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EEL4705L
Post Lab 2

Lab 2 – Basic Two Level Circuits

Results

1) XOR – SOP Form

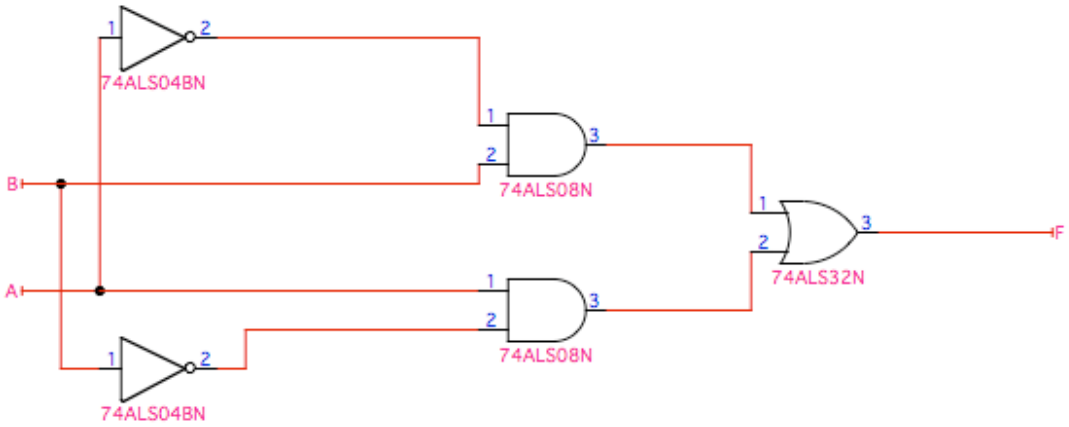
SOP Equation: $F = \overline{A}B + A\overline{B}$

Minterm Expression: $F = \sum m(1,2)$

Parts Required:

1	7404	Quad Hex Inverter
1	7408	Quad 2-Input AND
1	7432	Quad 2-Input OR

Schematic:



A	B	F
0	0	0
0	1	1
1	0	1
1	1	0

2) XOR – POS Form

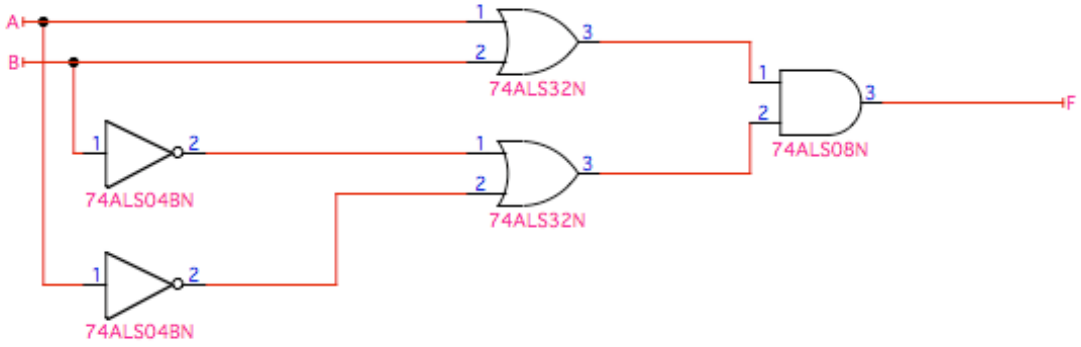
POS Equation: $F = (A + B) \cdot (\overline{A} + \overline{B})$

Maxterm Expression: $F = \prod \overline{m}(0,3)$

Parts Required:

1	7404	Quad Hex Inverter
1	7408	Quad 2-Input AND
1	7432	Quad 2-Input OR

Schematic:



A	B	F
0	0	0
0	1	1
1	0	1
1	1	0

Conclusion

Both the POS and SOP forms of the XOR function operated properly as described above. This lab demonstrated that the same logic expression can be realized in more than one manner.