

Nombre: José Alejandro Rodríguez Porras 19131

Laboratorio#3

Ejercicio 1

Nombre: José Alejandro Rodríguez Porras Carnet: 19131	30 / 07 / 2020
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Laboratorio #3											
Ejercicio #1											
Tabla 1						Tabla 2					
A	B	C	Y ₁	minterm	maxterm	Y ₂					
0	0	0	1	$\bar{A}\bar{B}\bar{C}$	$A+B+C$	0	m_0	M_0			
0	0	1	0	$\bar{A}\bar{B}C$	$A+B+\bar{C}$	1	m_1	M_1			
0	1	0	1	$\bar{A}B\bar{C}$	$A+\bar{B}+C$	0	m_2	M_2			
0	1	1	0	$\bar{A}BC$	$A+\bar{B}+\bar{C}$	0	m_3	M_3			
1	0	0	1	$A\bar{B}\bar{C}$	$\bar{A}+B+C$	0	m_4	M_4			
1	0	1	1	$A\bar{B}C$	$\bar{A}+B+\bar{C}$	0	m_5	M_5			
1	1	0	0	$AB\bar{C}$	$A+\bar{B}+C$	1	m_6	M_6			
1	1	1	1	ABC	$A+\bar{B}+\bar{C}$	1	m_7	M_7			

Tabla 1:	SOP:	$\bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + \bar{A}B\bar{C} + A\bar{B}\bar{C} + ABC$
	POS:	$(A+B+\bar{C}) \cdot (A+\bar{B}+\bar{C}) \cdot (\bar{A}+\bar{B}+C)$

Tabla 2:	SOP:	$\bar{A}\bar{B}C + A\bar{B}\bar{C} + ABC$
	POS:	$(A+B+C) \cdot (A+\bar{B}+C) \cdot (A+\bar{B}+\bar{C}) \cdot (\bar{A}+B+C) \cdot (\bar{A}+B+\bar{C})$

Tabla 3

Tabla 4

A	B	C	D	minterm	maxterm	Y_3	M_3	Y_4	M_4
0	0	0	0	$\bar{A}\bar{B}\bar{C}\bar{D}$	$A+B+C+D$	1	m_0	1	m_0
0	0	0	1	$\bar{A}\bar{B}\bar{C}D$	$A+B+C+\bar{D}$	1	m_1	0	m_1
0	0	1	0	$\bar{A}\bar{B}C\bar{D}$	$A+B+\bar{C}+D$	1	m_2	1	m_2
0	0	1	1	$\bar{A}\bar{B}CD$	$A+B+\bar{C}+\bar{D}$	1	m_3	1	m_3
0	1	0	0	$\bar{A}B\bar{C}\bar{D}$	$A+\bar{B}+C+D$	0	m_4	0	m_4
0	1	0	1	$\bar{A}B\bar{C}D$	$A+\bar{B}+C+\bar{D}$	0	m_5	0	m_5
0	1	1	0	$\bar{A}BC\bar{D}$	$A+\bar{B}+\bar{C}+D$	0	m_6	1	m_6
0	1	1	1	$\bar{A}BCD$	$A+\bar{B}+\bar{C}+\bar{D}$	0	m_7	1	m_7
1	0	0	0	$A\bar{B}\bar{C}\bar{D}$	$\bar{A}+B+C+D$	1	m_8	1	m_8
1	0	0	1	$A\bar{B}\bar{C}D$	$\bar{A}+B+C+\bar{D}$	0	m_9	0	m_9
1	0	1	0	$A\bar{B}C\bar{D}$	$\bar{A}+B+\bar{C}+D$	1	m_{10}	1	m_{10}
1	0	1	1	$A\bar{B}CD$	$\bar{A}+B+\bar{C}+\bar{D}$	0	m_{11}	0	m_{11}
1	1	0	0	$AB\bar{C}\bar{D}$	$\bar{A}+\bar{B}+C+D$	0	m_{12}	0	m_{12}
1	1	0	1	$AB\bar{C}D$	$\bar{A}+\bar{B}+C+\bar{D}$	0	m_{13}	0	m_{13}
1	1	1	0	$ABC\bar{D}$	$\bar{A}+\bar{B}+\bar{C}+D$	1	m_{14}	0	m_{14}
1	1	1	1	$ABCD$	$\bar{A}+\bar{B}+\bar{C}+\bar{D}$	0	m_{15}	0	m_{15}

Tabla 3:

SOP: $\bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}\bar{C}D + \bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}CD + A\bar{B}\bar{C}\bar{D} + A\bar{B}C\bar{D} + ABC\bar{D}$

POS: $(A+B+C+D) \cdot (A+B+C+\bar{D}) \cdot (A+B+\bar{C}+D) \cdot (A+B+\bar{C}+\bar{D}) \cdot (\bar{A}+B+C+D) \cdot$

