

# **DIGITAL SYSTEM**

## **PRACTICUM REPORT 8 : FLIP – FLOP APPLICATION**



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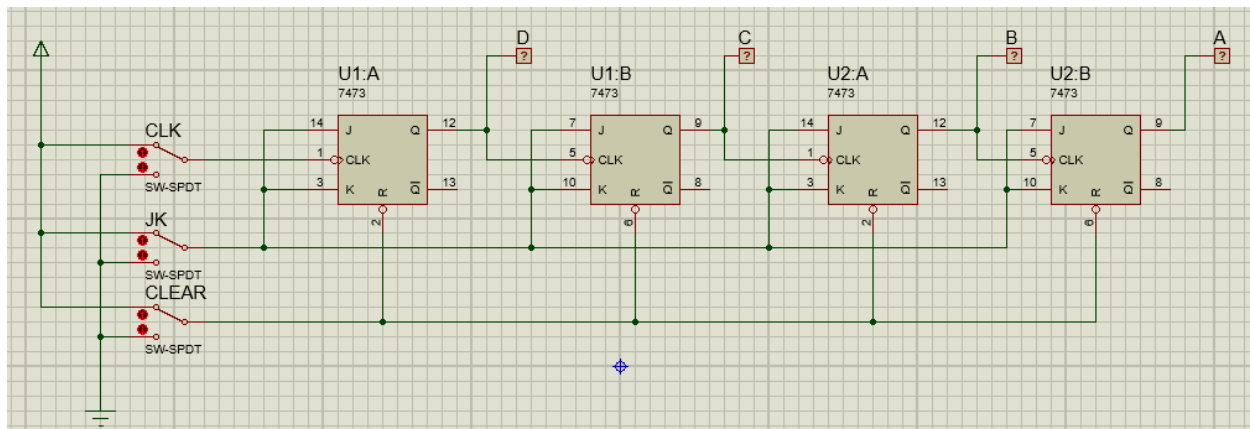
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**2019**

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### EXERCISE 1



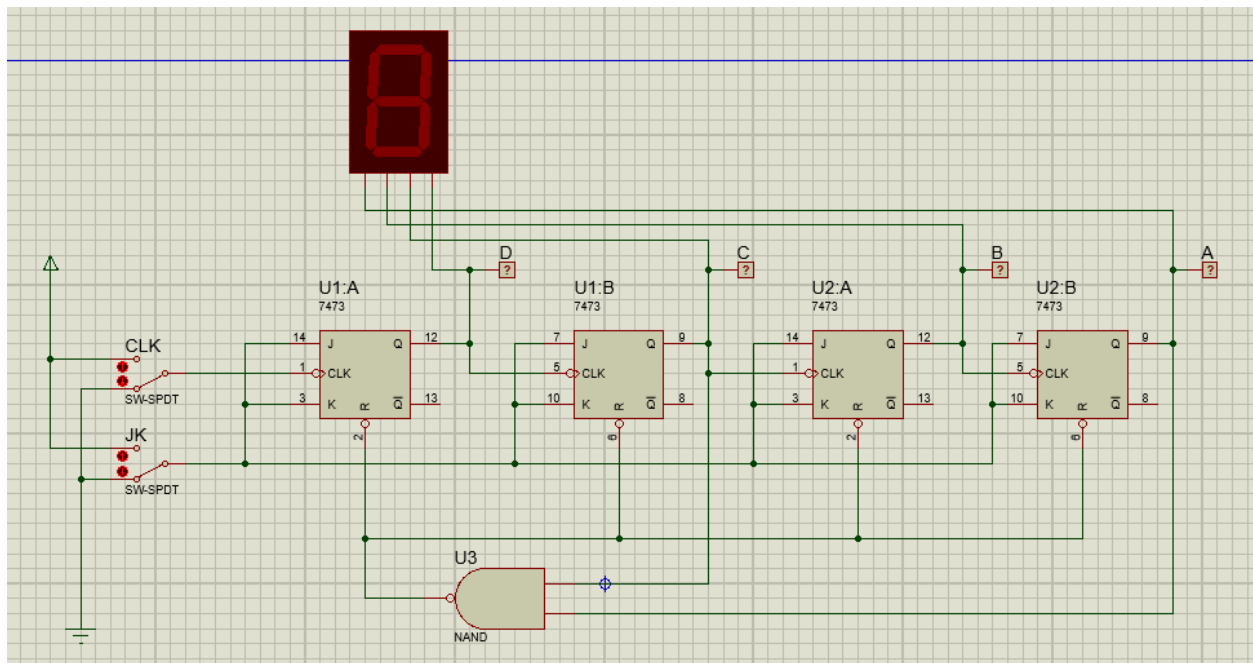
	INPUT			OUTPUT			
	CLEAR	JK	CLK	A	B	C	D
1	1	1	0	0	0	0	0
2	1	1	1	0	0	0	0
3	1	1	0	0	0	0	1
4	1	1	1	0	0	0	1
5	1	1	0	0	0	1	0
6	1	1	1	0	0	1	0
7	1	1	0	0	0	1	1
8	1	1	1	0	0	1	1
9	1	1	0	0	1	0	0
10	1	1	1	0	0	0	0
11	1	1	0	0	0	0	1
12	1	1	1	0	0	0	1
13	1	1	0	0	0	1	0
14	1	1	1	0	0	1	0
15	1	0	0	0	0	1	0

