AVALIAÇÃO INDIVIDUAL

Lucas Azevedo Dias

1. Primeira questão:
   a. Resposta:

A	B	C	D	LED A	LED B	LED C	LED D	LED E	LED F	LED G
0	0	0	0	1	1	1	1	1	1	0
0	0	0	1	0	1	1	0	0	0	0
0	0	1	0	1	1	0	1	1	0	1
0	0	1	1	1	1	1	1	0	0	1
0	1	0	0	0	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1	1	1	1
0	1	1	1	1	1	1	0	0	0	0
1	0	0	0	1	1	1	1	1	1	1
1	0	0	1	1	1	1	1	0	1	1
1	0	1	0	1	1	1	0	1	1	1
1	0	1	1	0	0	1	1	1	1	1
1	1	0	0	1	0	0	1	1	1	0
1	1	0	1	0	1	1	1	1	0	1
1	1	1	0	1	0	0	1	1	1	1
1	1	1	1	1	0	0	0	1	1	1

*Obs.: Está resolvido também através do programa em https://replit.com/@FunNyLuAz/Trabalho-8-Mapas-de-Karnaugh.

   b. Resposta:
   - LED A

$_{AB}{}^{CD}$	00	01	11	10
00	1		1	1
01		1	1	1
11	1		1	1
10	1	1		1

$$A'B'D' + A'C + A'BD + BC + AD' + AB'C'$$
$$\therefore A' \cdot (B'D' + C + BD) + BC + AD' + AB'C'$$

   - LED B

$_{AB}{}^{CD}$	00	01	11	10
00	1	1	1	1
01	1		1	
11		1		
10	1	1		1

$$B'C' + A'B'C' + AC'D + A'C'D' + A'CD + A'B'C + AB'D'$$
$$B'C' \cdot (1 + A') + AC'D + A'C'D' + A'CD + A'B'C + AB'D'$$
$$\therefore B'C' + AC'D + A' \cdot (C'D' + CD) + B' \cdot (A'C + AD')$$

- LED C

$_{AB}^{CD}$	00	01	11	10
00	1	1	1	
01	1	1	1	1
11		1		
10	1	1	1	1

$$A'C' + A'D + A'BC + B'C' + AB'C + BC'D$$
$$\therefore A' \cdot (C' + D + BC) + B' \cdot (C' + AC) + BC'D$$

- LED D

$_{AB}^{CD}$	00	01	11	10
00	1		1	1
01		1		1
11	1	1		1
10	1	1	1	

$$AC' + A'B'D' + BCD' + BC'D + B'CD$$
$$\therefore AC' + D' \cdot (A'B' + BC) + D \cdot (BC' + B'C)$$

- LED E

$_{AB}^{CD}$	00	01	11	10
00	1			1
01				1
11	1	1	1	1
10	1		1	1

$$AC + ABC' + A'CD' + B'C'D'$$
$$\therefore A \cdot (C + BC') + D' \cdot (A'C + B'C')$$

- LED F

$_{AB}^{CD}$	00	01	11	10
00	1			
01	1	1		1
11	1		1	1
10	1	1	1	1

$$AC + AB'C' + A'C'D' + BC'D' + A'BC' + A'BD'$$
$$\therefore A \cdot (C + B'C') + C'D' \cdot (A' + B) + A'B \cdot (C' + D')$$