$(\bar{A}+B+\bar{C}+D) \cdot (\bar{A}+\bar{B}+C+D) \cdot (\bar{A}+\bar{B}+\bar{C}+D) \cdot (\bar{A}+\bar{B}+\bar{C}+\bar{D})$

Tabla 4:
SOP: $\bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}CD + \bar{A}B\bar{C}\bar{D} + \bar{A}B\bar{C}D + \bar{A}B\bar{C}\bar{D} + \bar{A}B\bar{C}\bar{D}$
POS: $(A+B+C+\bar{D}) \cdot (A+\bar{B}+C+D) \cdot (A+\bar{B}+C+\bar{D}) \cdot (\bar{A}+B+C+\bar{D}) \cdot (\bar{A}+B+\bar{C}+\bar{D}) \cdot$ $(\bar{A}+\bar{B}+C+D) \cdot (\bar{A}+\bar{B}+C+\bar{D}) \cdot (\bar{A}+\bar{B}+\bar{C}+D) \cdot (\bar{A}+\bar{B}+\bar{C}+\bar{D})$

Ejercicio 2

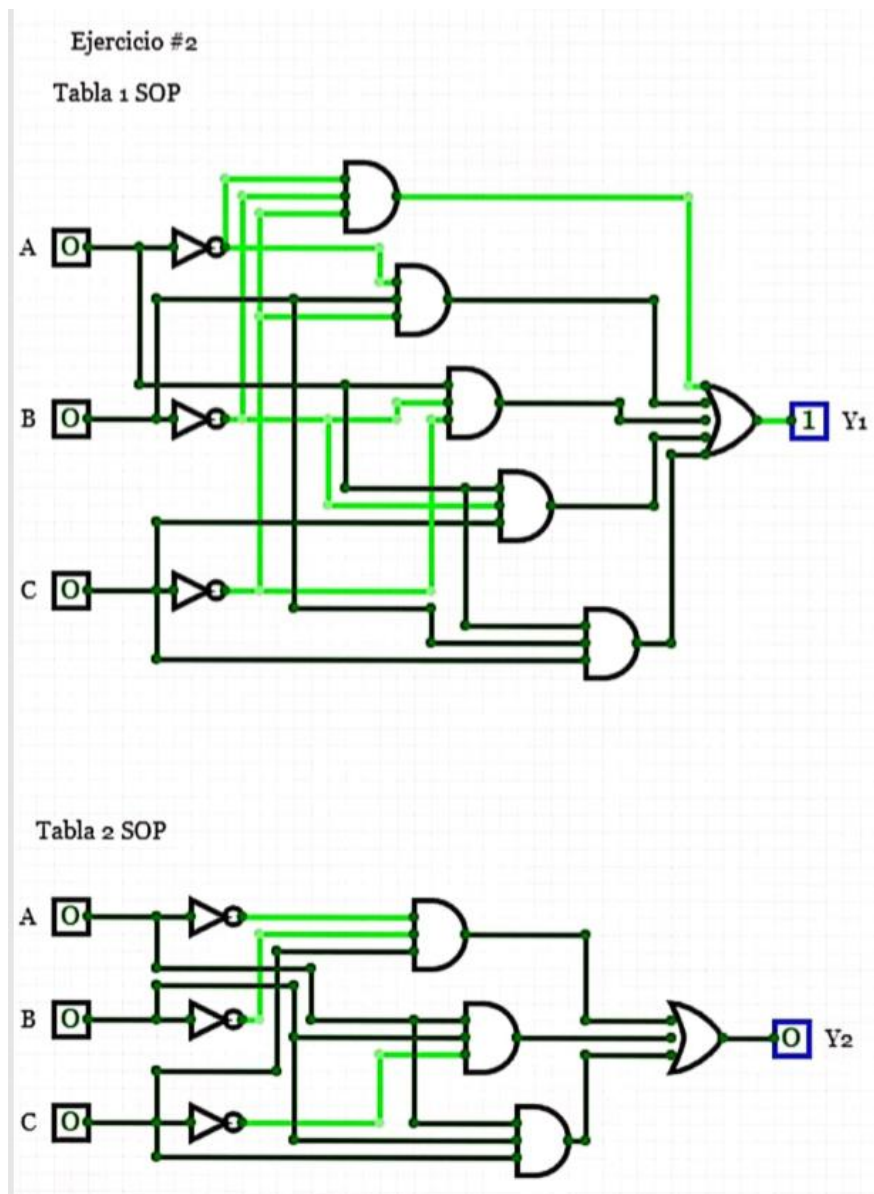


Tabla 3 SOP

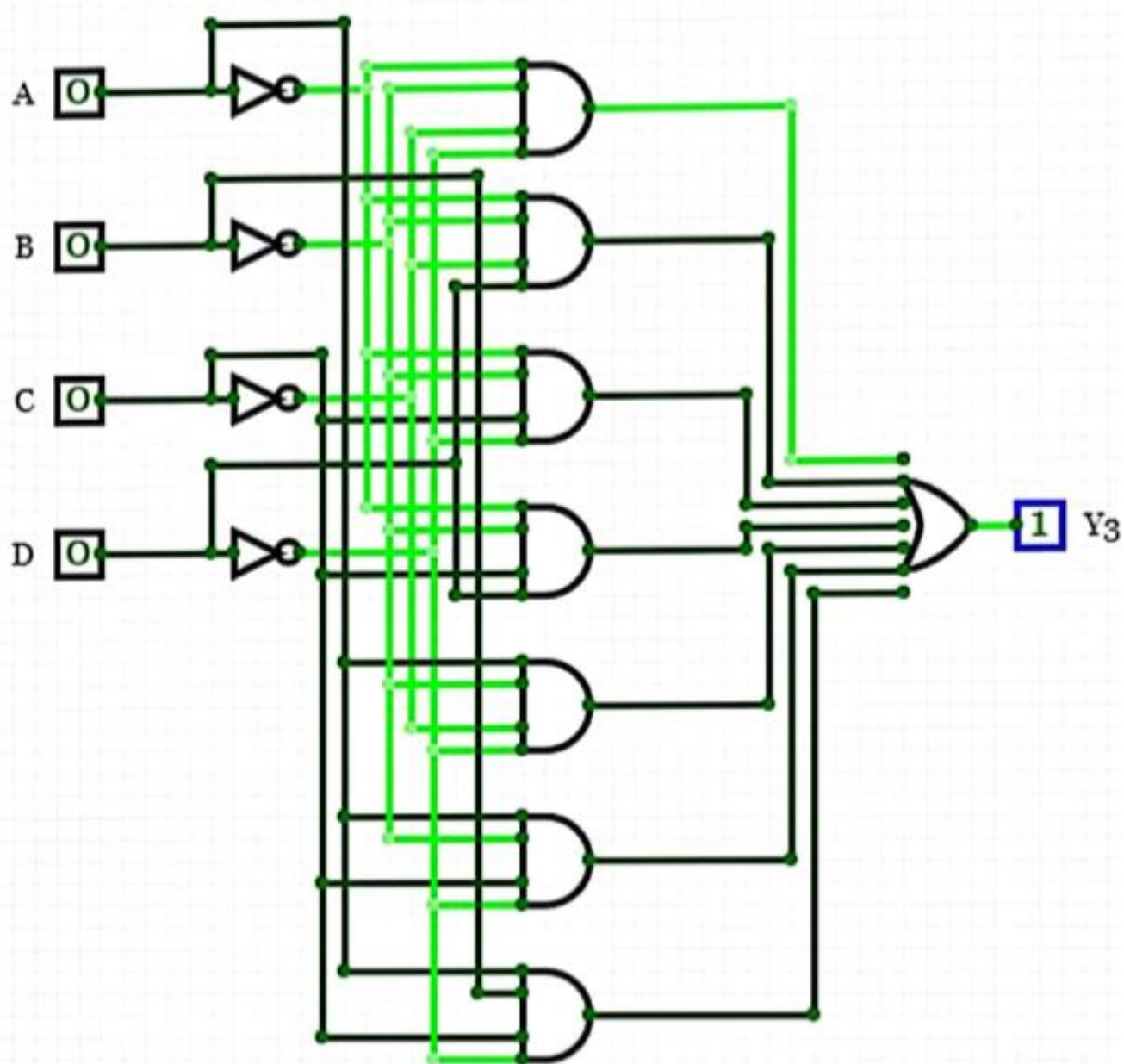
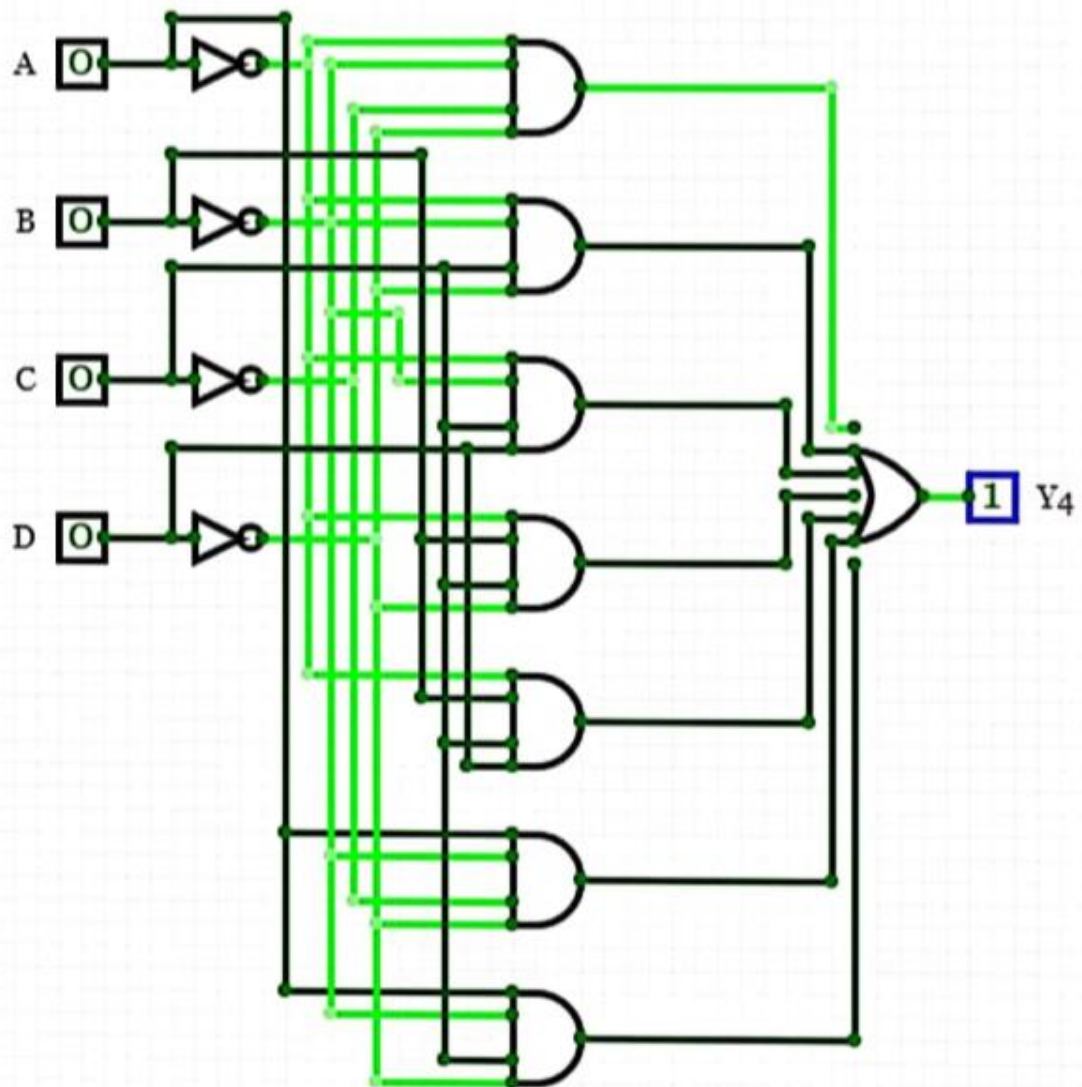


