

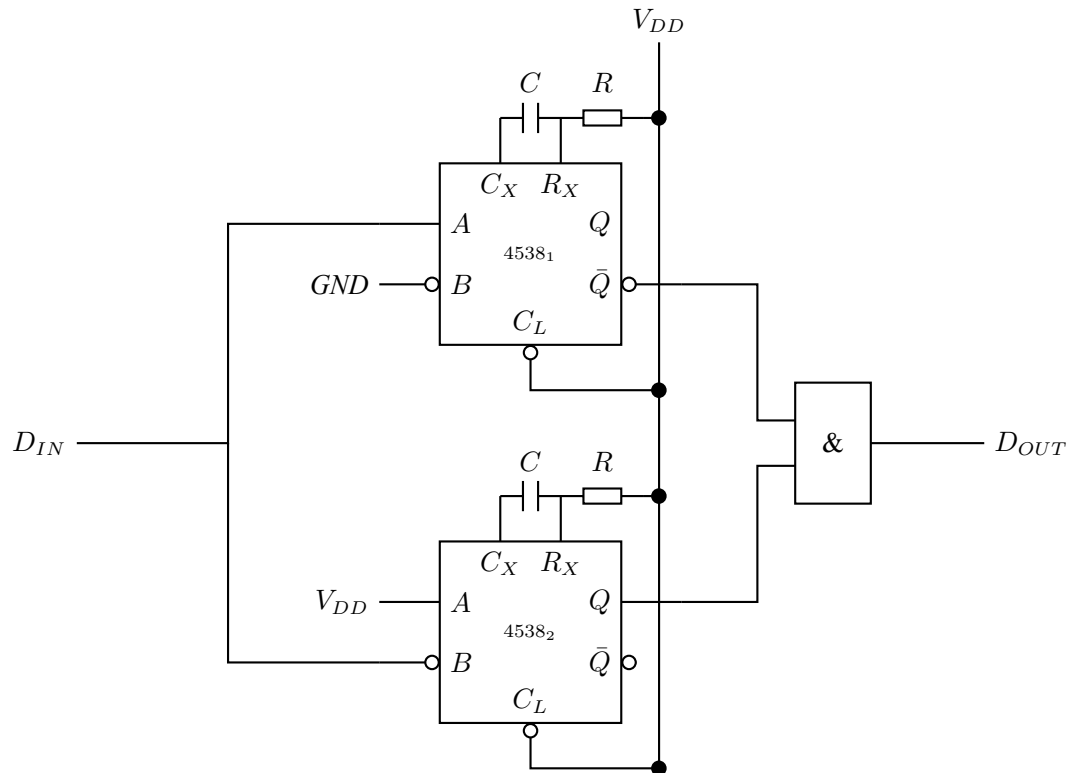
Digital Circuit Fall 2019

Yuxuan Zhang, XJTU, 2160909016

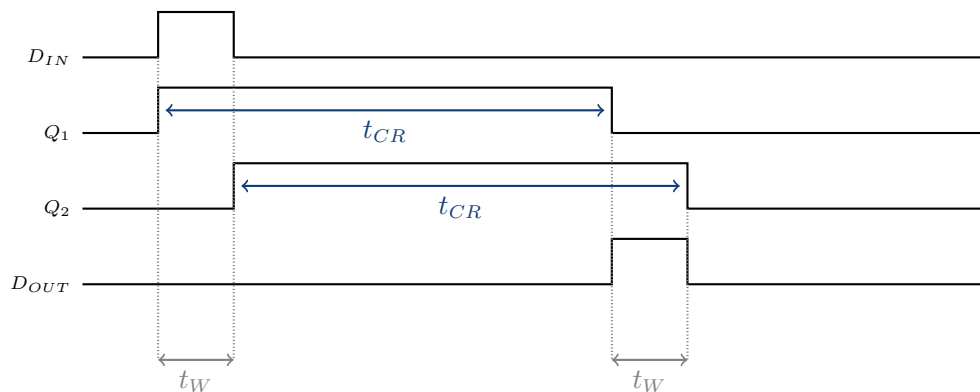
Session 5 - Sequential circuit and unit

Session 1 Notes

Another method to generate delayed pulse - without losing its length

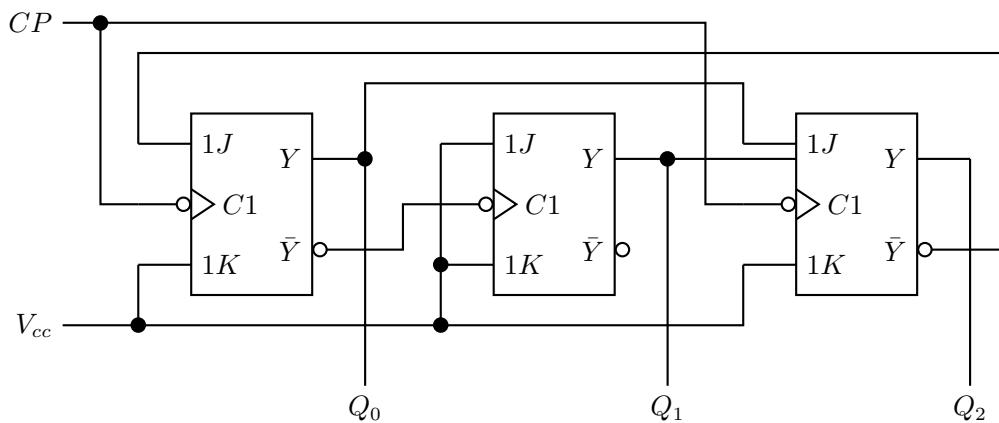


Functionality analysis:



Session 1 Homework

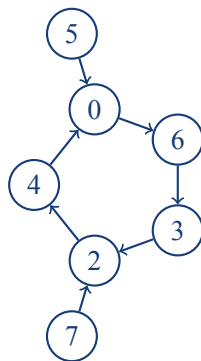
- **Problem 1 - 8.3** Analyze Logical function of the given circuit.



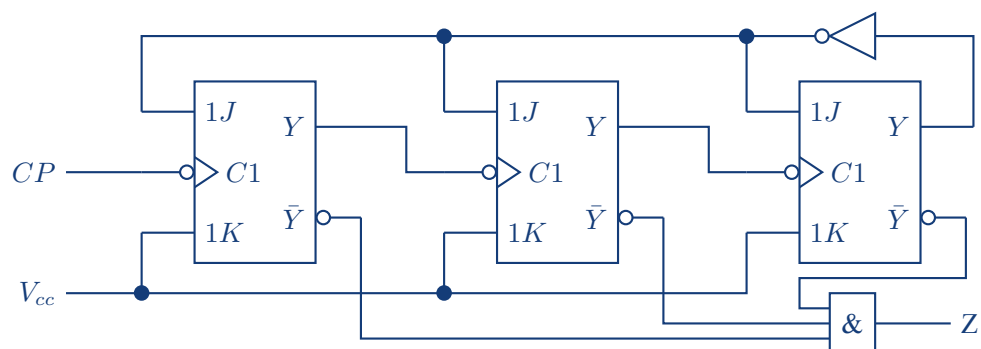
$K \equiv 1$, $J=1$ flip, $J=0$ reset.

CP	Q_0	Q_1	Q_2	Q_0^N	Q_1^N	Q_2^N	CP^N
0	0	0	0	1	1	0	6
