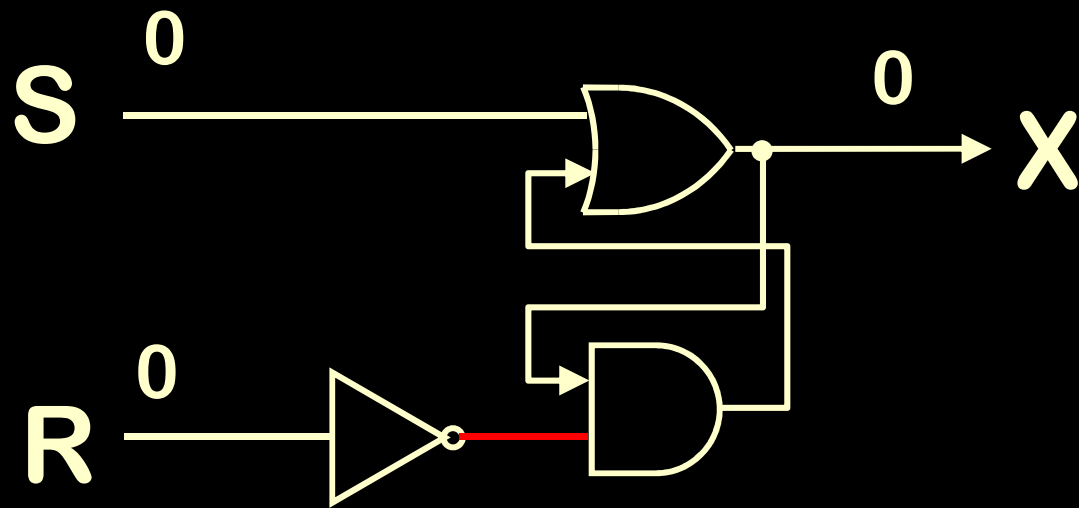
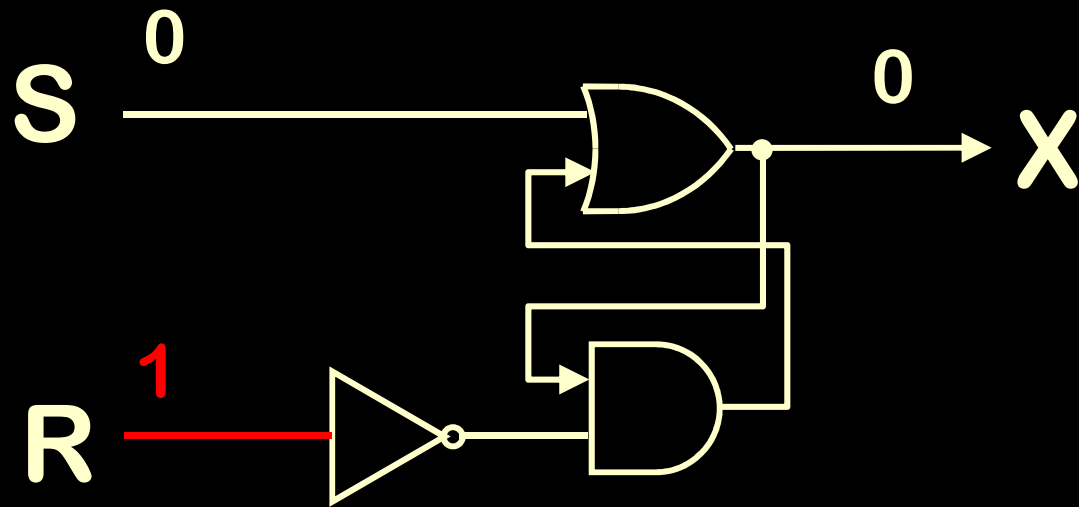


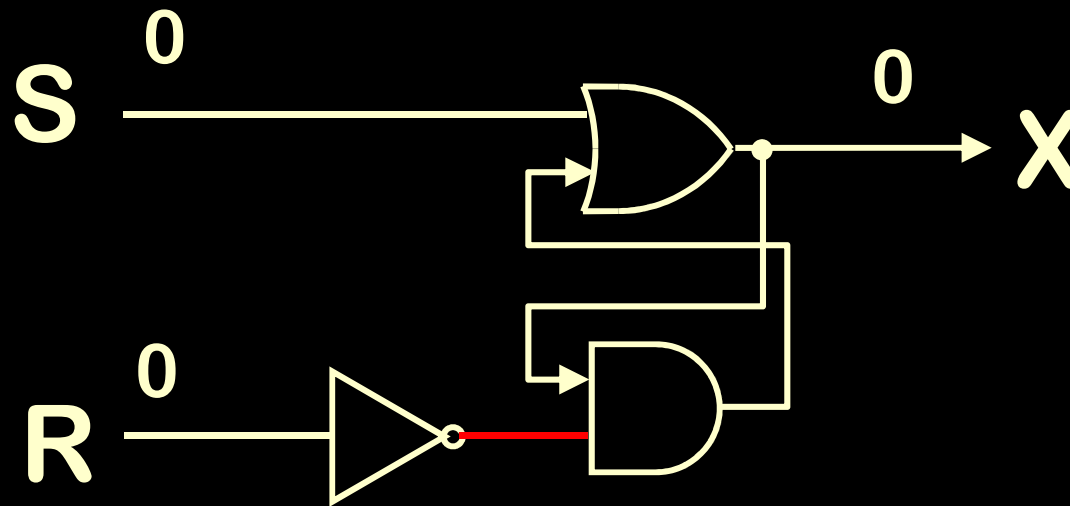
# *Digital Logic*

- Combinational Logic
  - Input determines output
- Sequential Logic
  - Input **AND CURRENT STATE** determine output



