**PRACTICAL # 1**

To study the working of basic gates.

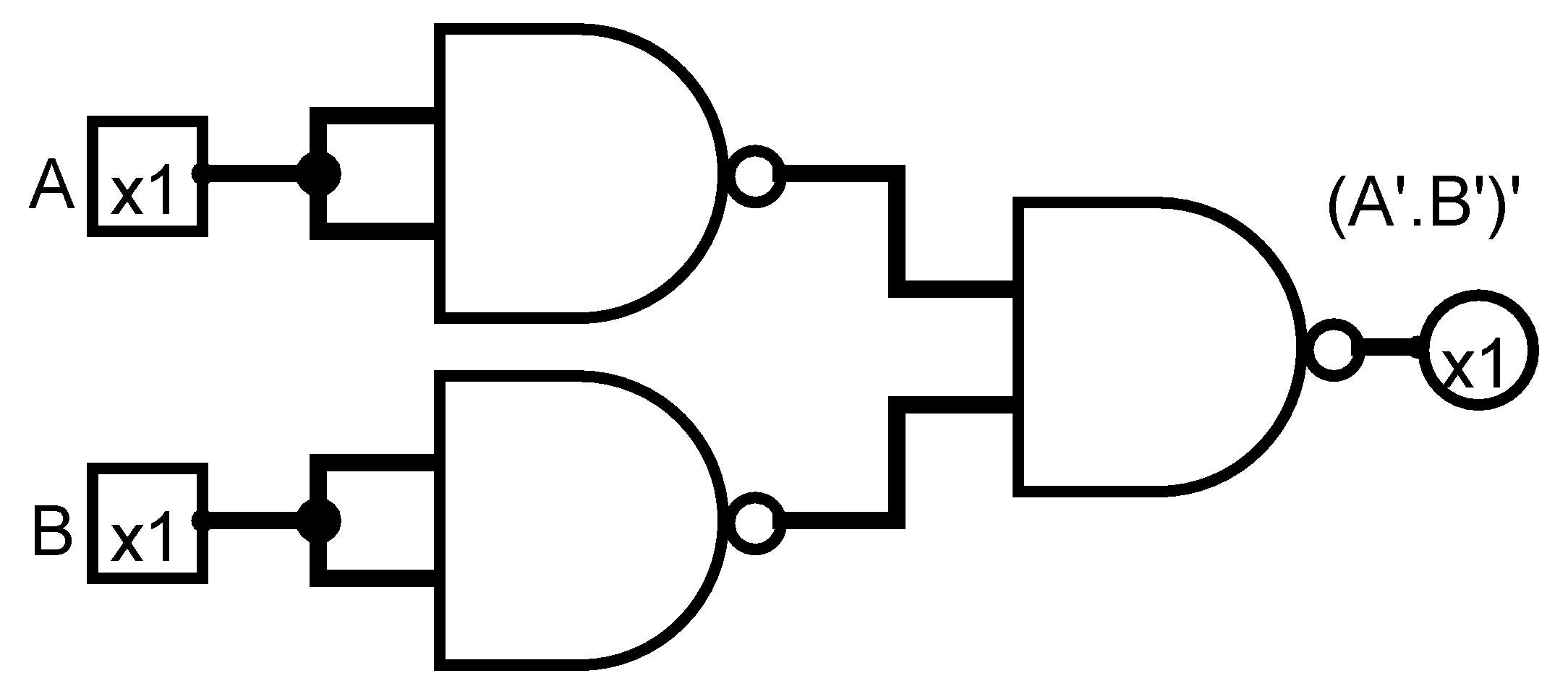
**PRACTICAL # 2**

Consider the following equation and draw the circuit.

