Digital Circuit Fall 2019

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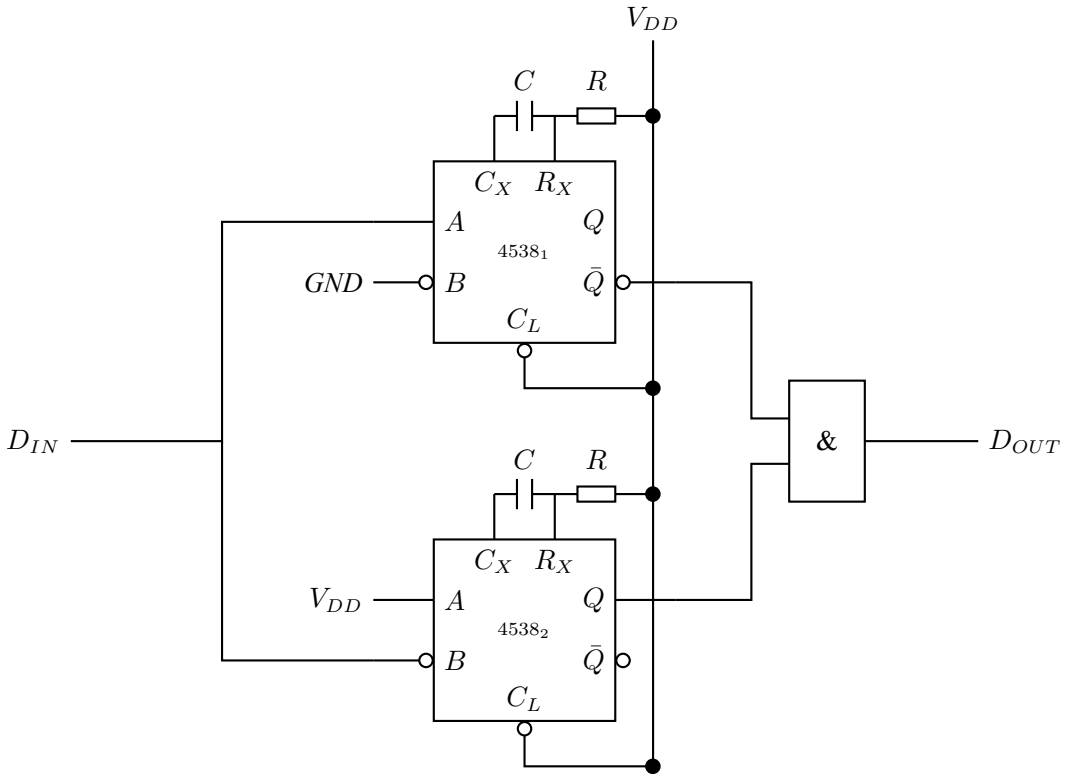
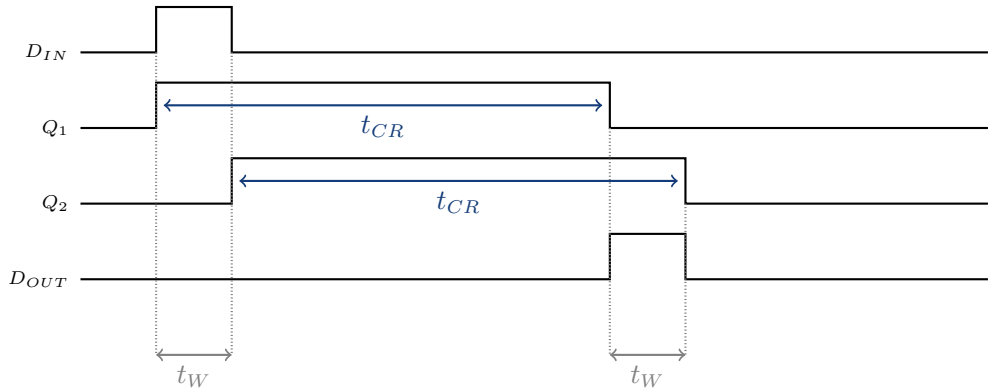
Session 5 - Sequential circuit and unit