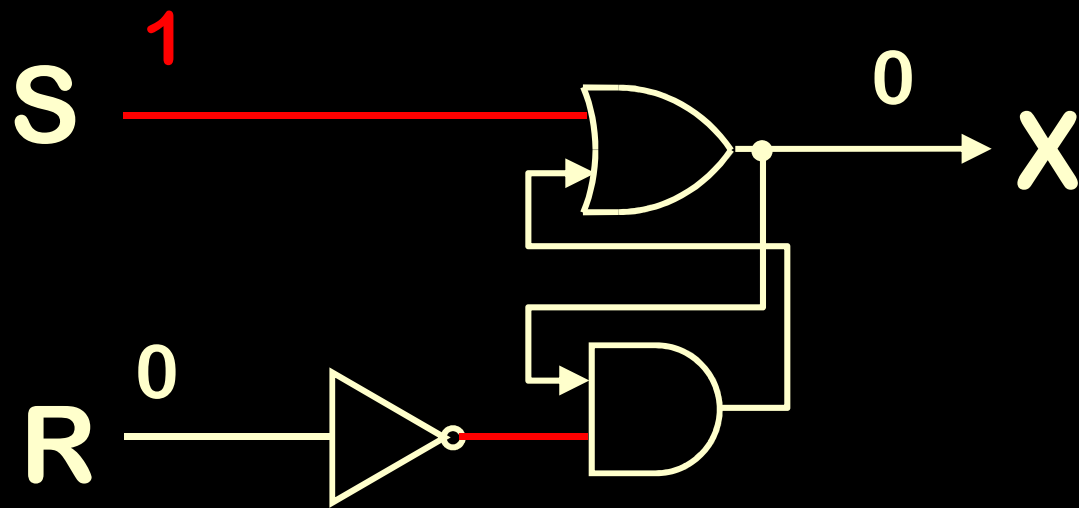


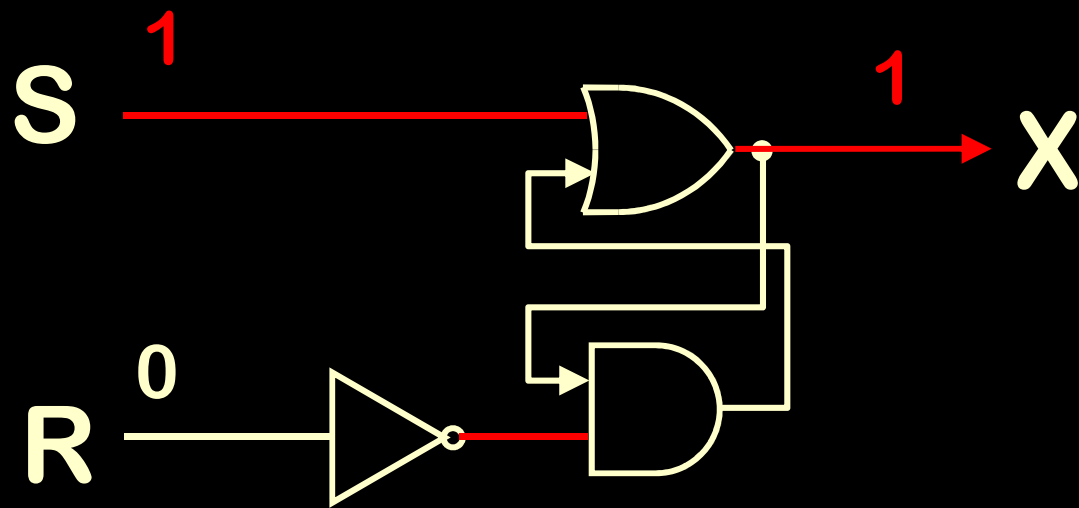


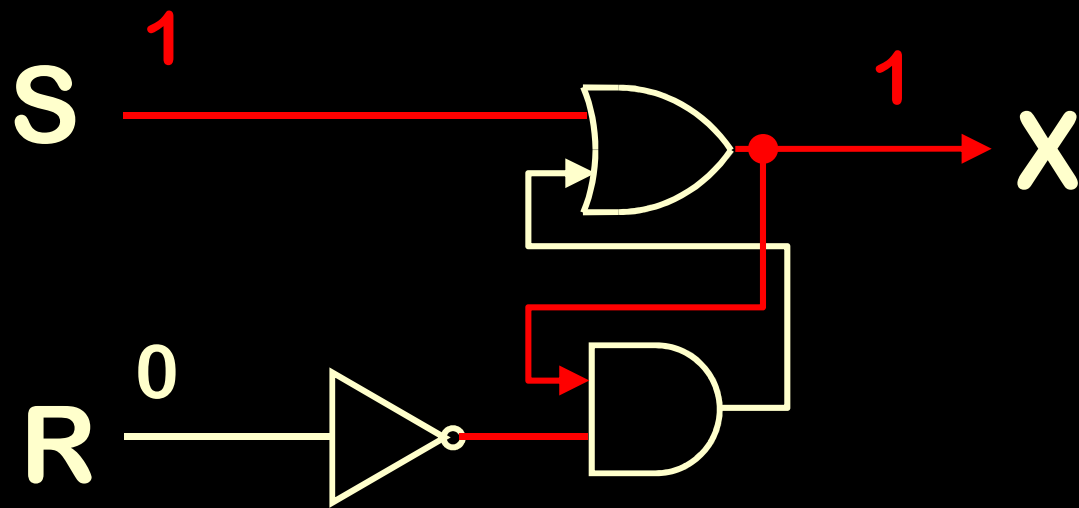


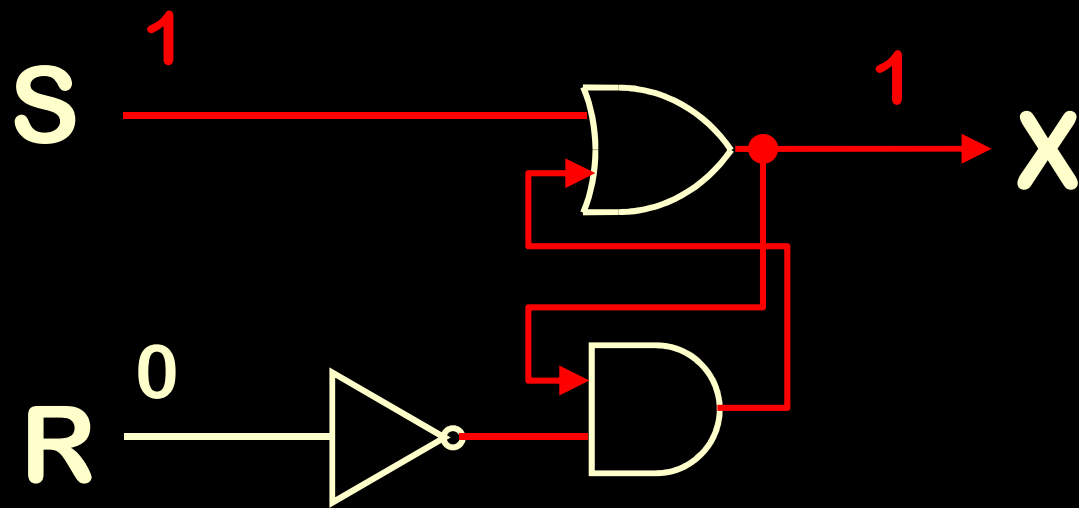
**R does nothing if output already 0**



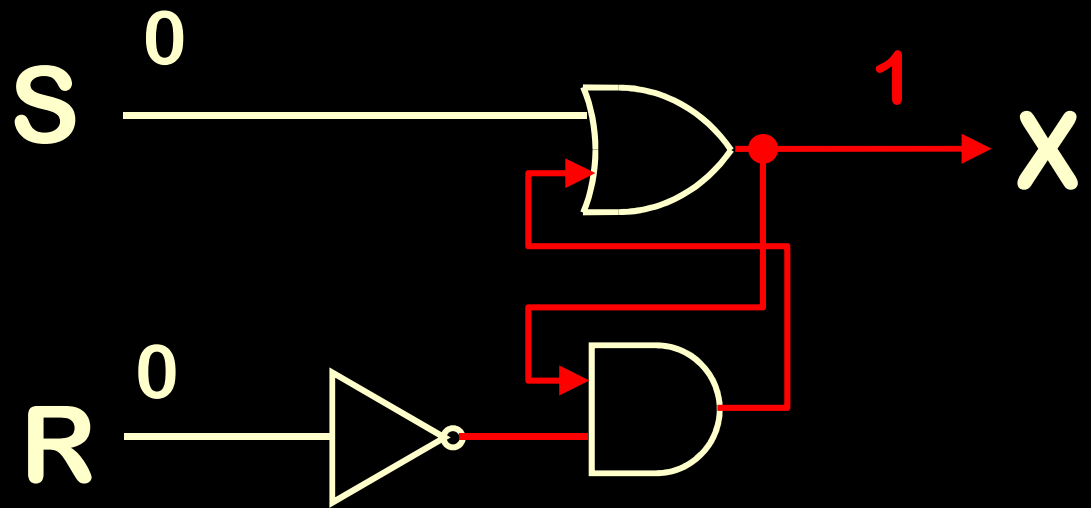


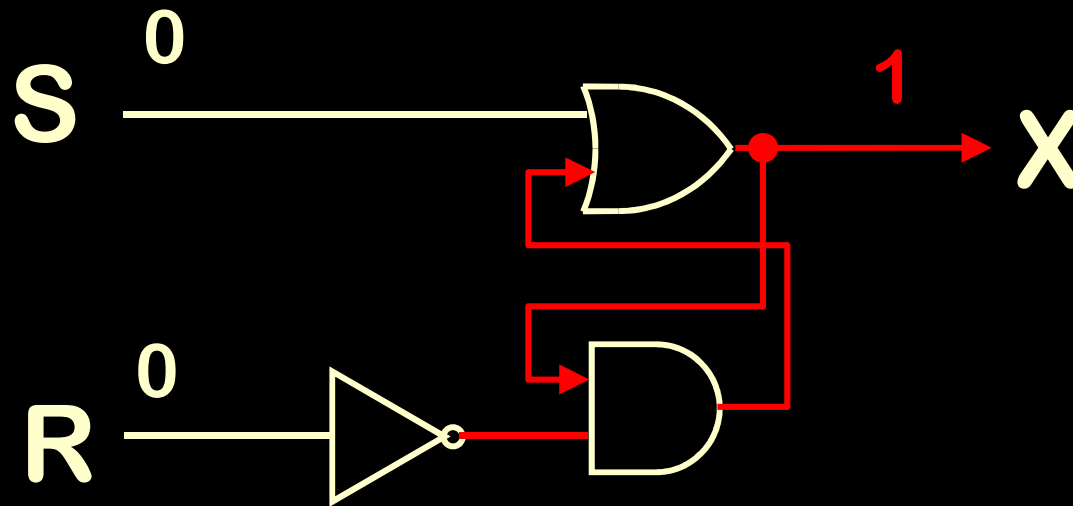






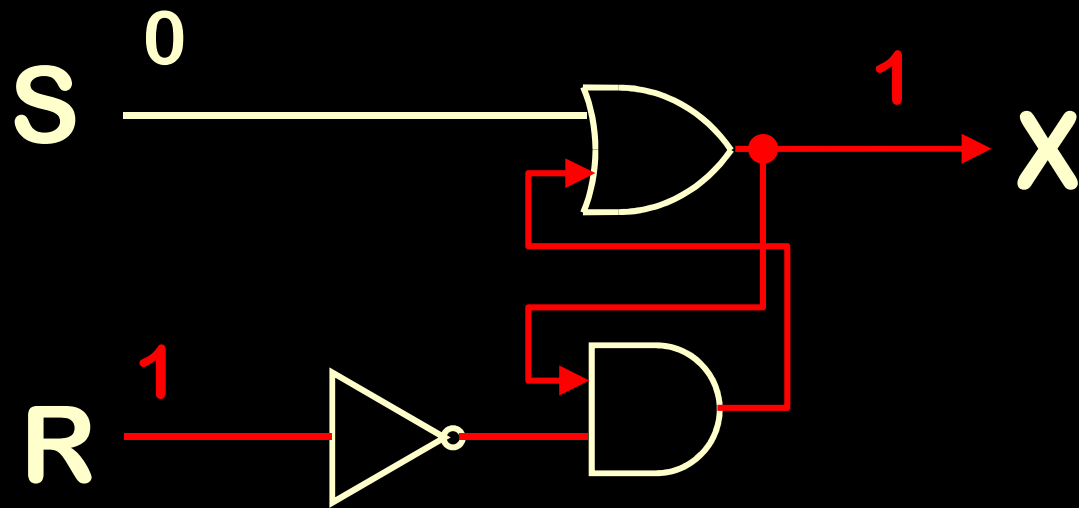


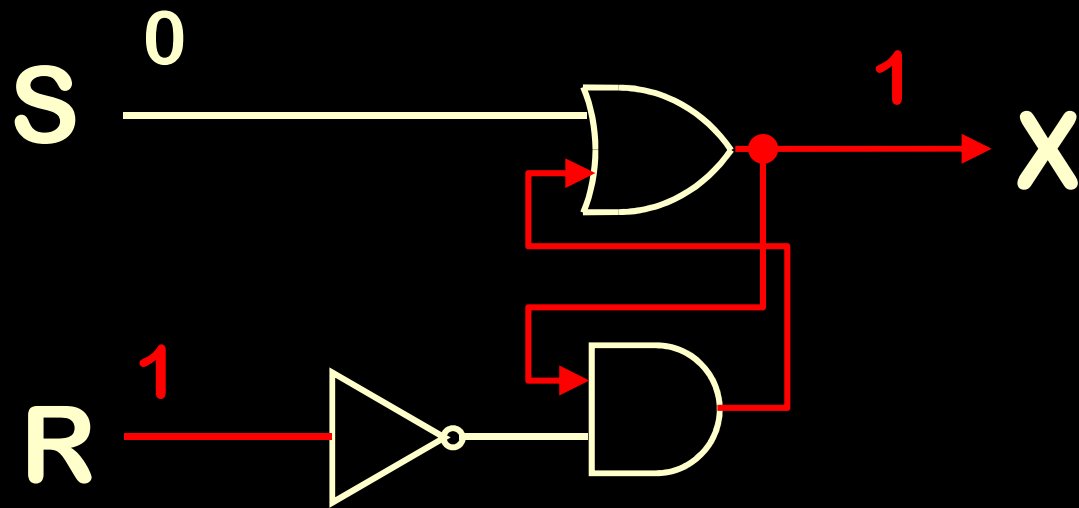


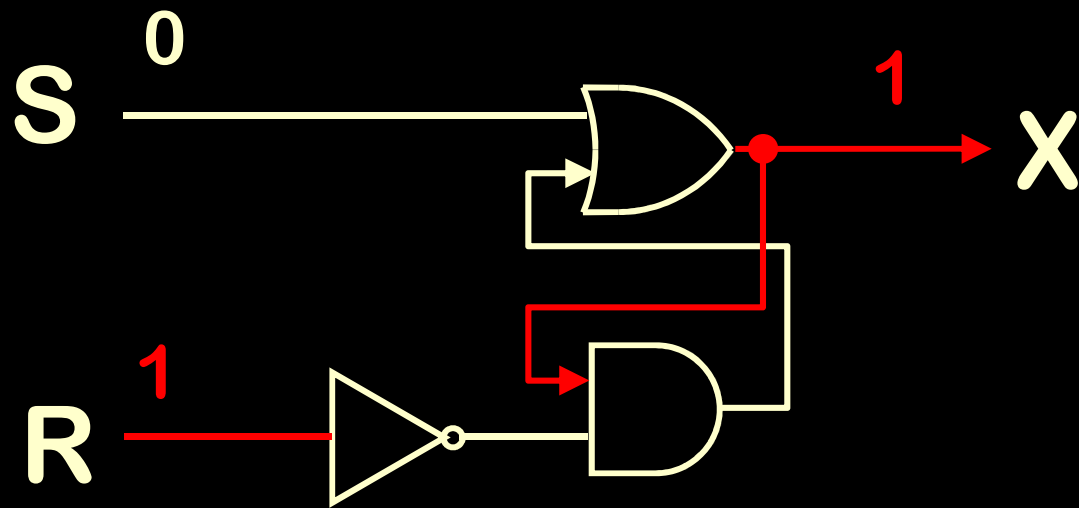


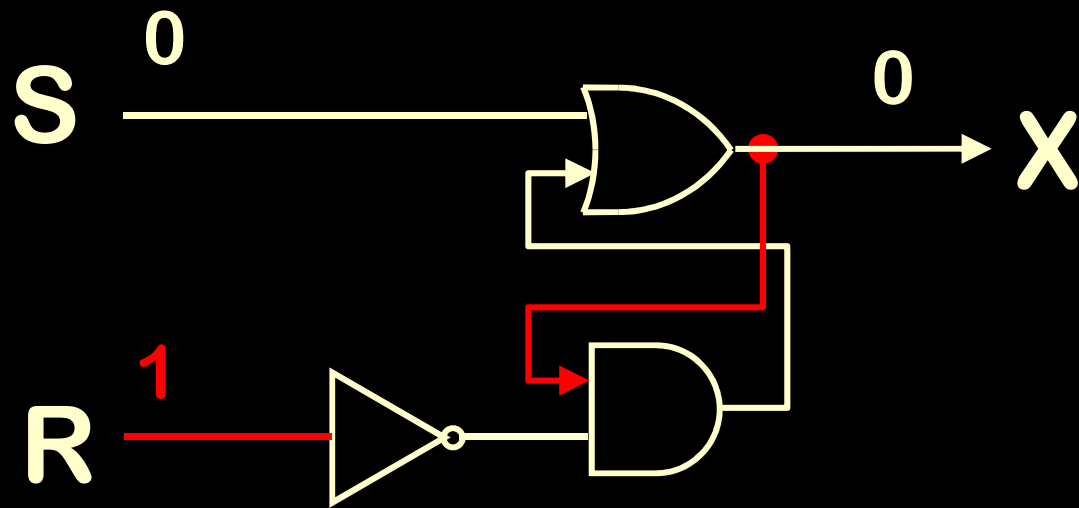
**S changes the state to 1**

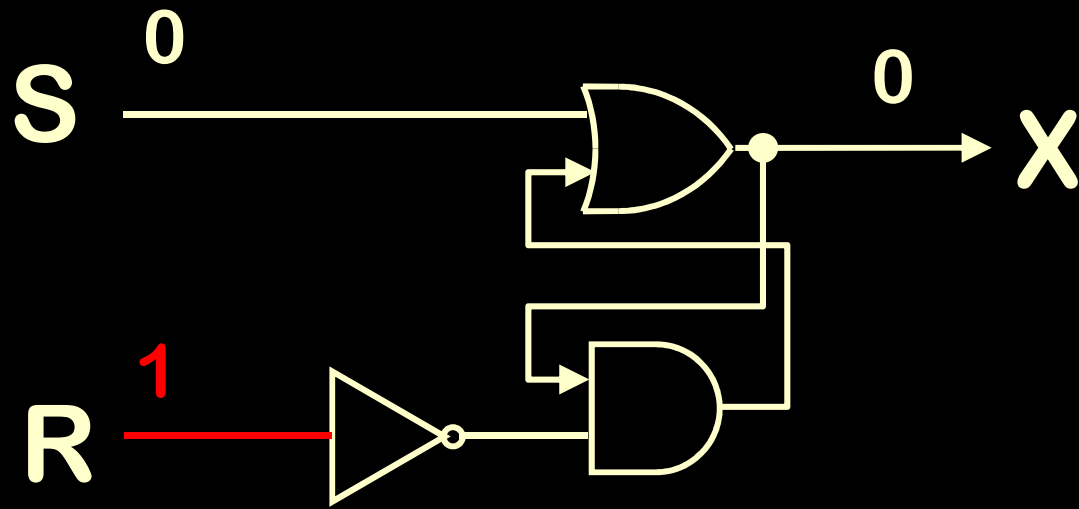


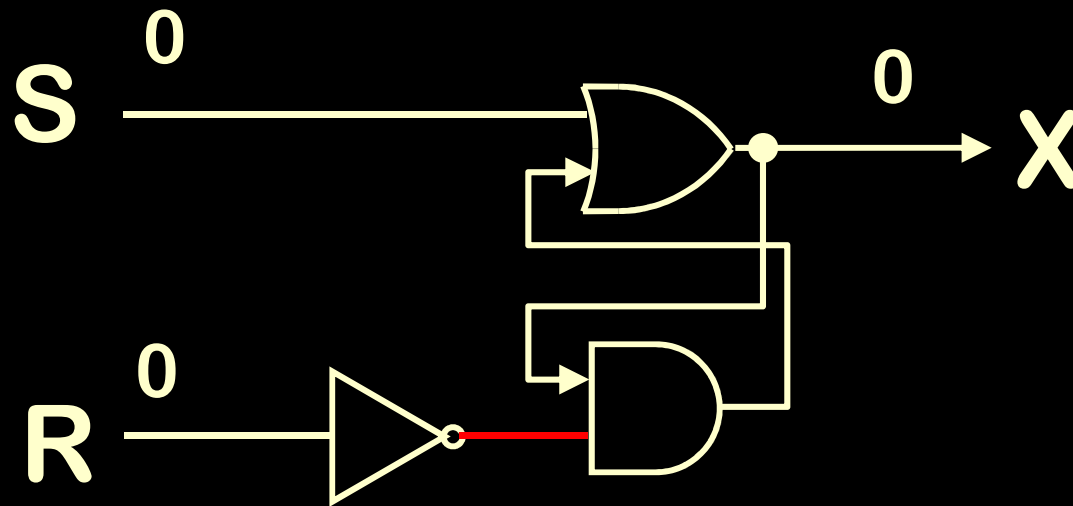










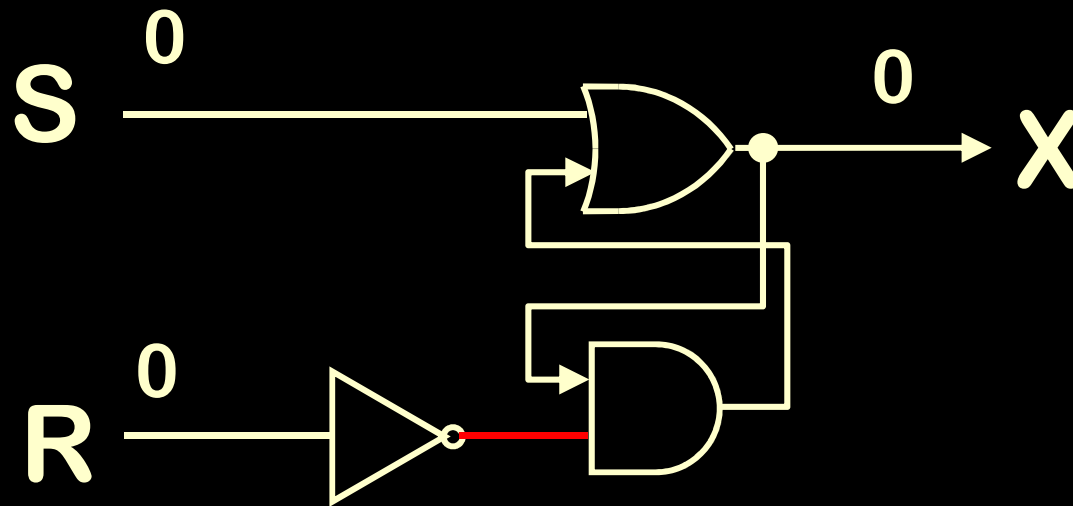


**R changes the state to 0**





# *Set-Reset (SR) Flip-Flop*



**S** changes the state to 1  
**R** changes the state to 0



# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	



# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	0
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	



# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	



# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	



# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	
1	0	0	
1	0	1	
1	1	0	1
1	1	1	



# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	
1	0	0	1
1	0	1	
1	1	0	1
1	1	1	



# *Set-Reset (SR) Flip-Flop*

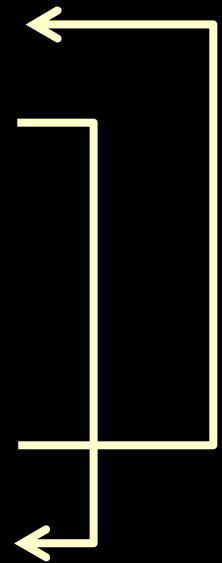
State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	





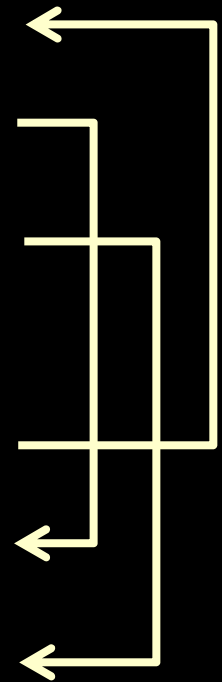
# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	

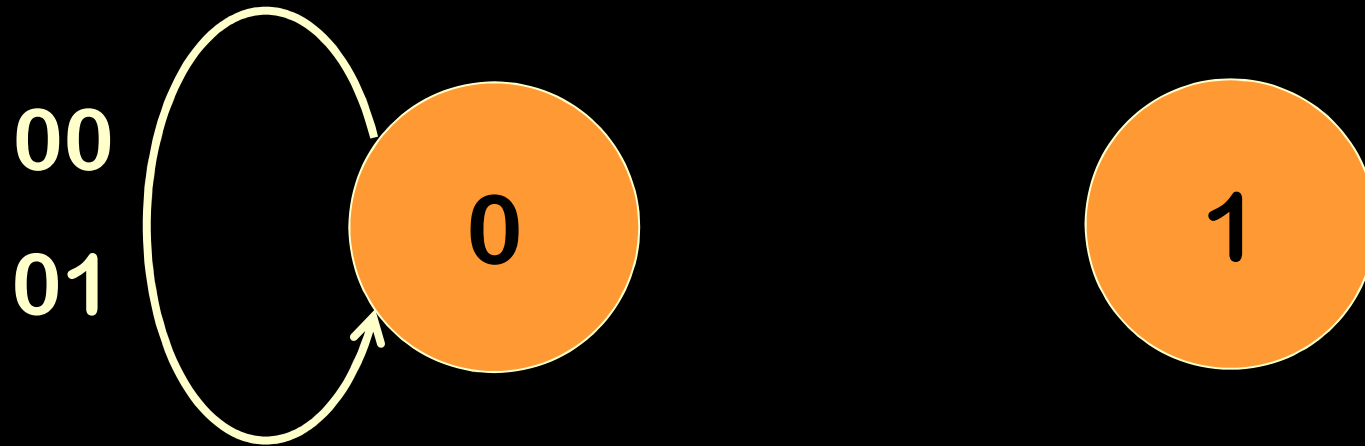


# *Set-Reset (SR) Flip-Flop*

State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1



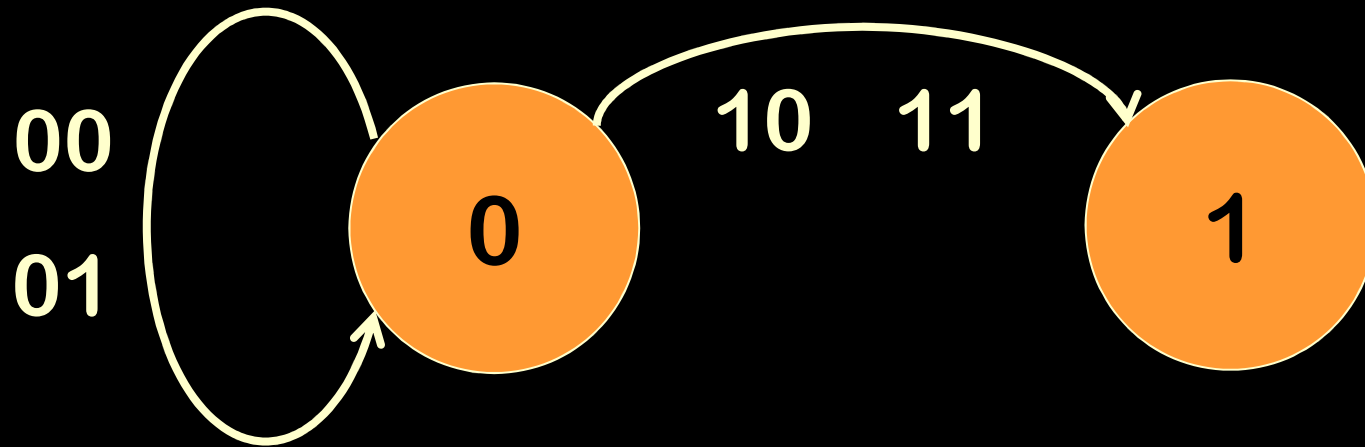
# State Diagram



State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1



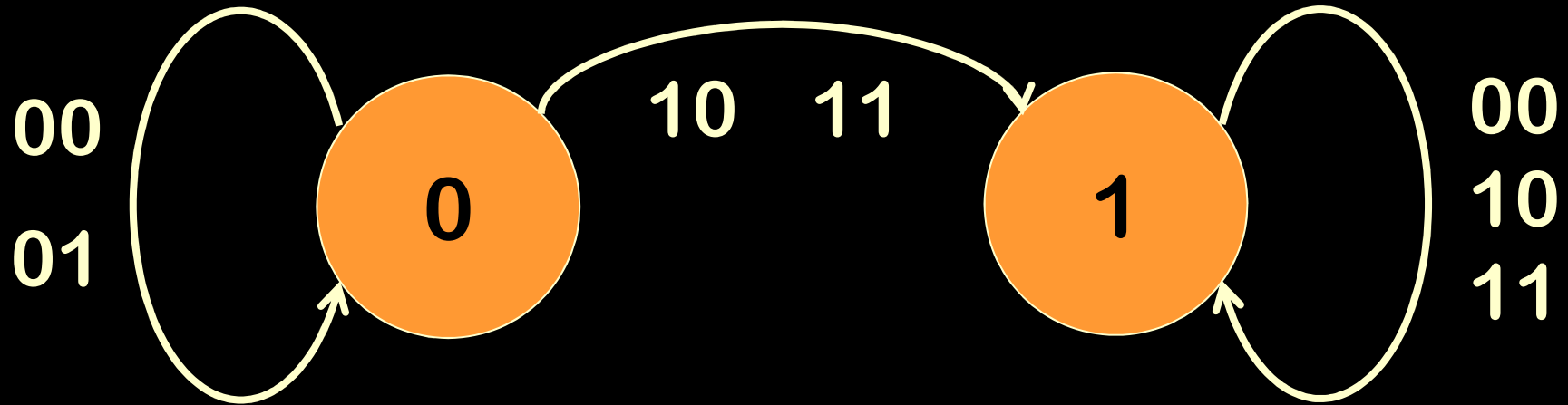
# State Diagram



State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1



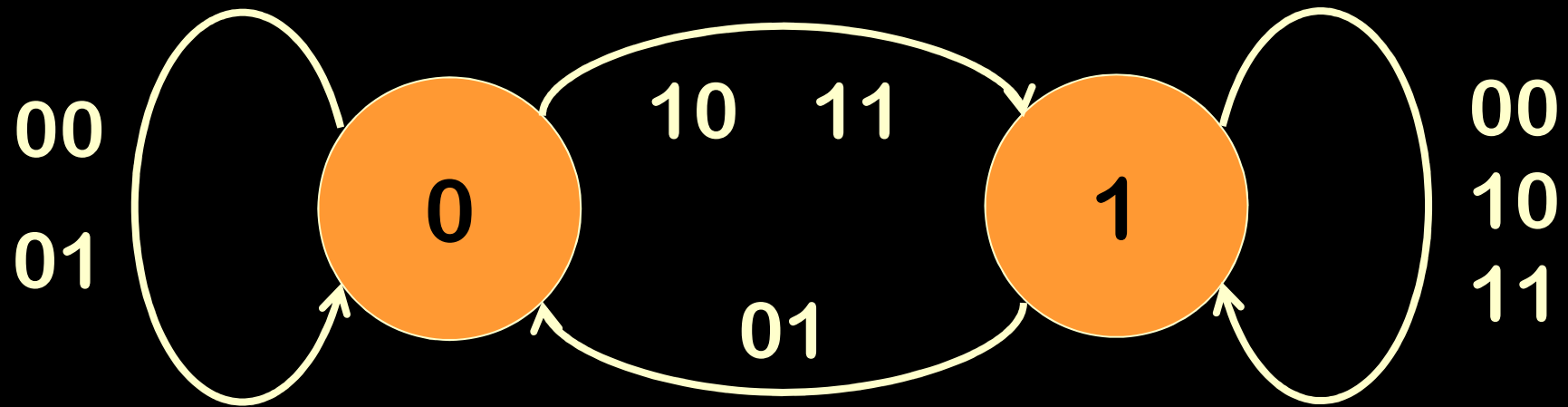
# State Diagram



State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1



