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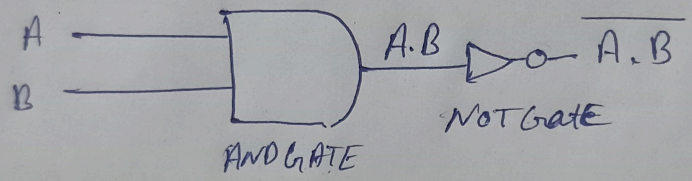
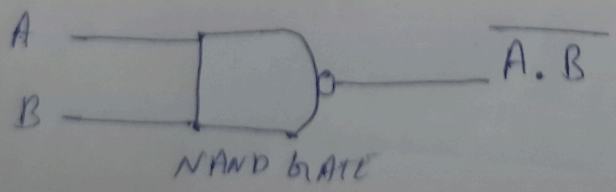
⇒ What is a Nand gate → A NAND gate ("not AND gate") is a logic gate that produces a low output (0) only if all its inputs are true, and high output (1) otherwise. Hence the NAND gate is the inverse of an AND gate, and its circuit is produced by connecting an AND gate to a Not gate. Just like an AND gate, a NAND gate may have any number of input probes but only one output probe



The symbol of a NAND gate is similar to the AND, but a bubble is drown at the output point of the AND gate The symbol of the NAND gate is shown below



Hence, the truth table of a 2 input NAND gate can be represented as:

A	B	$X = \overline{A.B}$
0	0	1
0	1	1
1	0	1
1	1	0

You can see that this is just the reverse of the truth table of an AND gate. The truth table of AND gate is given below for reference

Input		output
A	B	$X = A.B$
0	0	0
0	1	0
1	0	0
1	1	1

Like AND gate a NAND gate can also be more than two inputs like 3, 4, input NAND gate. A NAND gate is also referred to as a universal logic gate as all the binary operation can be realized by using only NAND gates.