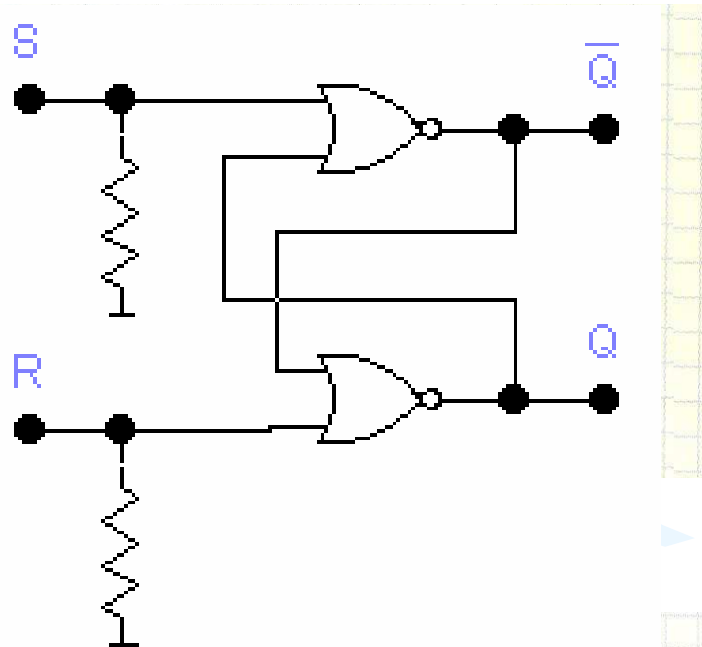




DIGITALNA ELEKTRONIKA

SR FLIP-FLOP

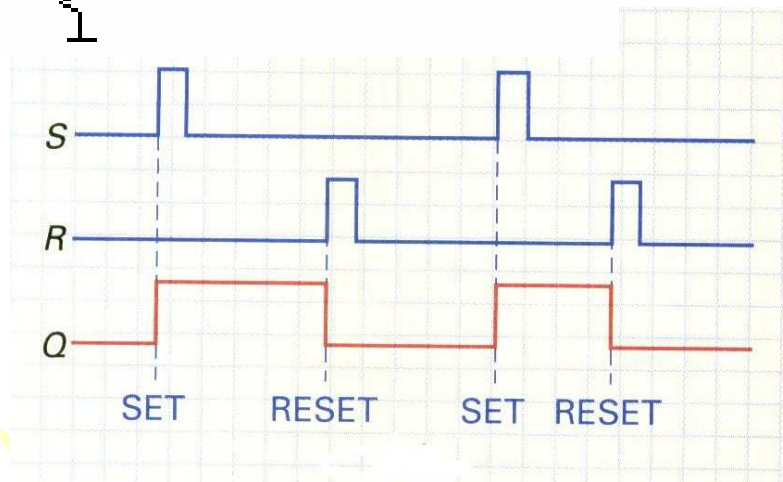


S	R	Q
0	0	Q
0	1	0
1	0	1
1	1	Race

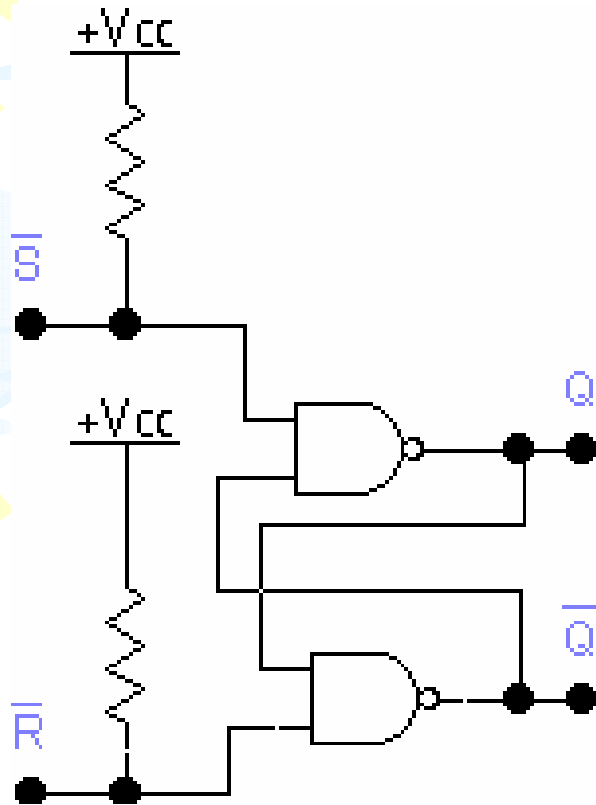
No Change

Reset

Set

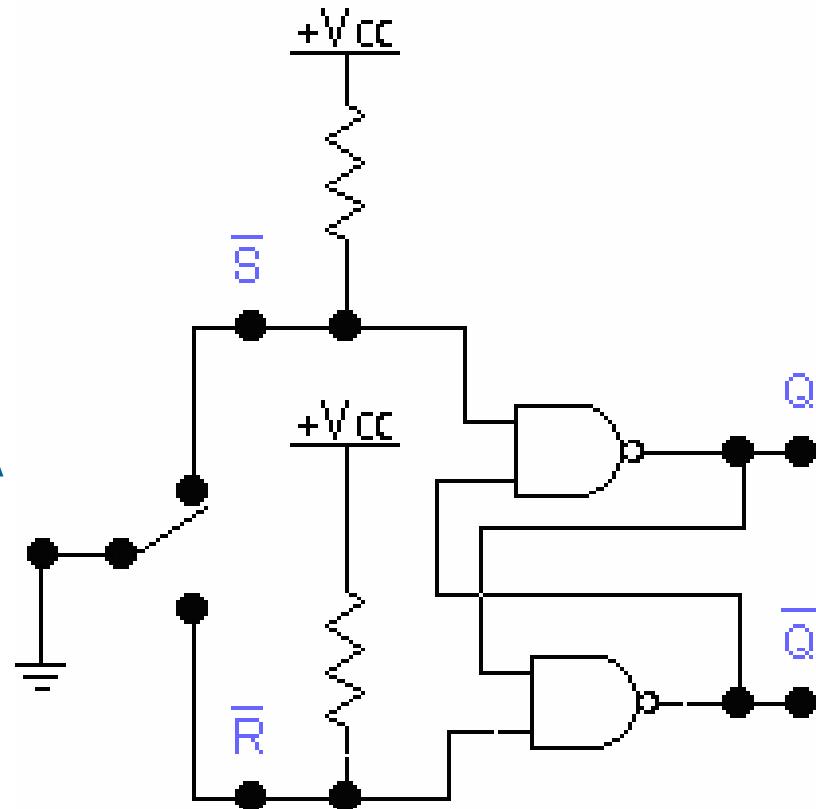


SR FLIP-FLOP SA NI KOLIMA

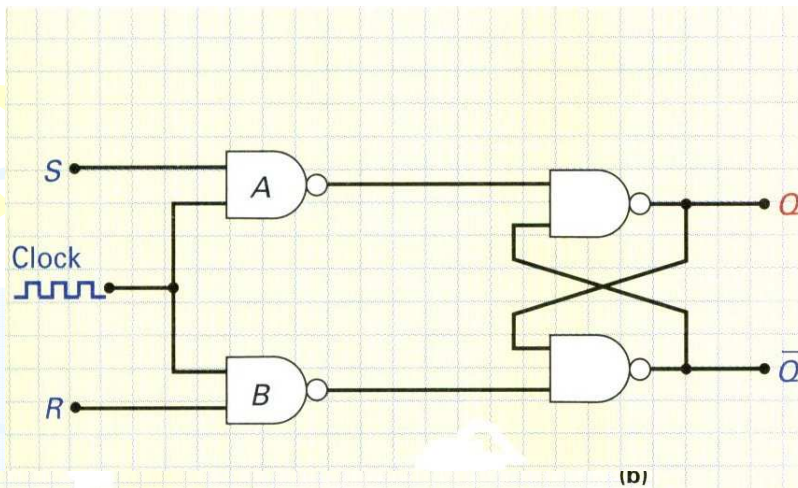