Session 1 Notes

Another method to generate delayed paluse - without losing its length

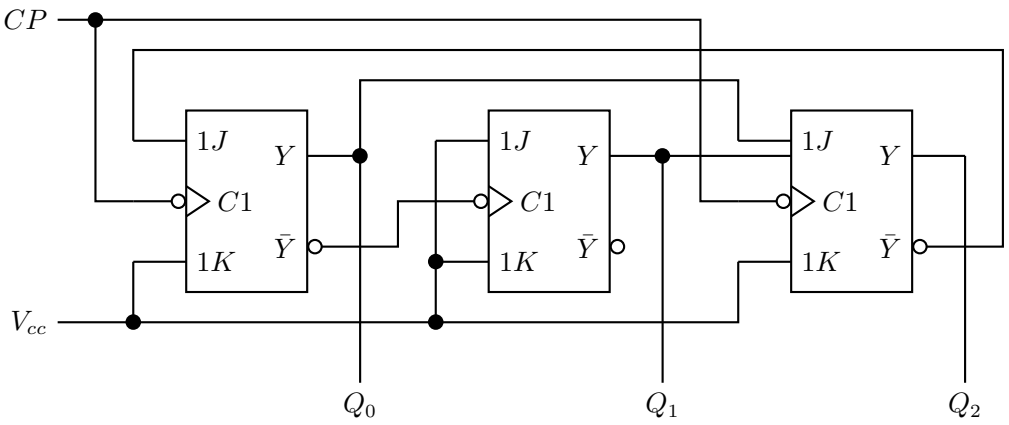


Functionality analysis:



Session 1 Homework

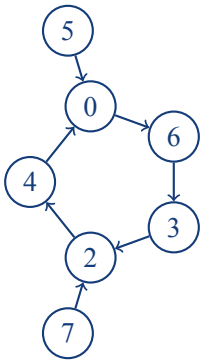
• **Problem 1 - 8.3** Analyze Logical function of the given circuit**.**



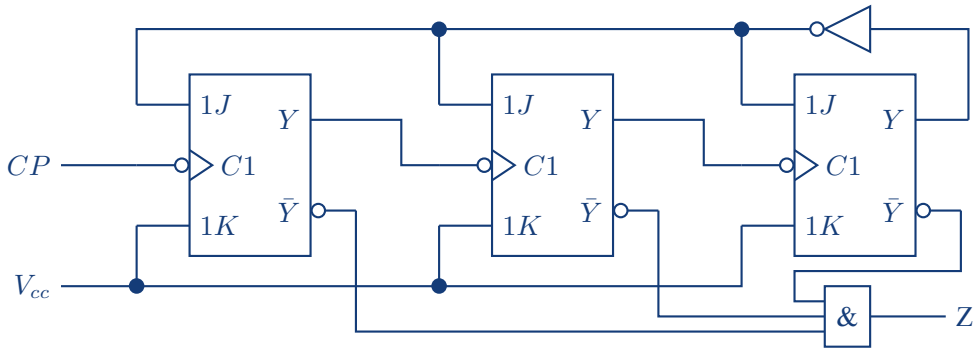
$K \equiv 1$, J=1 flip, J=0 reset.

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

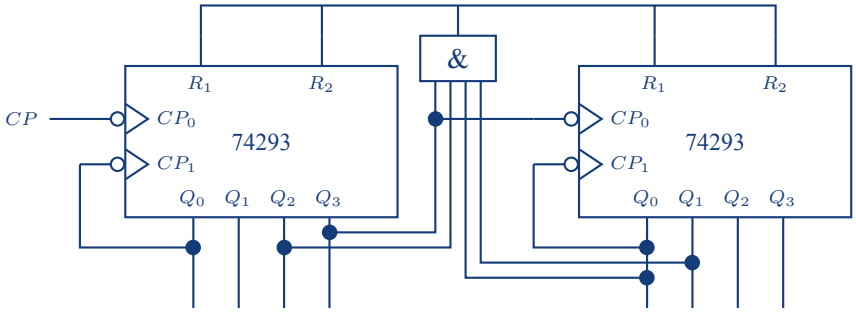
Carno Chart:



• **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 .**