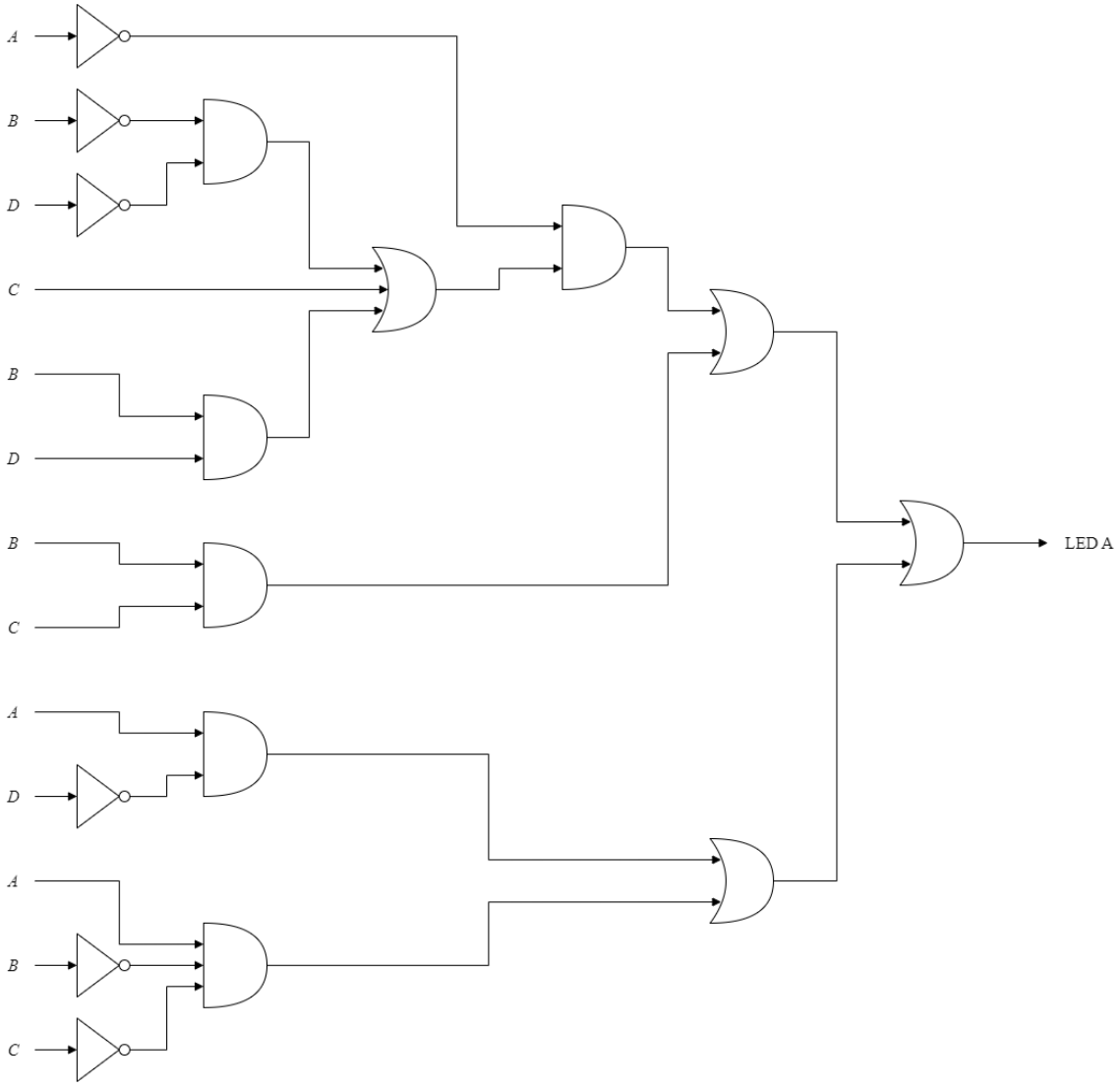
- LED G

$_{AB}^{CD}$	00	01	11	10
00			1	1
01	1	1		1
11		1	1	1
10	1	1	1	1

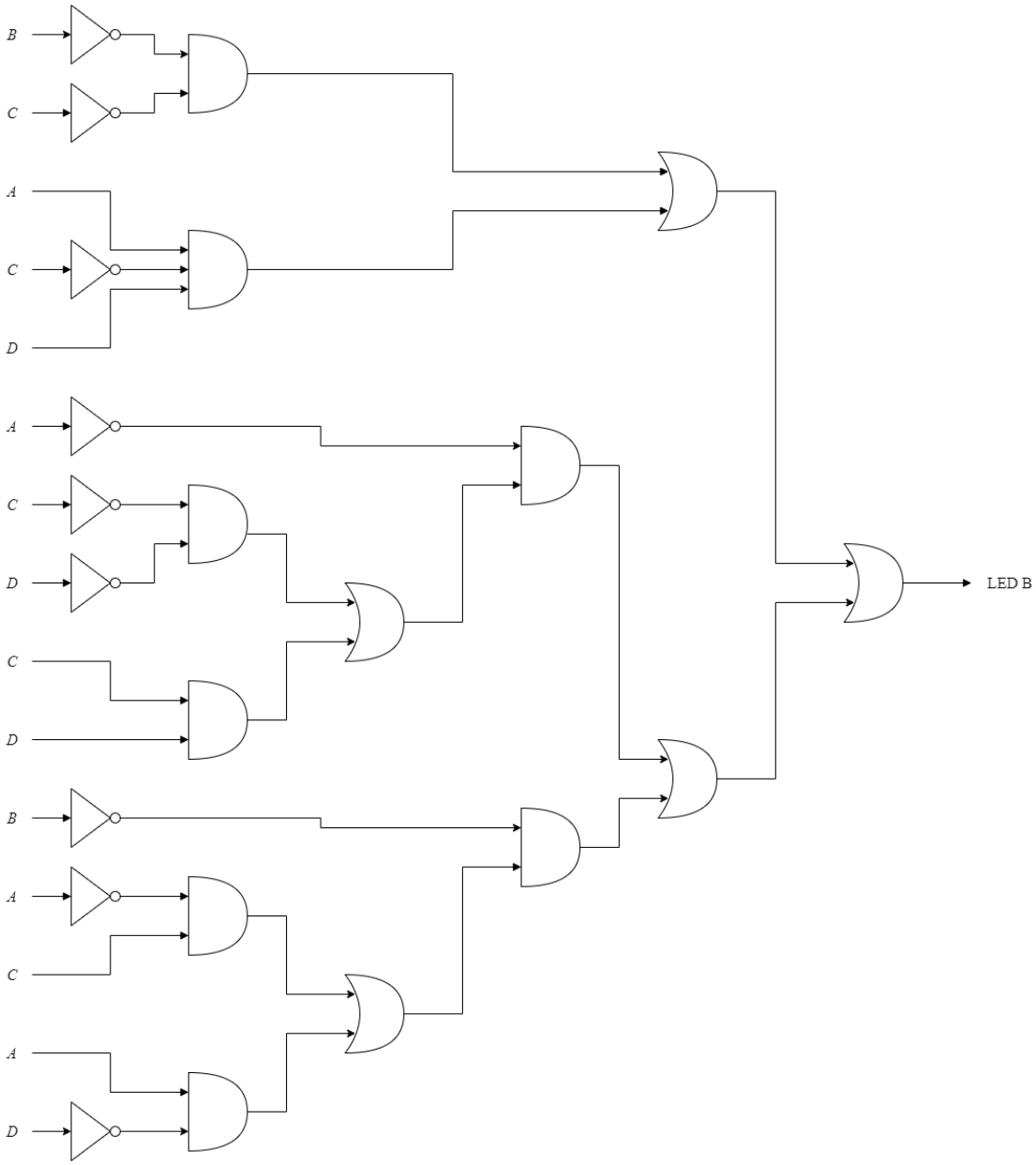
$$AC + AD + AB'C' + A'B'C + A'BD' + A'BC' + BC'D$$
$$\therefore A \cdot (C + D + B'C') + A' \cdot (B'C + BD') + BC' \cdot (A' + D)$$

c. Resposta:

