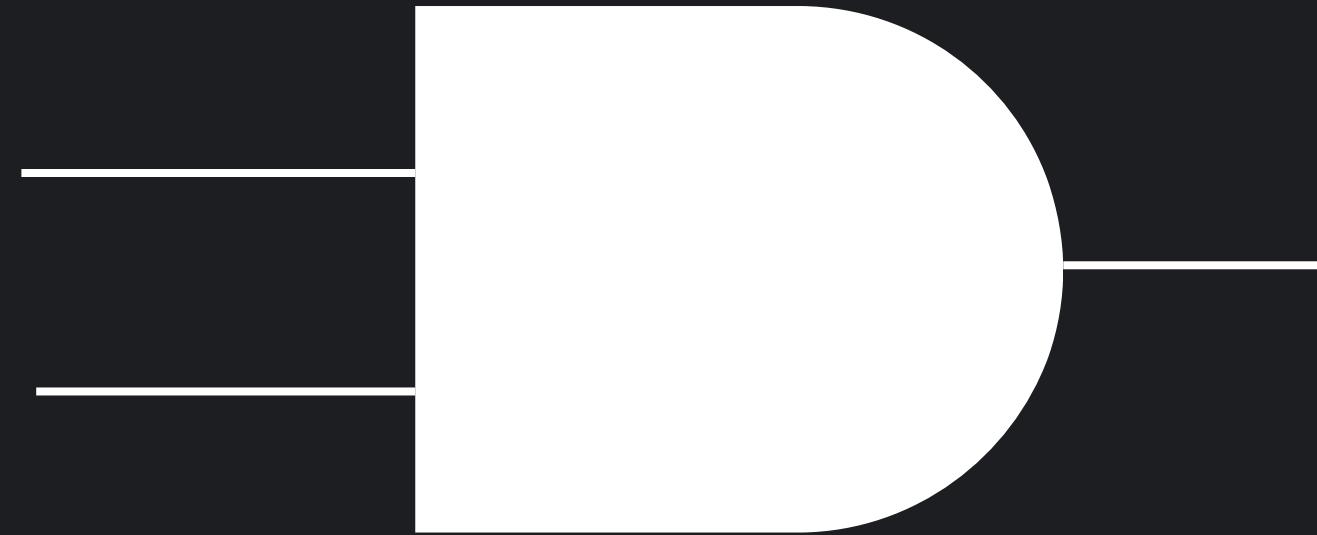


AND GATE

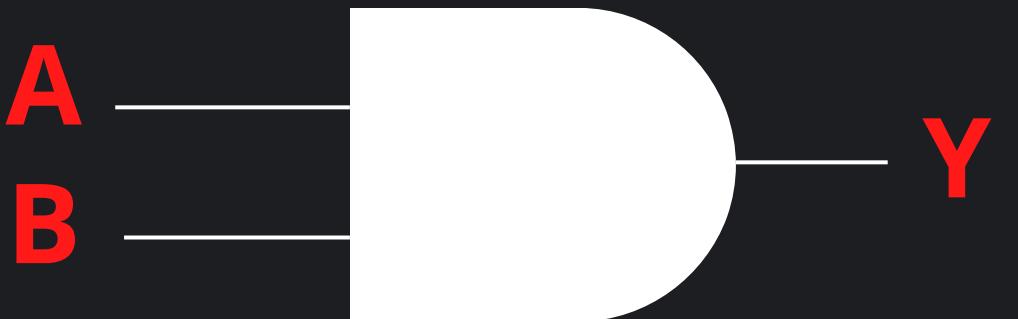


What is an AND Gate?

An AND gate is a basic digital logic gate used in electronic circuits

It performs the operation of logical conjunction

It outputs a high value (1) only if all inputs are high (1)



Function of the AND Gate

The main function of an AND gate is to combine two or more input signals and produce an output signal according to this rule

- Output = 1 only when all inputs = 1
- If any input = 0 → Output = 0

Truth Table



A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

Summary

- The AND gate is a fundamental digital logic gate.
- It performs logical AND, producing a 1 only when all inputs are 1.
- It is used in decision-making circuits, processors, controllers, and larger digital system.
- It forms the foundation for building more complex digital logic circuit.