PRIMENA SR FLIP FLOPA

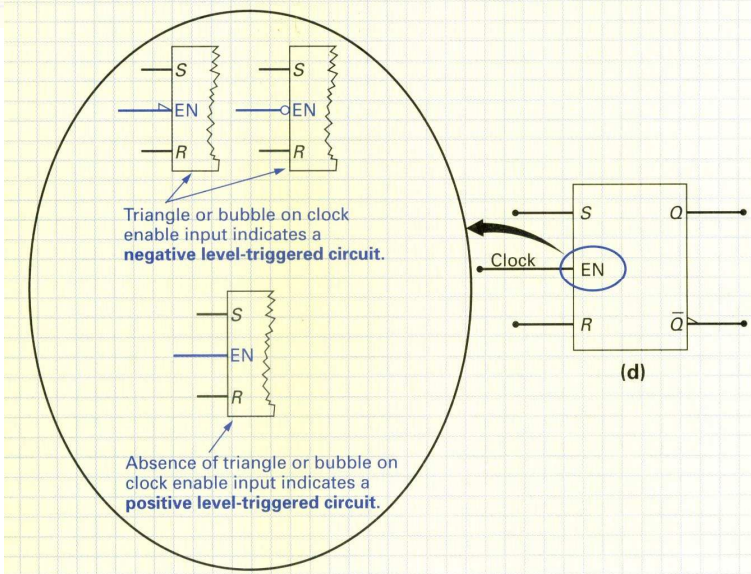
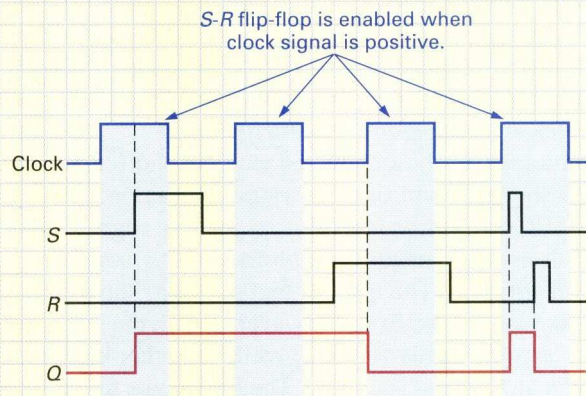
- SKLOP KOJI
ELIMINISE EFEKAT
NEZELJENIH
PROMENA SIGNALA
IZAZVANIH VIBRACIJAMA
KONTAKTNOG PERA
KOD RELEA
PREKIDAČA I TASTERA



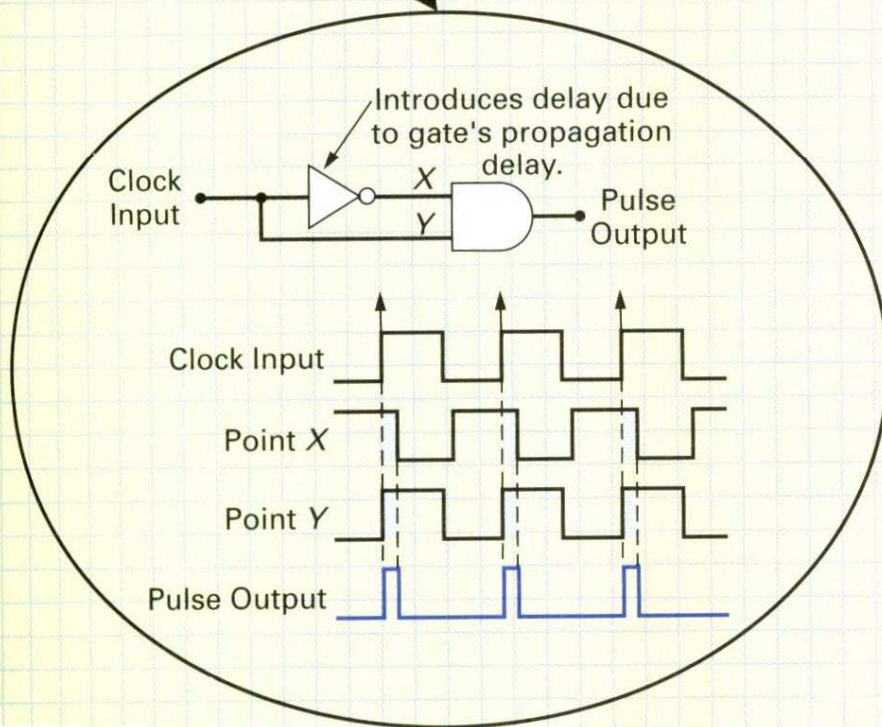
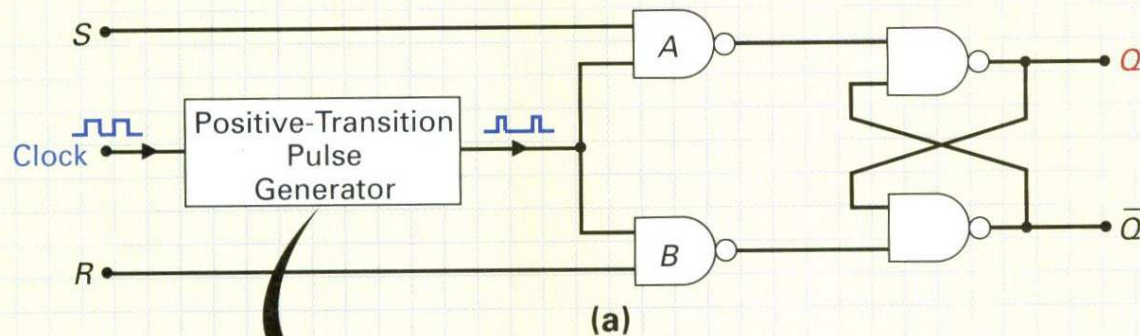
KLOKOVANI SR FLIP-FLOP



