

XNOR using NAND gate

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2 Abstract

This document shows XNOR operation using NAND gates

3 Components

Component	Value	Quantity
Resistor	220 Ohm	1
Led	-	1
Arduino	UNO	1
Bread board	-	1
jumper wires	M-M	3

Table 1: Table 1.0

4 Hardware

Make the connections as for Table 1.1

Arduino	13	GND
Led	+VE	-VE

Table 2: Table 1.1

4.1 XNOR Gate Truth Table

The truth table of the XNOR gate is shown below:

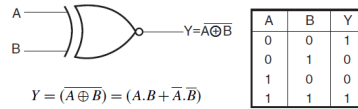
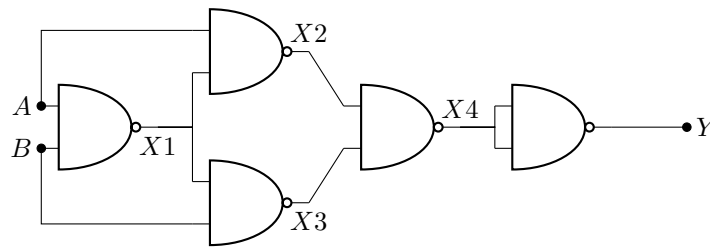


Figure 1



EXPRESSIONS FOR XNOR USING NAND

GATE

$$X1 = (A.B)'$$

$$X2 = (A(A.B)')'$$

$$X3 = ((A.B')')$$

$$X4 = (A.B') + (A'.B)$$

$$Y = ((A.B') + (A'.B))'$$

5 SOFTWARE

PROBLEM1:XNOR USING NAND GATE

Now make the connections as the table 1.1 Execute the following program after downloading

<https://github.com/manasareddy442002/fwc-moudle1/blob/main/code.txt>

The LED will ON and oFF according to changing XNOR operation