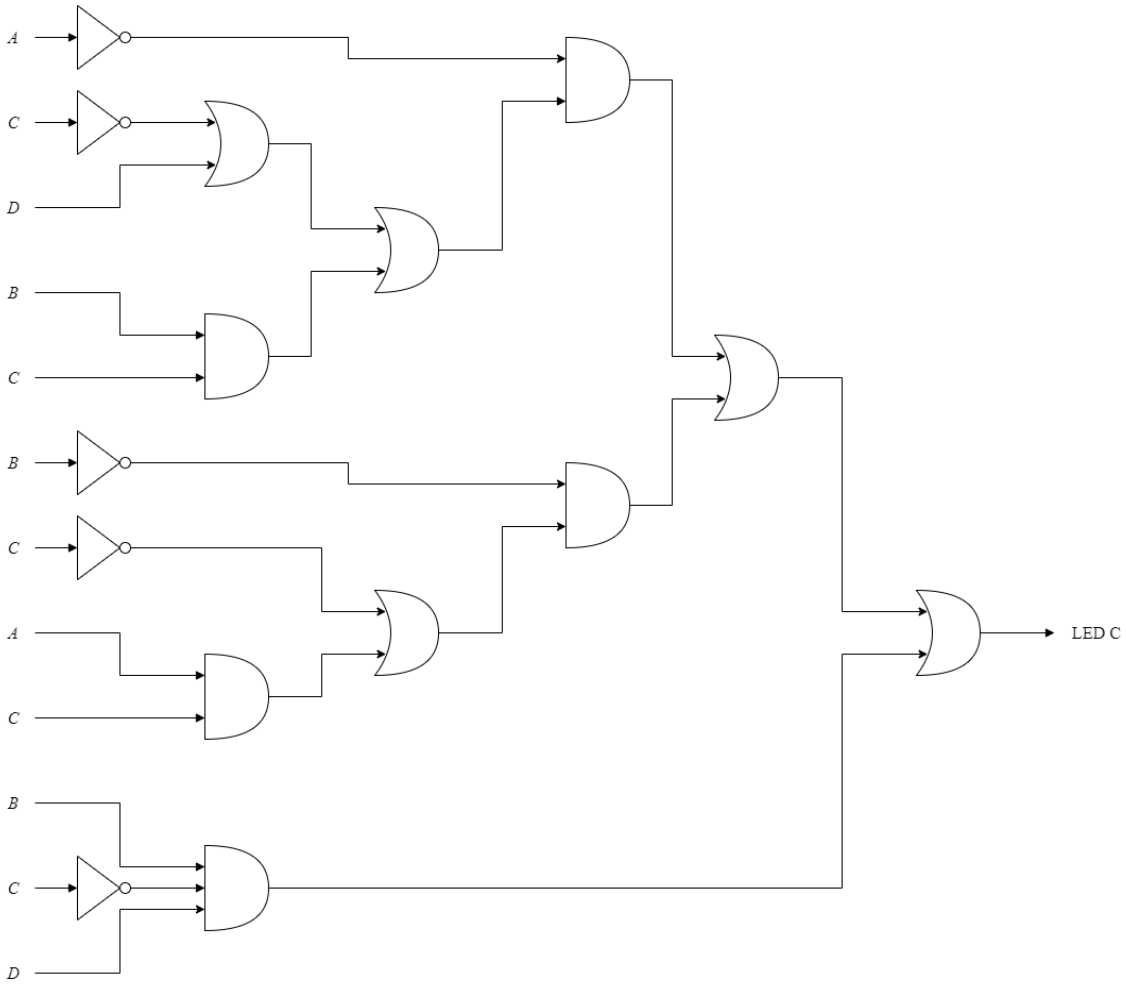
- LED A



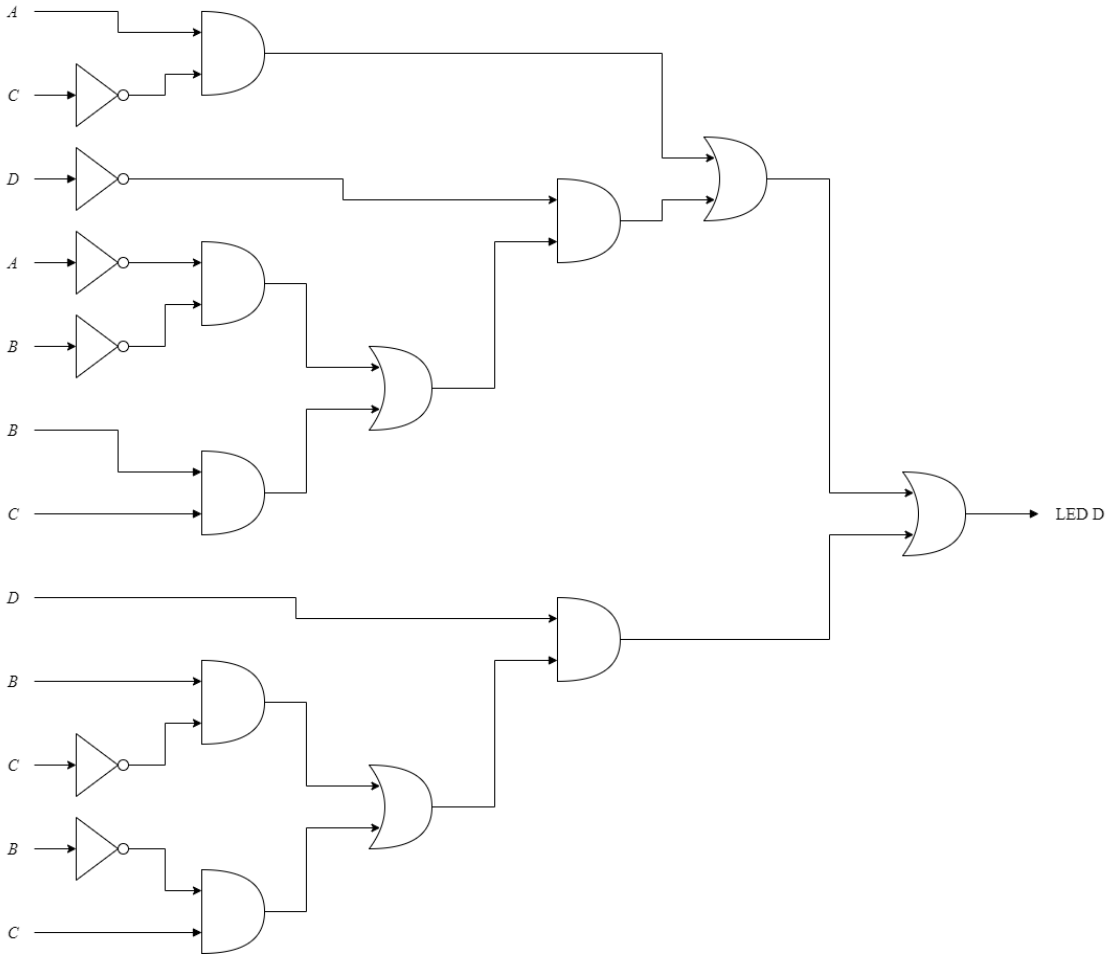