Clock	S	R	Q
0	0	0	No Change
0	0	1	No Change
0	1	0	No Change
0	1	1	No Change
1	0	0	No Change
1	0	1	0-Reset
1	1	0	1-Set
1	1	1	Race



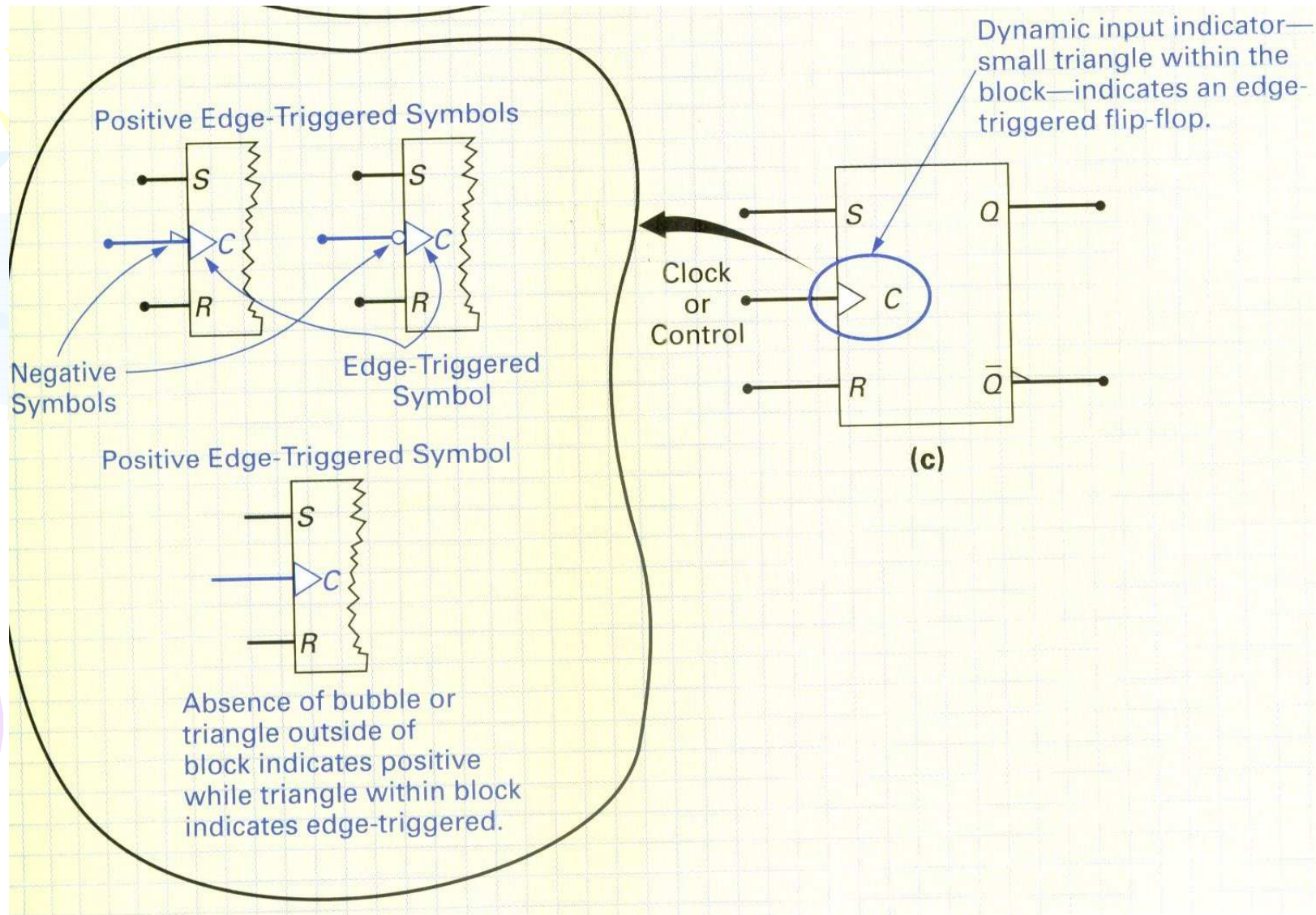
IVIČNI SR FLIP FLOP



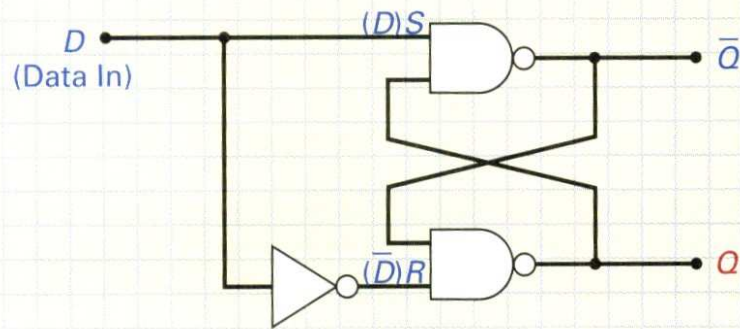
Clock	S	R	Q
0	X	X	No Change
1	X	X	No Change
↓	X	X	No Change
↑	0	0	No Change
↑	0	1	0—Reset
↑	1	0	1—Set
↑	1	1	Race

(b)

IVICNI FLIP FLOP SYMBOL



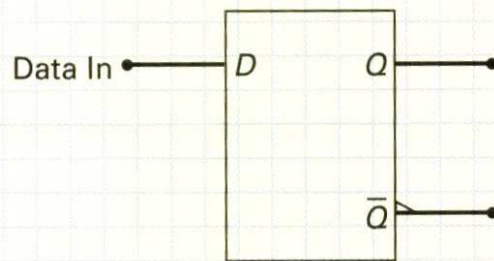
D FLIP-FLOP



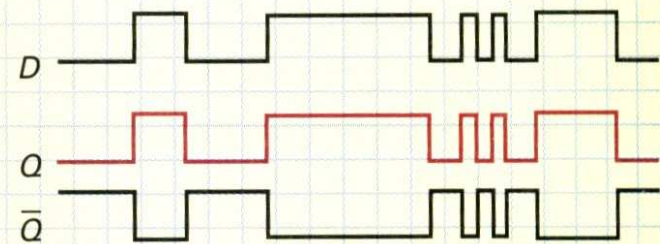
(a)