Tabla 4 SOP



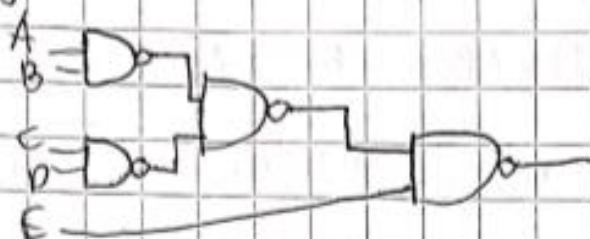
Ejercicio 3

Link al repositorio:

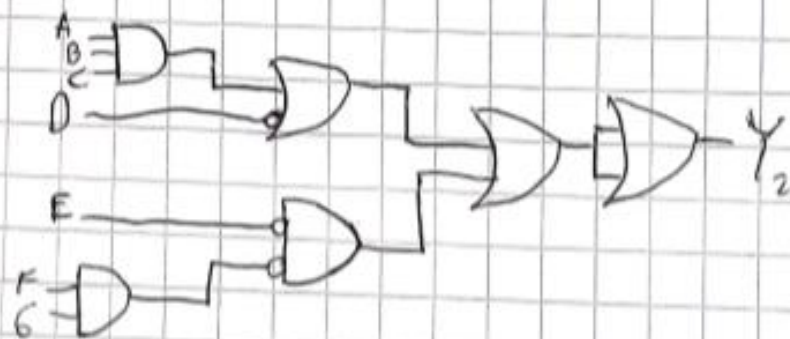
<https://github.com/rod19131/lab03dig>

Ejercicio #4

1.)



$$Y_1 = \overline{AB + CD + E}$$



$$Y_2 = [(ABC + \bar{D}) + \overline{FG} \cdot E] + [(ABC + \bar{D}) + (\overline{FG} \cdot E)]$$