- LED B



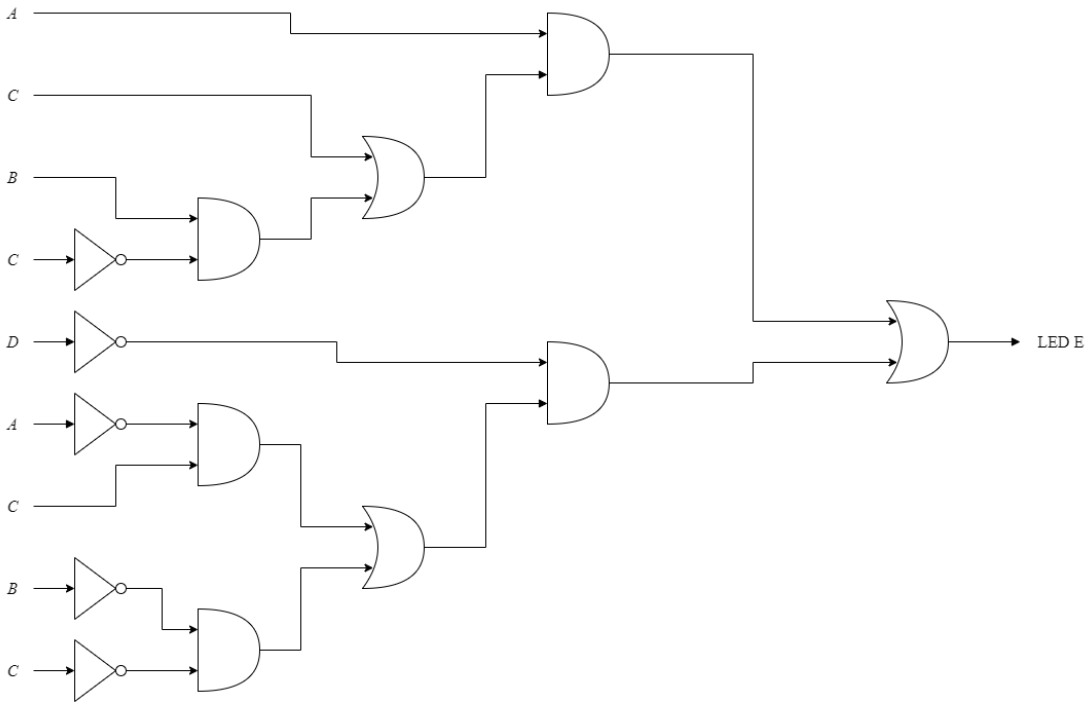
- LED C