D	Q
0	0
1	1

(b)

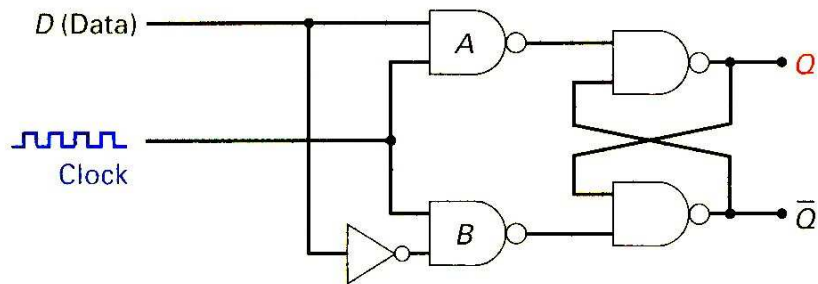


(c)

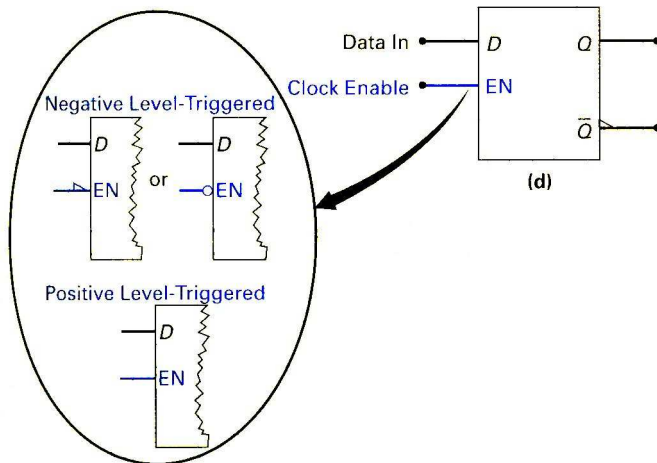
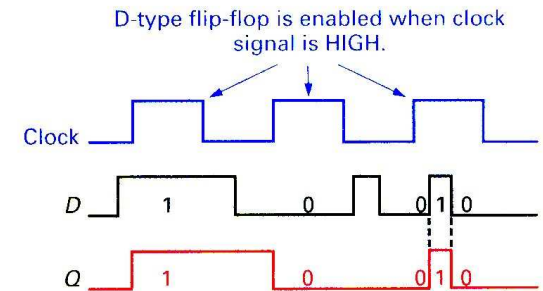


(d)

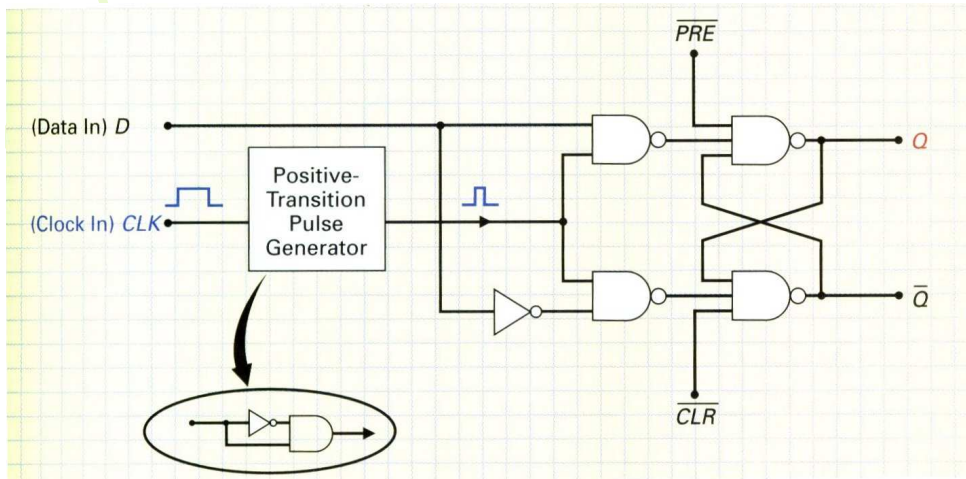
KLOKOVANI D FLIP-FLOP



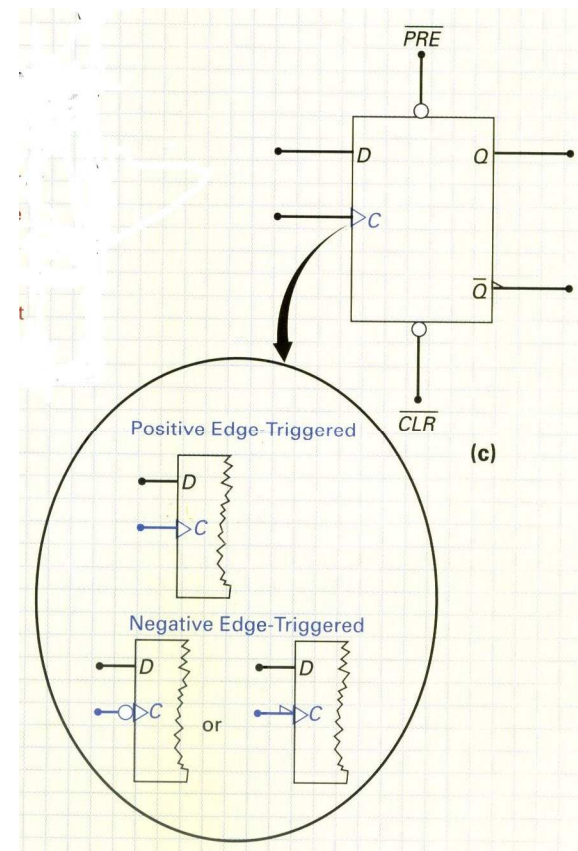
CLK	D	Q	
0	X	Q	No Change
1	0	0	Reset
1	1	1	Set



