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Date: 7 / 10 / 2021

Enperiment No. 1

Aim: Implementation of Boolean expression using ANDIORINOT gates. Theory + 1 AND gate : 1) An AND gate is a logic gate having two or more inputs and a single output. 2) An AND gate operates on logical multiplication rules. 3) In this gate if either of the input is low (0), then the output is also low. 4) If all of the inputs are high (1), then the output will also be high. 5) A dot (.) is used to show the AND operation i.e. A.B or can be written as AB.

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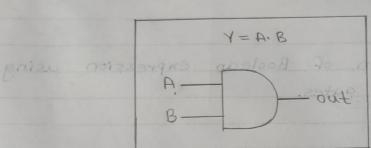
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Enperiment No. 1



Aim: Implementation of Boolean
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Figure 1: Logic symbol of AND gate : prosrit

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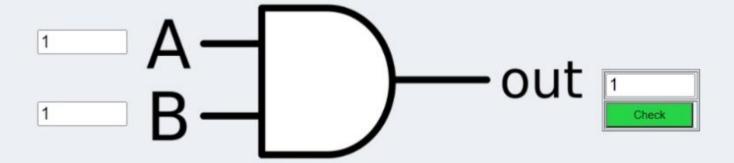
next (0) was ei

figure 2: Truth table of AND gate

and out work of por si () to A ce

operation i.e. A.B or can be written as AB.

Verification of truth table for AND gate



Serial No.	A	В	Output	Remarks
1	0	0	0	Correct
2	0	1	0	Correct
3	1	0	0	Correct
4	1	1	1	Correct

Reset

Date:



	2) OR hate:
	1) An OR gate is a logic gate that performs
	logical or operation.
	2) A logical OR operation has a high
	input (1) if one or both the inputs to the
	gate are high (1).
	3) If neither input is high, a low
	output (0) results.
	4) A plus (+) is used to show the
	OR operation.
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1.5	
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Y = A + Broiderage so losipol

A (1)

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B - (1) del one steps

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(2) A (2) tugai reddien of OR gate gold of the steps

(3) Figure 3: Logic Symbol of OR gate gold of the steps

(4) A (2) The steps of or gate gold of the steps of th

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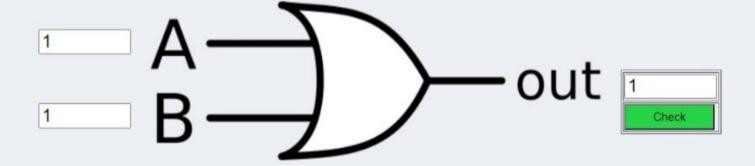
In	put	output	
A	B	Y = A+B	
0	0	0	
0	1	1	
- 1	0	1	
1	1	1	

figure 4: Truth Table of OR gate



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Verification of truth table for OR gate



TRUT	Print			
Serial No.	A	В	Output	Remarks
1	0	0	0	Correct
2	0	1	1	Correct
3	1	0	1	Correct
4	1	1	1	Correct

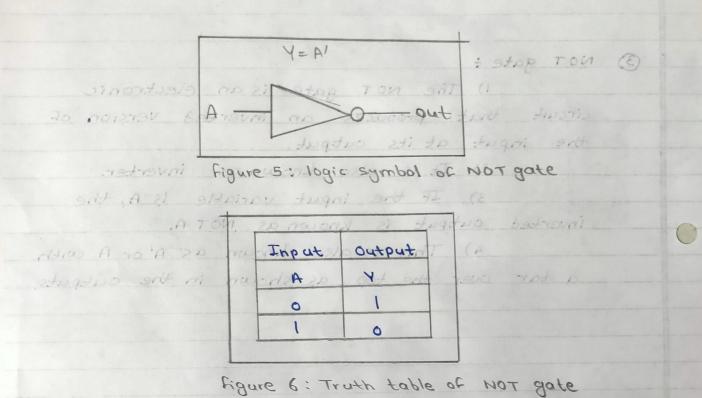
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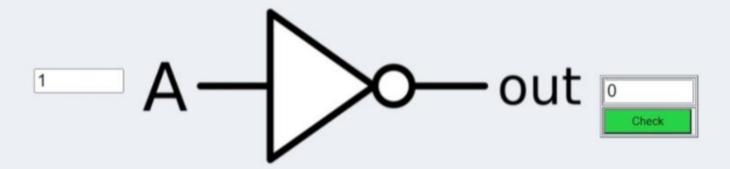
	circuit that produces an inverted version of
	the input at its output.
	2) It is also known as inverter. 3) If the input variable is A, the
	inverted output is known as NOT A.
	4) This is also known as A' or A with
	a bar over the top, as shown in the outputs.
num n	
(3)	the second of the second of the second second second
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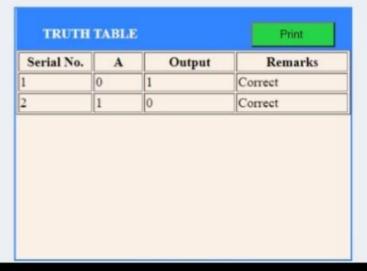


Conclusion: Now we can implement the Boolean enpression using AND, OR, NOT gate.



Verification of truth table for NOT gate





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Implementation of Boolean enpression using ANDIORI NOT For F (x, y, z) = x'y'z + x(Y'+z) + xyz' Soin. F = XY'Z + X'Y'Z + XYZ (Y'+xy) Z = (Y'+x) (Y'+Y) Z Y'2 + x2

0

Truth table :

n	7	30	7	y'2:	XZ	Timplementation of Bosnessymit
Т	Т	7	F	TF	· T	7
T	7	F	F	FS	F	5 F'Y) X + 5 'Y'X = (S, Y, X) ?
Т	F	т	τ	TT	T	τ
7	F	F	7	F	F	5 4 7 4 5 4 X 4 5 4 X 2 7
E	т	Т	F	F	F	F
E	Т	F	F	F	F	F 54x + 54 =
6	F	Т	Т	7	F	Т
4	F	F	7	F	F	(xx + 'Y) =

Diagram :

= (X+, X) (X+, X) :