16	1	0	1	0	0	1	0
17	1	1	0	0	0	1	1
18	1	1	1	0	1	1	1
19	0	1	0	0	0	0	0
20	0	1	1	0	0	0	0

- What is the function of :
  - Switch CLK : to save the biner.
  - Switch JK : main counter.
  - Switch : to reset JK's condition.
- Conclusion :
 

= When CLK = 0, so the condition changes.

## EXERCISE 2



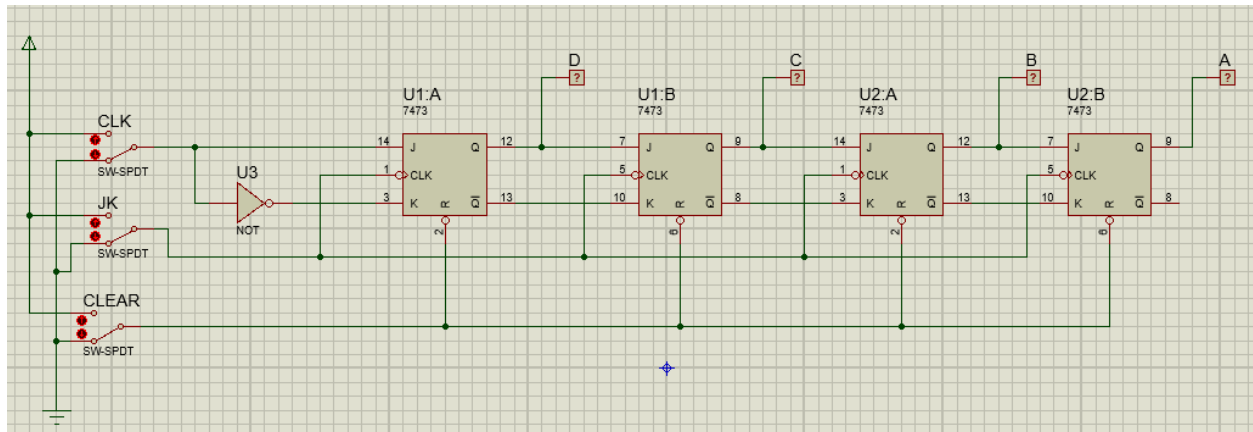
	INPUT		OUTPUT			
	JK	CLK	A	B	C	D
1	1	0	0	0	0	0
2	1	1	0	0	0	0
3	1	0	0	0	0	1
4	1	1	0	0	0	1
5	1	0	0	0	1	0
6	1	1	0	0	1	0

7	1	0	0	0	1	1
8	1	1	0	0	1	1
9	1	0	0	1	0	0
10	1	1	0	1	0	0
11	1	0	0	1	0	1
12	1	1	0	1	0	1
13	1	0	0	1	1	0
14	1	1	0	1	1	0
15	1	0	0	1	1	1
16	1	1	0	1	1	1
17	1	0	1	0	0	0
18	1	1	1	0	0	0
19	1	0	1	0	0	1
20	1	1	1	0	0	1
21	0	0	1	0	0	1
22	0	1	1	0	0	1
23	1	0	0	0	0	1
24	1	1	0	0	0	1

• **Conclusion :**

- When JK = 1 CLK = 1, it will save variable before.
- When JK = 1 CLK = 0, then the value changes +1.
- When JK = 0 CLK = 0/1, then the value is 0.

**EXERCISE 3**



	CLR	JK	CLK	A	B	C	D
1	0	X	-	0	0	0	0
2	1	1	-	0	0	0	0
3	1	1	1	0	0	0	1
4	1	1	2	0	0	1	1
5	1	1	3	0	1	1	1
6	1	0	4	1	1	1	0
7	1	0	5	1	1	0	0

8	1	0	6	1	0	0	0
9	1	0	7	0	0	0	0
10	1	0	8	0	0	0	0
11	1	1	9	0	0	0	1
12	1	0	10	0	0	1	0
13	1	0	11	0	1	0	0
14	1	0	12	1	0	0	0
15	1	0	13	0	0	0	0

- **Conclusion :**

- CLEAR = RESET -> when clear = 0, then the value is 0.
- Happens exchange of the value if click 2x.
- For JK value = 1 and the KLOP in, then can calculate.