IVICNI D FF



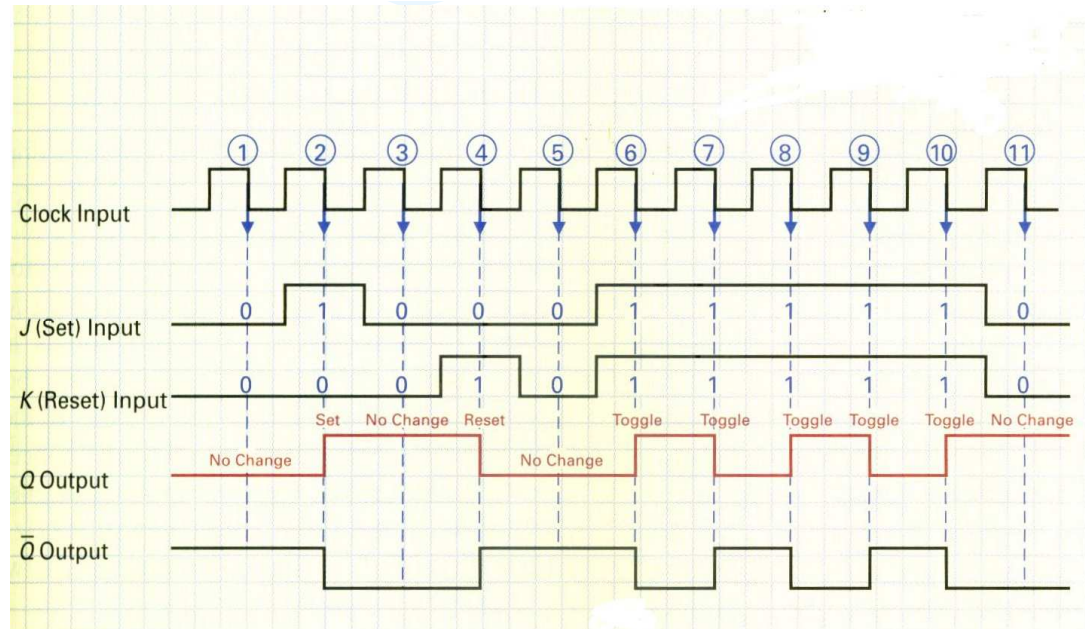
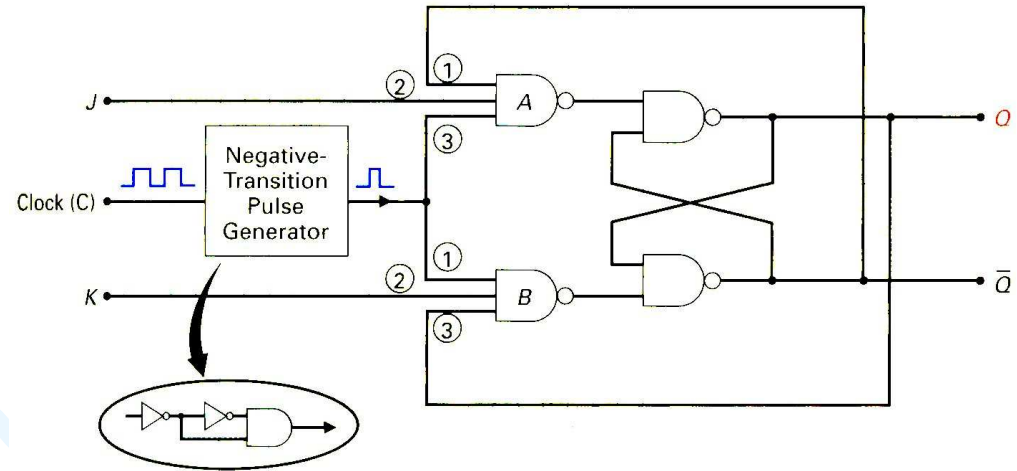
PRE	CLR	CLK	D	Q
0	1	X	X	1-Preset
1	0	X	X	0-Clear
0	0	X	X	Race
1	1	0, 1 or \downarrow	X	No Change
1	1	\uparrow	1	1-Set
1	1	\uparrow	0	0-Reset



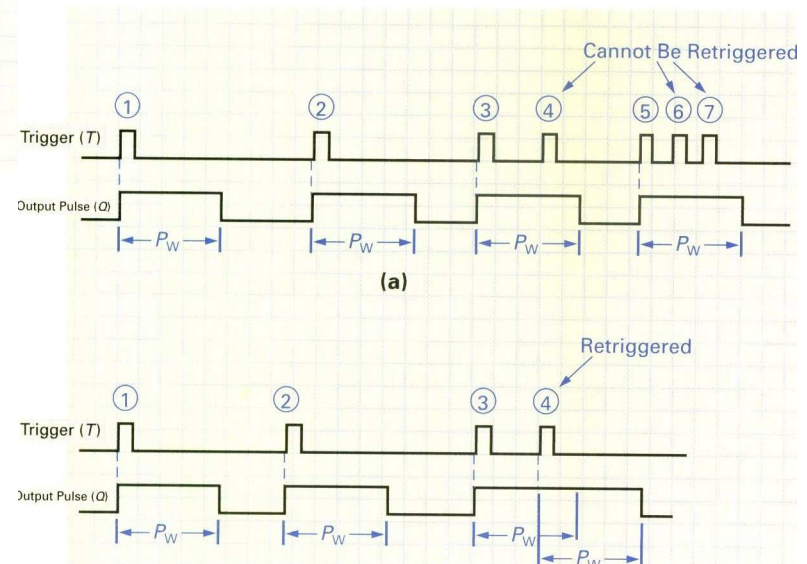
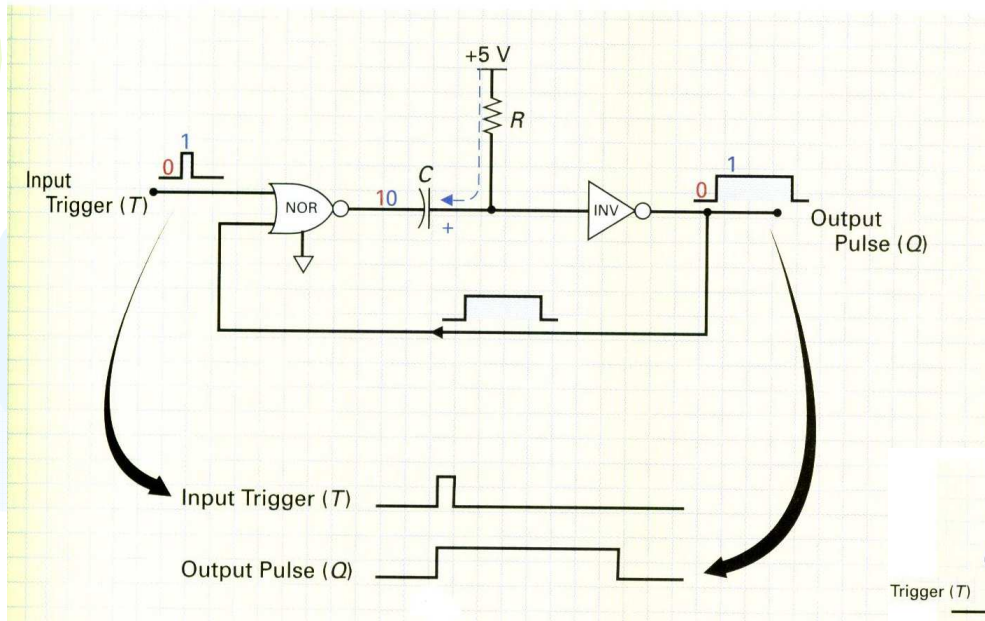
JK FF

