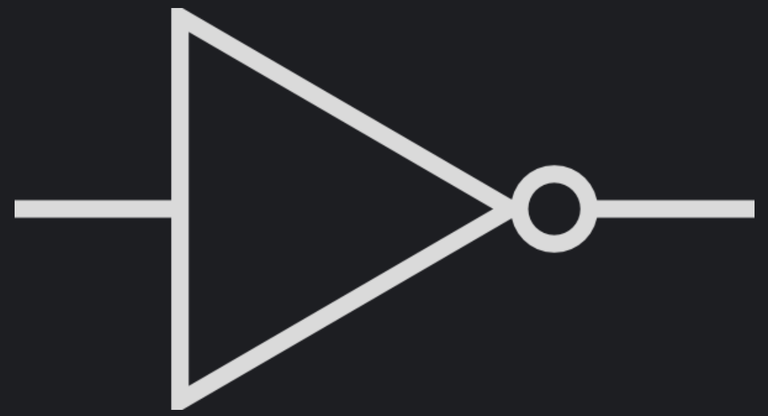
Not Gate

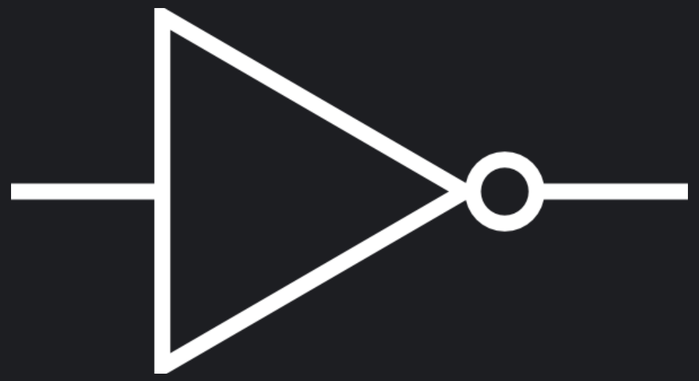


What is a NOT Gate?

A NOT gate, also called an inverter, is a basic logic gate that inverts its single input signal, producing the opposite output. If the input is 0, the output is 1, and if the input is 1, the output is 0.

This gate is a fundamental component of digital circuits, as it performs logical negation and can be used, along with AND and OR gates, to build any other logic gate.

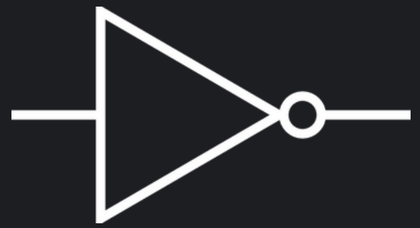
Truth Table



A	$\bar{A}$
0	1
1	0

Truth Table

- *Function: It performs a logical negation (NOT) on its input.*
- *Input: It has only one input signal.*
- *Output: It has one output signal that is the inverse of the input.*
- *Truth Table:*
- *Input 0 → Output 1*
- *Input 1 → Output 0*



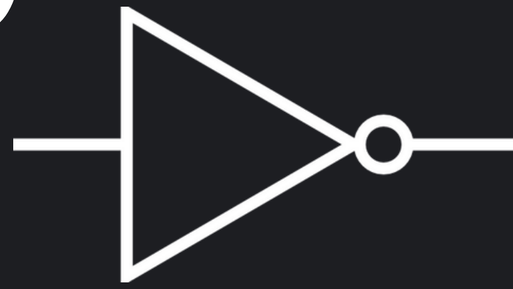
- *Other names: It is also known as an inverter or complement gate.*

Summary

A Nor gate or inverter is a basic logic gate with one input and one output.Its function is to invert the input value; when the input is 1 (true), output is 0 (false) , and vice versa . NOT gates are fundamental building blocks of digital circuits and are used in various applications , including signal inversion and logic level transformation.

Explanation of a NOT Gate

Inversion Function: A NOT gate acts as a logical inverter or negator. If the input is "high" (1) , the output is "low" (0), and if the input is "low" (0) , the output is "high" (1)



A	$\bar{A}$
0	1
1	0

Truth Table