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Truth Table to a combinational circuit

Input Reference	A B e	F	minterm	maxterm
0	0 00	0	$A'+B'+c'$	$A+B+c$
1	0 01	1	$A'B'c$	$A+B+c'$
2	0 10	1	$A'B'c'$	$A+B'+c$
3	0 11	0	$A'B c$	$A'+B+c$
4	1 00	0	$A B'c$	$A'+B+c'$
5	1 01	0	$A B'c$	$A'+B+c'$
6	1 10	1	$A Bc'$	$A'+B'+c$
7	1 11	0	$A B c$	$A'+B'+c'$

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Table: 2

Ist canonical form

$F = \varepsilon \, (1,2,0) \rightarrow$ shorthand Notation

$= A'B'c + A'Bc' + ABc'$

$(A'B'c')'$

$= (A')' + (B')' + (C')'$

$= A + B + c$ $A \, (0,7)$

$= (A+B+c)(A'+B'+c')$

2nd canonical form

$F = \pi \, [0, 3, 4, 5, 7)$

$= (A+B+c) \cdot (A+B'+c') \cdot (A'+B+c) \cdot (A'+B+c')$

$\cdot (A'+B'+c')$

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01.

Input	A B C	F	Minterm	Maxterm
0	0 0 0	0	$x'y'z'$	$x+y+z$
1	0 0 1	1	$x'y'z$	$x+y+z'$
2	0 1 0	1	$x'yz'$	$x+y'+z$
3	0 1 1	0	$x'yz$	$x+y'+z'$
4	1 0 0	0	$xy'z'$	$x'+y+z$
5	1 0 1	0	$xy'z$	$x'+y+z'$
6	1 1 0	1	xyz'	$x'+y'+z$
7	1 1 1	0	xyz	$x+y+z$

Discussion

Today's lab we learnt Maxterm, minterm, canonical form to represent boolean functions where minterm's corresponding to a1 on the with table are added together.