(SET)(RESET)

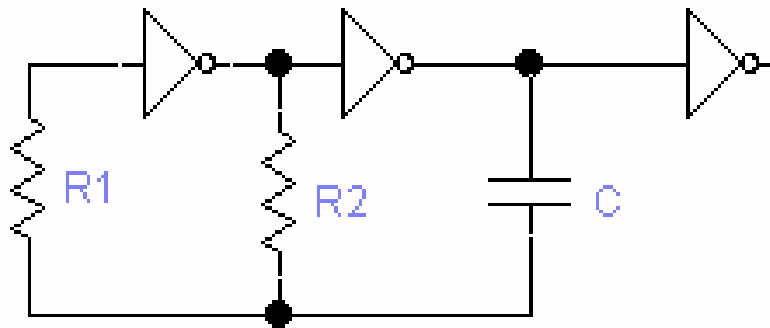
C	J	K	Q
0	X	X	Q — No Change
1	X	X	Q — No Change
↑	X	X	Q — No Change
↓	0	0	Q — No Change
↓	0	1	0 — Reset
↓	1	0	1 — Set
↓	1	1	\bar{Q} — Toggle



MONOSTABILNI MULTIVIBRATOR SA LOGICKIM KOLIMA



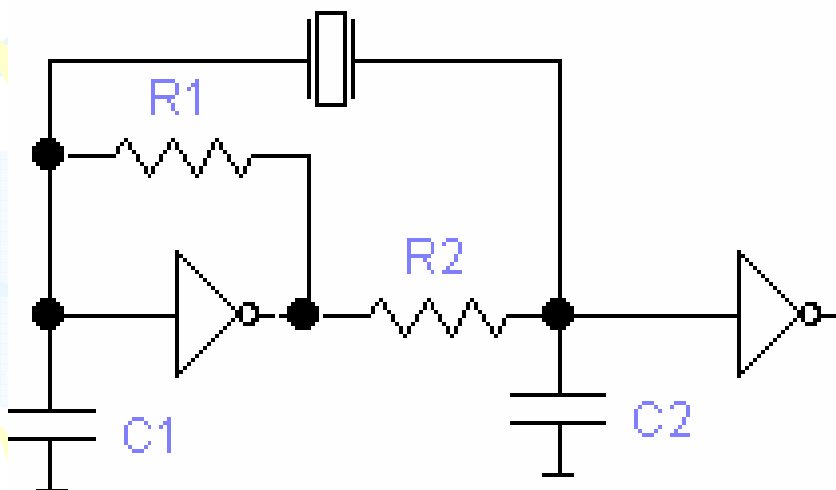
RC OSCILATOR SA LOGI;KIM KOLIMA



$$R_1 \approx 10 \cdot R_2$$

- PERIODA OSCILOVANJA ZAVISI OD $R_2 C$

KVARCNI OSCILATOR



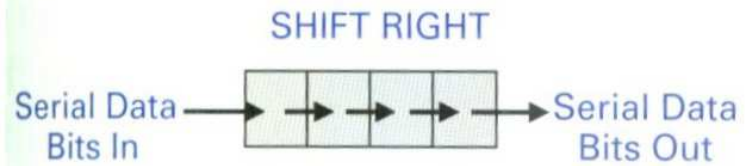
$$R_1 \approx 1M\Omega - 10M\Omega$$

$$R_2 \approx 100\Omega - 1000\Omega$$

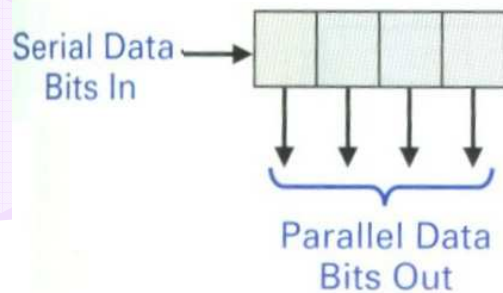
$$C_1, C_2 \approx 15pF - 27pF$$

- KOLO OSCILUJE NA PRALELNOJ (REZONANTNOJ) UCESTANOSTI KVARCA

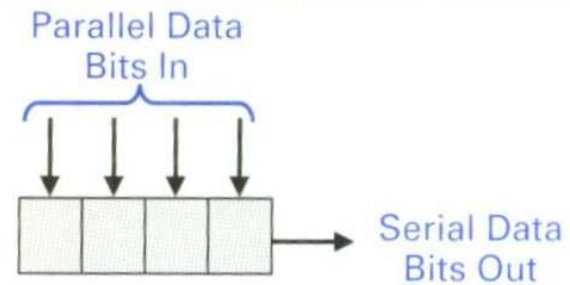
REGISTRI



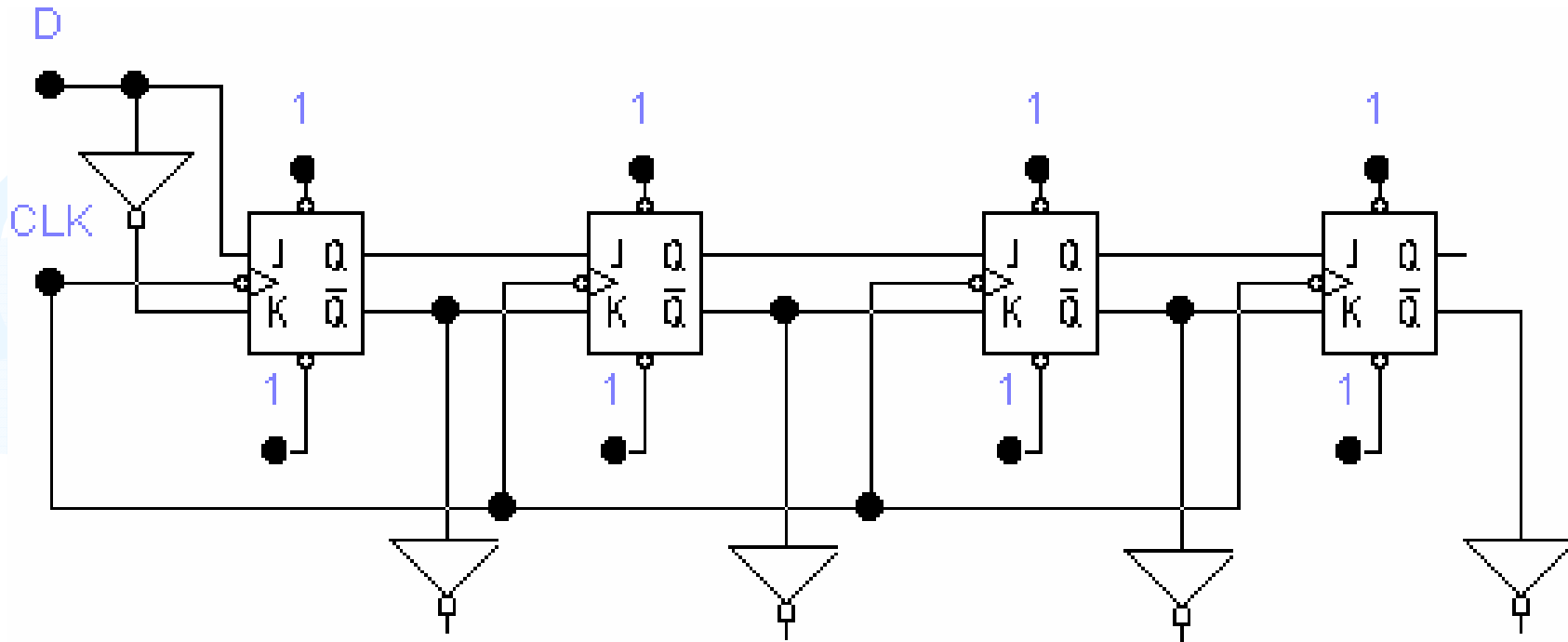
Serial-In, Parallel-Out (SIPO) Shift Registers



