Sequential Circuit – Core modules

- Latches are basic building block of flip-flops (Basic memory Unit).
- Two types of memory elements based on the type of trigger that is suitable to operate
- Latches
- -Flip Flops
- Latches operate with enable signal, which is level sensitive, where as flip-flops are edge sensitive.

D flip-flop

- Basic memory storage device.

- For D flip-flop, a clock signal is needed to change states.

- D flip flop is designed using S-R latches.

- Similar to S-R latch, only we use set and reset function. (Tie D input to s input and not D to R input to make S_R flip flop into D flip flop.

- Block Diagram of D flip flop.

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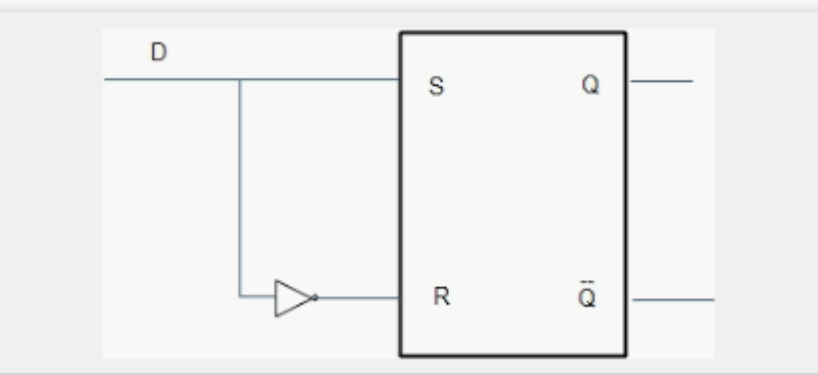

Sequential Circuit: Core Modules (Cont)

Internal circuit of D flip flop: