Synchronous Reset Flip-Flop

TYPES OF FLIP-FLOP:

 **SR Flip-Flop**

 **D Flip-Flop**

 **JK Flip-Flop**

 **T Flip-Flop**

 **Master-Slave Flip-Flop**

 **Edge-Triggered Flip-Flop**

 **Level-Triggered Flip-Flop**

# D FLIP-FLOP:

* **Inputs**: Data (D), Clock (CLK)
* **Output**: Q and Q'
* **Behaviour**:

1. Captures the value of the D input on the rising (or falling) edge of the clock signal.
2. The output Q will be equal to the D input at the clock edge.
3. Provides a clear and predictable behaviour for data storage.

PERSONAL TASK:

1. Define the structure of D Flip flop.

#### Function to Initialize the Flip-Flop

#### Function to Set Inputs

#### Function to Update the Flip-Flop State

#### Function to Print the Current State

#### Main Function to Test the Flip-Flop

WHICH KIND OF SITUATION I FACED:

1. First of all, I don’t know about the what is flip flop and how it is work, Then I find the video and notes.
2. T find it on chatgpt or google.
3. Then I show a one pdf in which the code of c language was written.
4. Then I understand the code a bit.