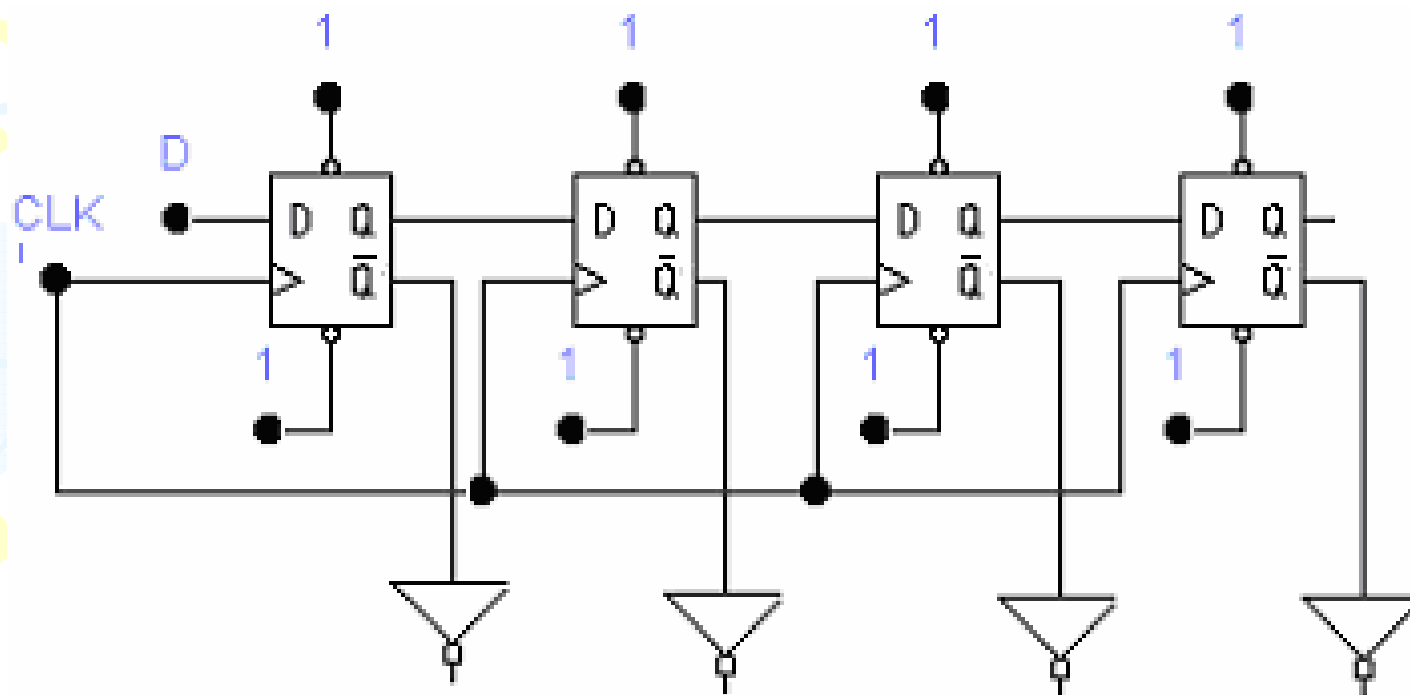
Parallel-In, Serial-Out (PISO) Shift Registers