X = B + AB

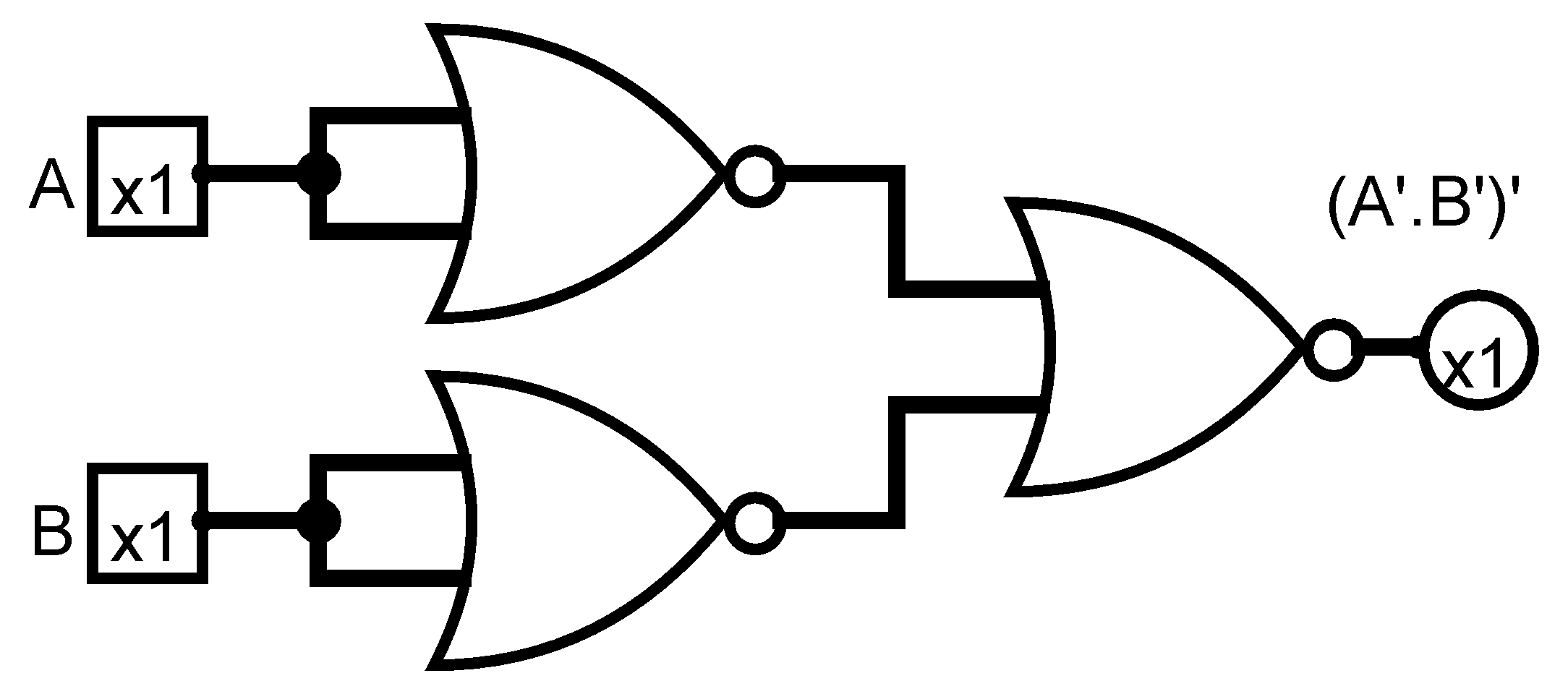
**PRACTICAL # 3**

Implement the given circuit.



**PRACTICAL # 4**

Implement the given circuit.



**PRACTICAL # 5**

Consider following standard sop

x = C+AC+ +C+AB

minimize it by using k.map and design circuit and compare Xstan = Xsimplified .

**PRACTICAL # 6**

Consider the following equation and draw the circuit using NAND gate only.

X = + BC

**PRACTICAL # 7**

Consider the following equation and draw the circuit using NOR gate only.

X = +BC

**PRACTICAL # 8**

Construct a truth table for y = where x is 3-bit input variable. Design a k.map for the truth table, minimize it and design circuit for minimize expression.

**PRACTICAL # 9**

Implement the circuit of half adder.

Sum = A⊕B

Carry = A.B

**PRACTICAL # 10**

Implement the circuit of full adder.

Sum = (A⊕B) ⊕C

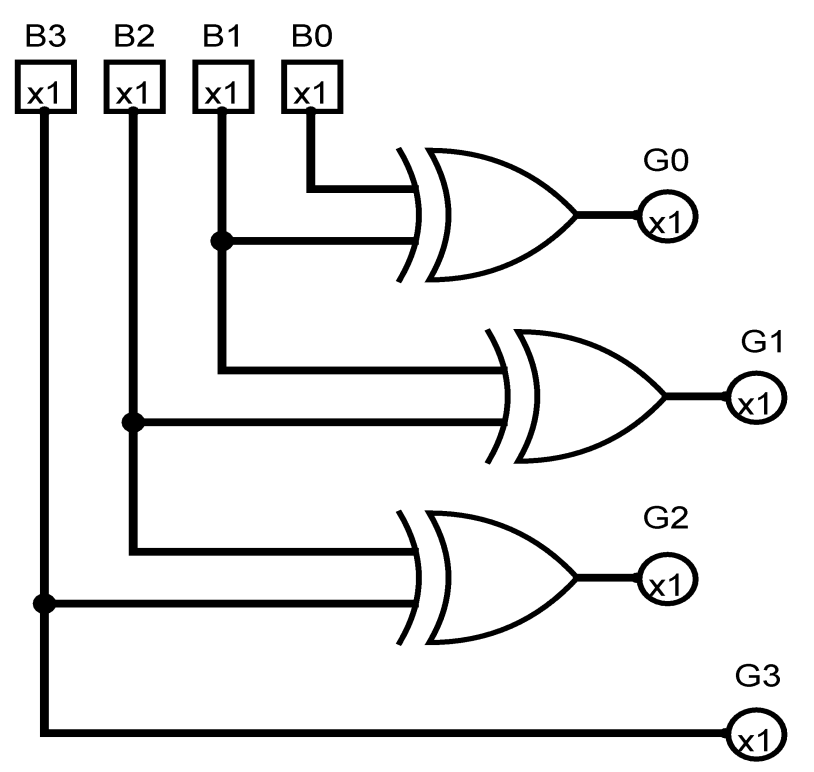
Carry = AB + C(A⊕B)

**PRACTICAL # 11**

Implement the circuit of 2 bit parallel adder.

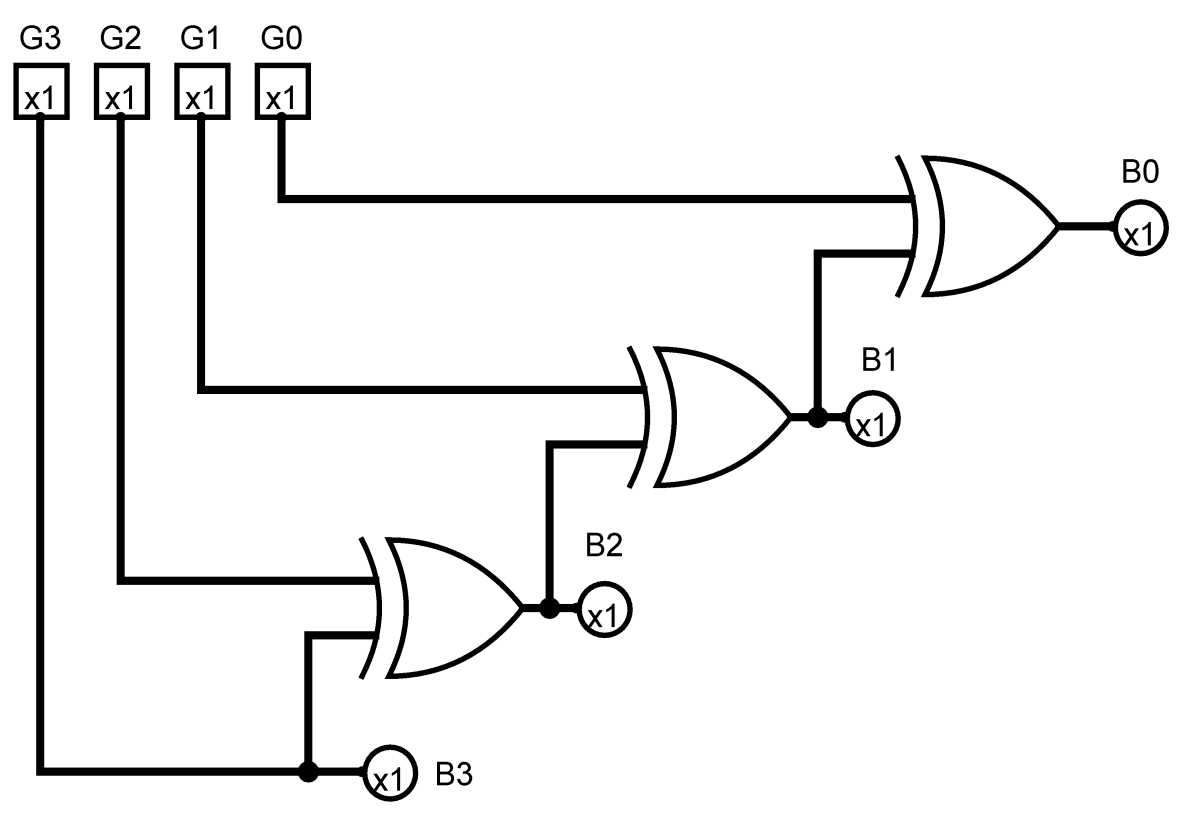
**PRACTICAL # 12**

Implement the circuit diagram of binary to gray code conversion.



**PRACTICAL # 13**

Implement the circuit diagram of gray code to binary conversion.

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**PRACTICAL # 14**

Convert binary no into excess-3 code.