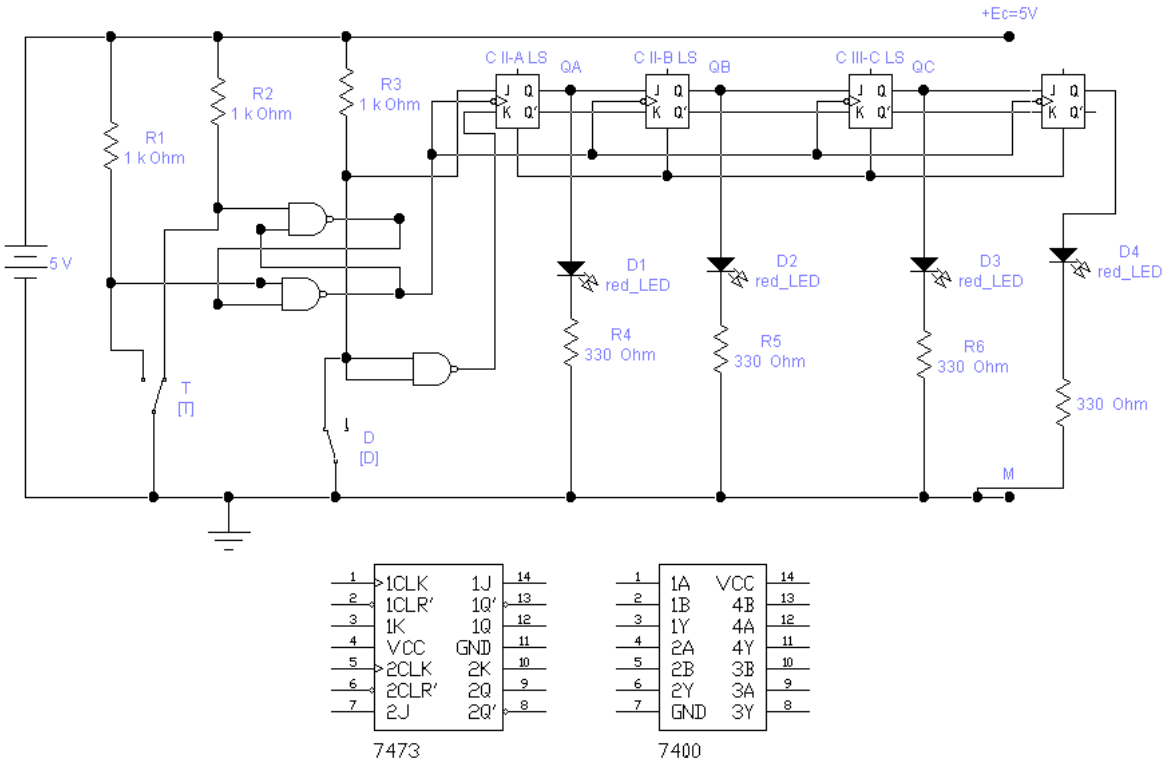
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CIRCUITE LOGICE SECVENTIALE :

Registru de deplasare

Un registru este un ansamblu de celule elementare de memorie in care se conserva provizoriu un grup de informatii binare,in vederea utilizarii sau prelucrari lor ulterioare.Circuitele la care introducerea sau extragerea datelor se face serial sunt cunoscute sub numele de registre de deplasare,intrucat informatia este translatata in serie de catre circuit.Structura tipica a unui registru de deplasare este reprezentata in figura:



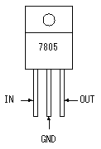
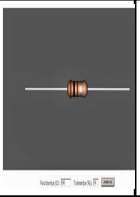
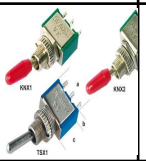
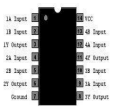
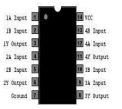
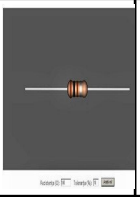
Circuitul se compune dintr-un lant de bistabil de tip JK conectati in cascada,celula de la intrarea in serie fiind de tip D.Potrivit tabelului din figura, sincronizat cu impulsul de tact, se efectueaza transferul in circuit a semnalului logic prezentat la intrarea serie.Se presupune ca initial starea logica a celulelor circuitului era „0” dupa al 4- lea impuls de tact,cuvantul aplicat la intrarea serie ocupa toate celulele registrului.

Numar impuls	Cuvant binar	Q_A	Q_B	Q_C	Q_D
0(stare initiala	…….	0	0	0	0
1	1	1	0	0	0
2	0	0	1	0	0
3	1	1	0	1	0
4	1	1	1	0	1

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Transferul secventei binare 1011 in celulele registru de deplasare
1.Lipiti componentele conform schemei.
2.Introduceti integratele in soclu,verificati continuitatea la pini.
3.Studiati configuratia pinilor(CI 7400,CI 7473).
4.Alimentati montajul cu tensiunea 5Vcc.
5.Se inscrie in registru secventa 1011 , intrarea de date fiind intrerupatorul D conectat la intratea J a primului bistabil.
6.Concepeti transferul secvententei binare 1010 si inscrie-ti-o in registru.

Lista de piese (componente electronice)

Nr.Crt.	Simbol	Denumire	Cod	Parametrii	Capsula	Nr.buc	Furnizor
1.		Stabilizator tensiune 5V cc	LM 7805	U_{stab}=5Vcc		1	---
2.	R_1.R_2,R_3	Rezistenta	RCG-1050 (RMG-1050)	Rn=1kΩ seria E12 Pn=0.5 W Toleranta +-10%		3	---
3.	B_1,B_2	Intrerupatoare basculante	KNX2 KNX1	Un=250 V In =1 A		2	---
4.	CI	Circuit integrat	7400	Vcc= 5V		1	
5.	CII, CIII	Circuite integrate	7473	Vcc= 5V		2	
6.	R_4-R_7	Rezistenta	RCG-1050 (RMG-1050)	Rn=330Ω seria E12 Pn=0.5 W Toleranta +-10%		4	---
7.	D_1-D_4	LED	MDE 1101 R	I_F=(10…30) mA V_F=1,7V		4	---