B}\overline{C} + CD + AC = \overline{B}\overline{C} + C(A+D)$

b) $F = (\overline{B} + C) (A + \overline{C} + D)$

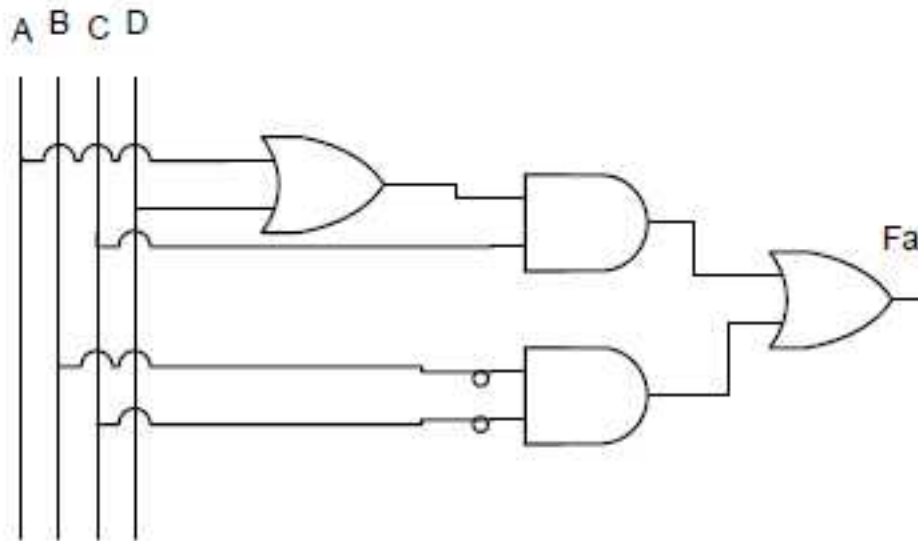
5

Data je f-ja $F(A,B,C,D) = (0,1,3,7,8,9,10,11,14,15)$.

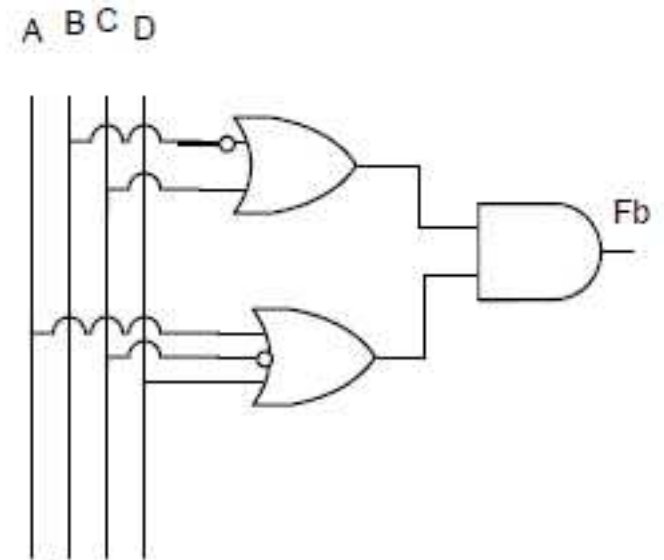
Koristeći Karnoov dijagram odrediti:

- a) **MDNF** b) **MKNF** c) realizovati prekidačku mrežu sa **I**, **ILI** i **NE** kolima

c)



C.a)



C.b)