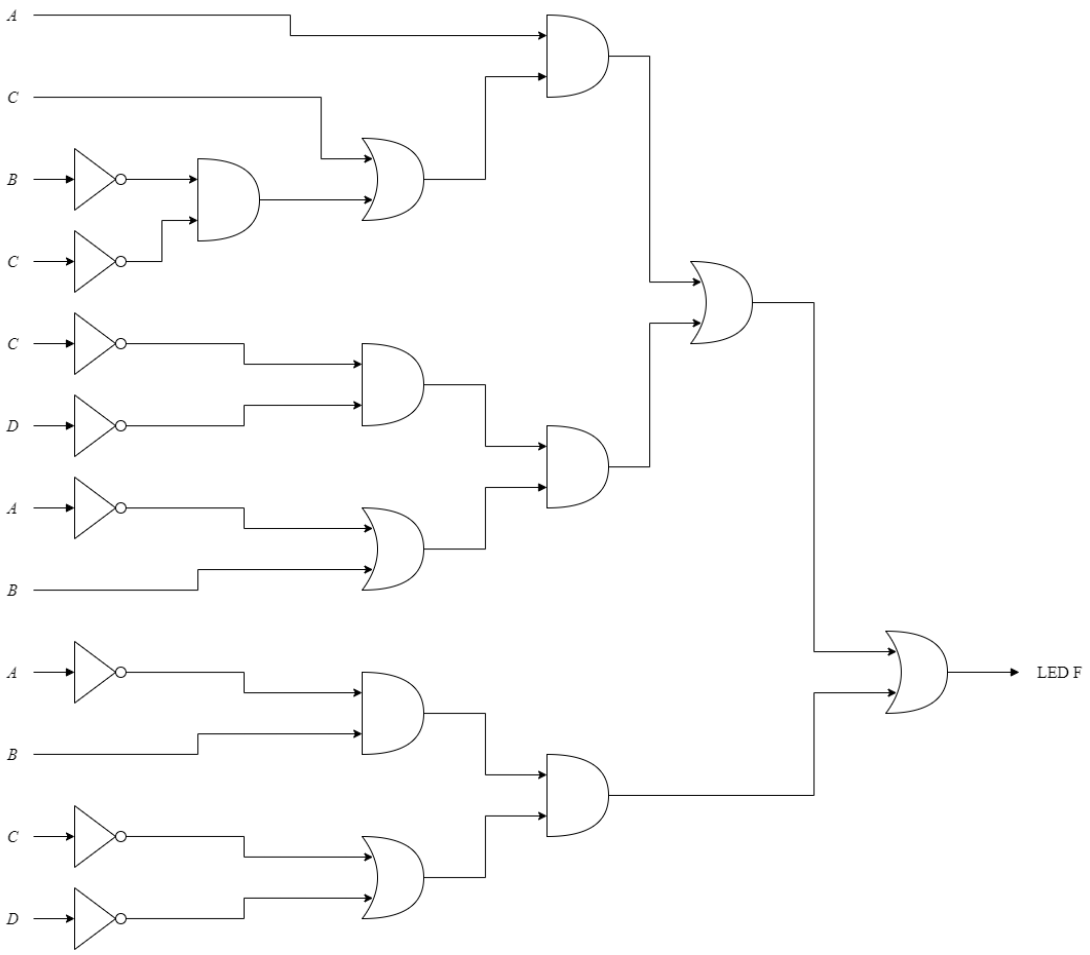
- LED D



- LED E



- LED F



- LED G