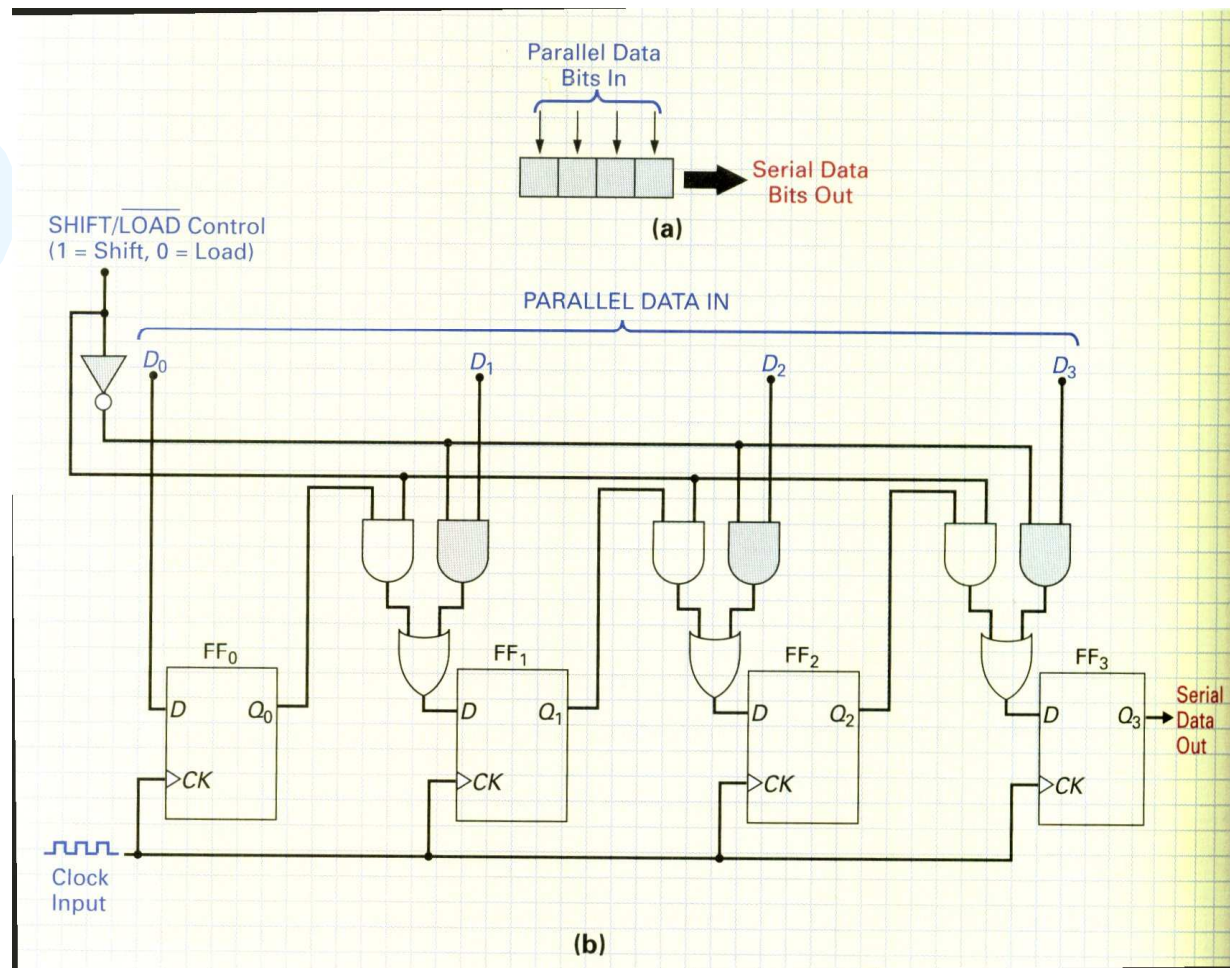
POMERAČKI REGISTAR SA JK FF




POMERAČKI REGISTAR SA D FF



PISO REGISTER

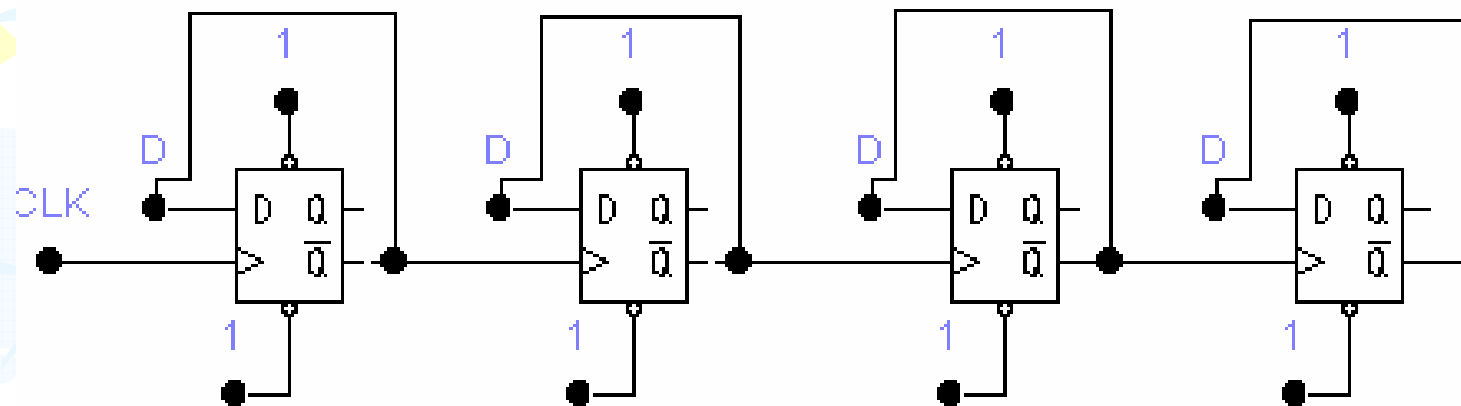





PROJECT

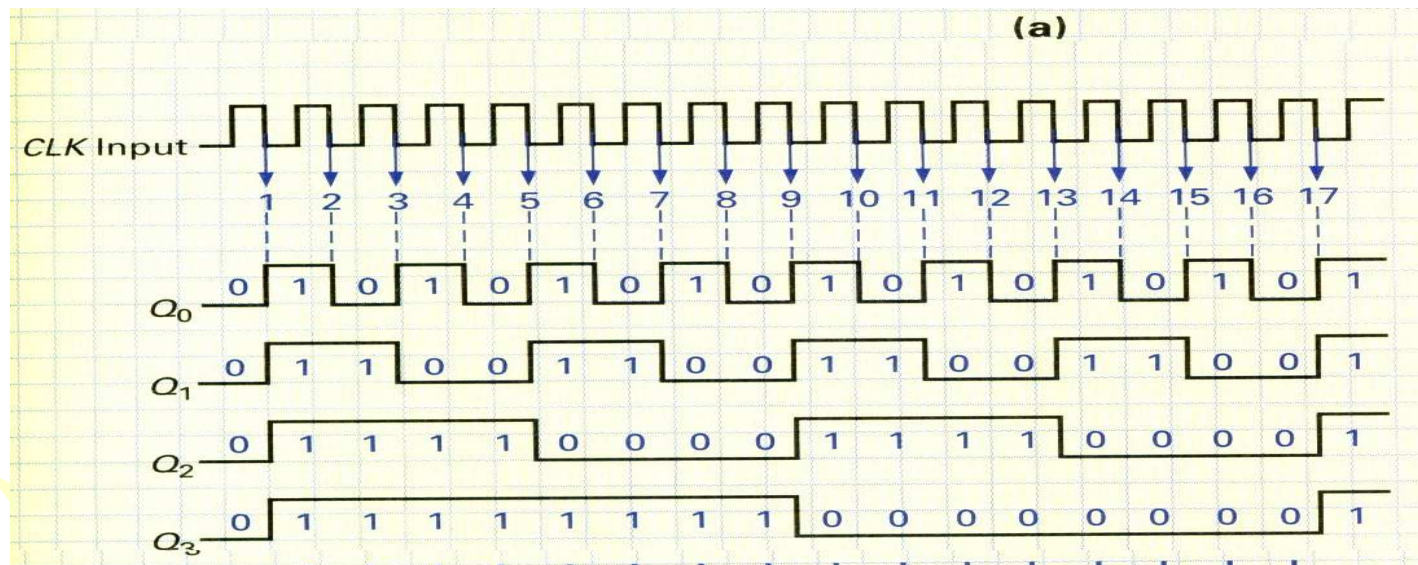


BROJAČ UNAPRED SA D FF





PROJECT



BROJAČ UNAZAD SA D FF