1	0	0	1	0	0	0	0
2	0	1	0	1	0	0	4
3	0	1	1	0	1	0	2
4	1	0	0	0	0	0	0
5	1	0	1	0	0	0	0
6	1	1	0	0	1	1	3
7	1	1	1	0	1	0	2

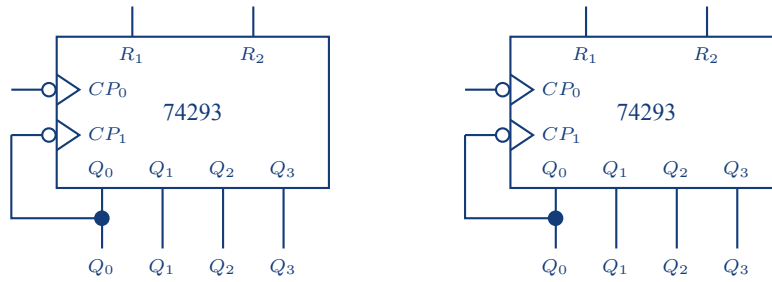
Carno Chart:



- **Problem 2 - 8.6** Design a circuit using Jump-Key flip-flop to serve given function.



- **Problem 3 - 8.7** Build a 60 counter with 74LS293.



- **Problem 4 - 8.12** Analyze Logical function of the given circuit.
- **Problem 5 - 8.13 .**
- **Problem 6 - 8.17 .**

Session 6 - Sequential circuit and unit

Session 2 Homework

- **Problem 1 - 9.1 .**
- **Problem 2 - 9.5 .**
- **Problem 3 - 9.8 .**
- **Problem 4 - 9.13 .**