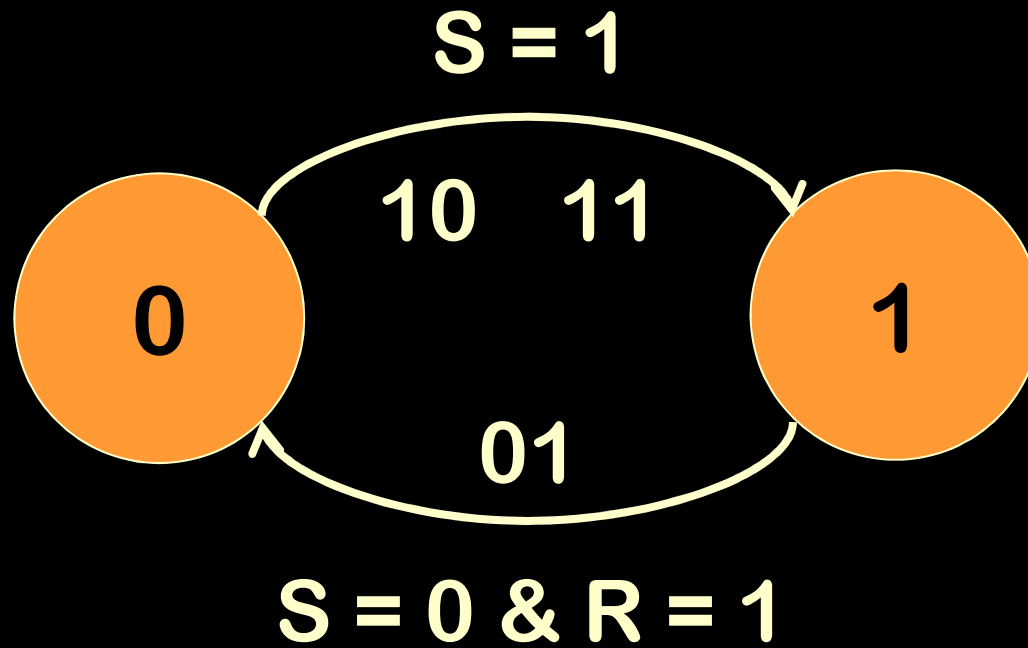
# State Diagram



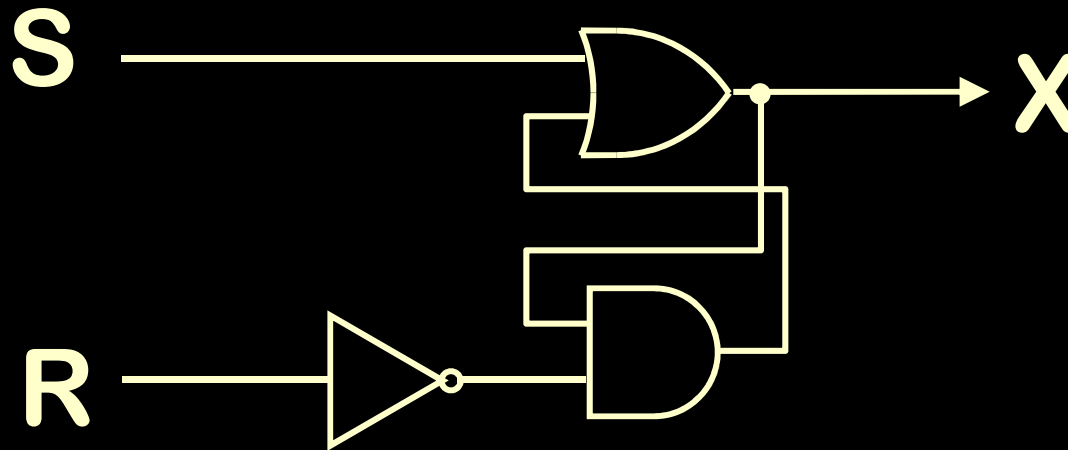
State	S	R	X (new state)
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1



# *State Diagram*



# *Set-Reset Flip-Flop*

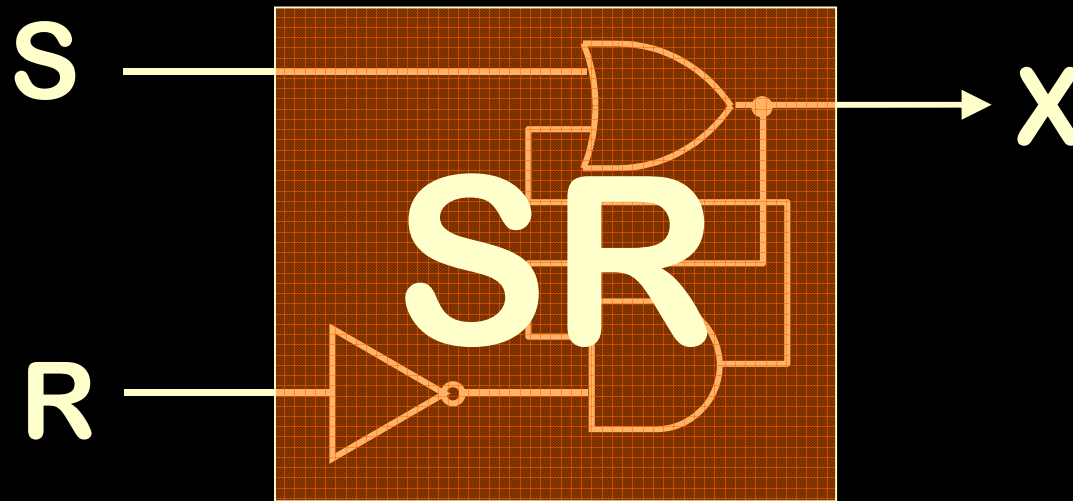


<u>S</u>	<u>R</u>	<u>X</u>
0	0	Stays the same
0	1	Resets to 0
1	0	Sets to 1
1	1	Undefined (sets to 1 here)

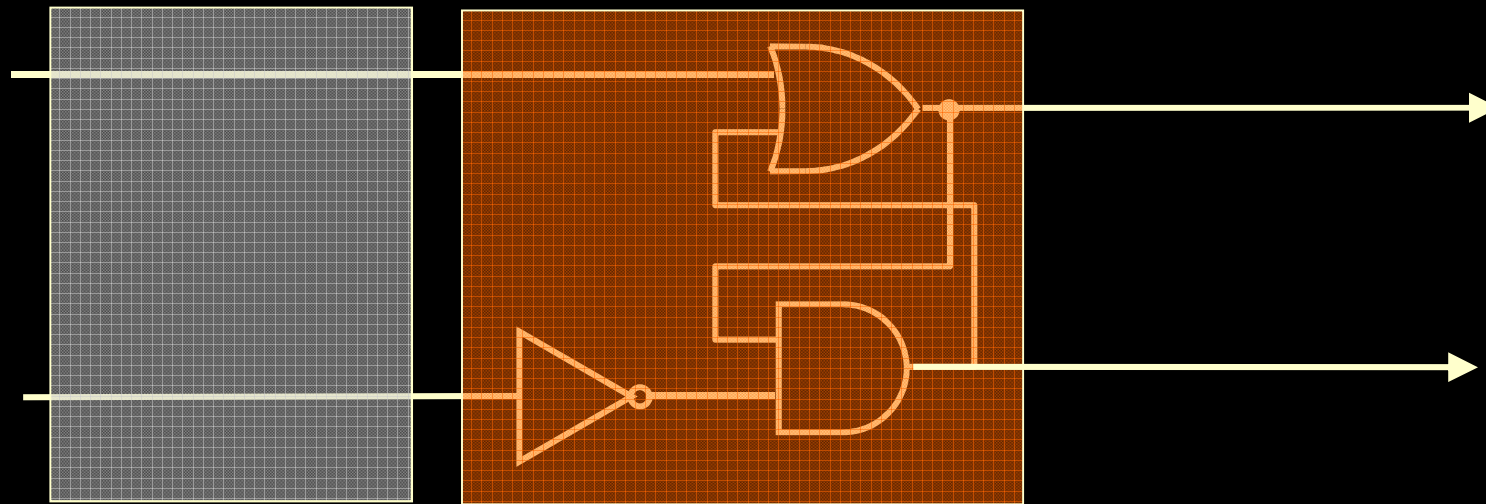




# *Set-Reset Flip-Flop*



# *Set-Reset Flip-Flop*



# *Set-Reset Flip-Flop*

