University of Information Technology and Sciences (UITS)

Lab Report-6

IT-202 : Digital Logic Design Lab

Impementation Of Product Of Sum By Using Gate

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1 Abstrac

The Product of Sum (POS) expression comes from the fact that two or more sums (OR's) are added (AND'ed) together.In this lab we will implement SOP on the breadboard with the help of AND Gate(74LS08),NOT Gate(74LS04),OR Gate(74LS32) and some wires to show how this it is works.

2 Related Work

We have to write a truth table for implementing POS.By this table we can have the list of outputs to execute POS for all the possible inputs.

2.1 Inserting Table Example

A	B	C	C'	A+B	B+C	A+C'	Output(A+B).(B+C).(A+C')
0	0	0	1	0	0	1	0
0	0	1	0	0	1	0	0
0	1	0	1	1	1	1	1
0	1	1	0	1	1	0	0
1	0	0	1	1	0	1	0
1	0	1	0	1	1	1	1
1	1	0	1	1	1	1	1
1	1	1	0	1	1	1	1

Figure 1: Truth Table of POS

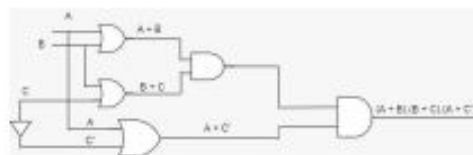# 3 Methodology

3.1 Insert Image

Figure 1: Gates Combination for POS
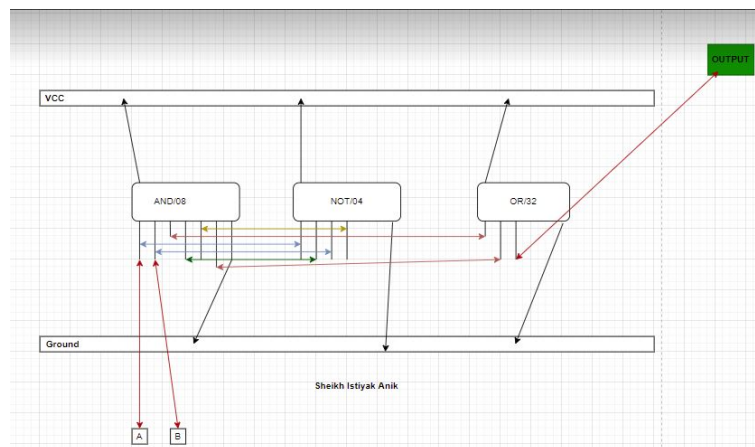
3.2   Working Procedure

For implementing POS we have to :
• Take IC(74LS08),IC(74LS04),IC(74LS32),a breadboard and some male to male wires.
• Connect the ICs on the breadboard.
• Connect the wires with the voltage 5 of breadboard and by taking 7 point as ground.Connect the inputs and outputs also.
• Verify the truth Table.

4   Results

Out is shown in figure-5 for the POS output.

4.1   Output-1

5   Conclusion

This lab Expressed about the product of sum .In this lab for implementing pos by using combined OR gate,NOT gate and AND gate.We also learned that how can we use POS rules.

References

1.https://www.electronics-tutorials.ws/logic/logic$_4$.html
2.$https://www.allaboutcircuits.com/textbook/digital/chpt-3/not-gate/$
3.$Output section is collect from Sheikh Istiaq Anik ID : 2014755004/$