Difference between Combinational and Sequential logic circuits.

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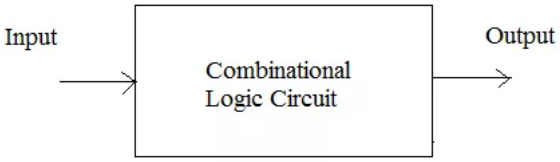
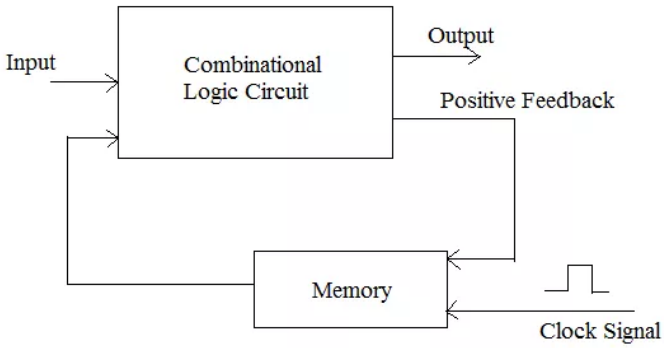
Combinational and Sequential circuits are the most essential concepts to be understood in digital electronics.

Combinational logic (sometimes also referred to as time-independent logic) is a type of digital logic which is implemented by Boolean circuits, where the output is a pure function of the present input only.



Sequential logic is a type of logic circuit whose output depends not only on the present value of its input signals but on the sequence of past inputs.



Combinational Logic Circuits	Sequential Logic Circuits
Output is a function of the present inputs (Time Independent Logic).	Output is a function of clock, present inputs and the previous states of the system.
Do not have the ability to store data (state).	Have memory to store the present states that is sent as control input (enable) for the next operation.
It does not require any feedback. It simply outputs the input according to the logic designed.	It involves feedback from output to input that is stored in the memory for the next operation.
Used mainly for Arithmetic and Boolean operations.	Used for storing data (and hence used in RAM).
Logic gates are the elementary building blocks.	Flip flops (binary storage device) are the elementary building unit.
Independent of clock and hence does not require triggering to operate.	Clocked (Triggered for operation with electronic pulses).
Example: Adder [1+0=1; Dependency only on present inputs i.e., 1 and 0].	Example: Counter [Previous O/P +1=Current O/P; Dependency on present input as well as previous state].