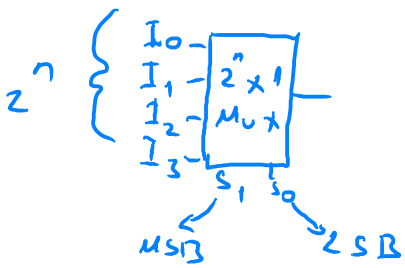
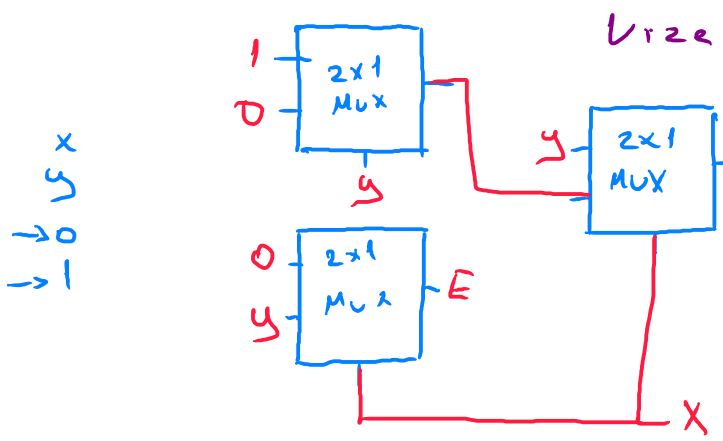

2^n
I_0
I_1
I_2
I_3
$2^n \times 1$
MUX
S_1
S_0
MSB
LSB

MSB

Y.T.

x	y	T	E
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

3 tane 2x1 mux kullanarak yarı tam toplayıcıyı gerçekleştirin.



Vize finalde 5li tip sorular gelebilir

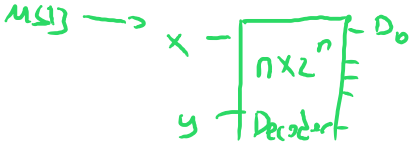
4) Kod çözücü (Decoder)

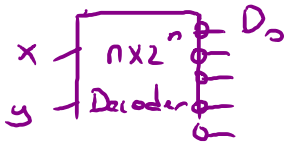
n bitlik girişimiz var 1 giriş aktif ediyor.

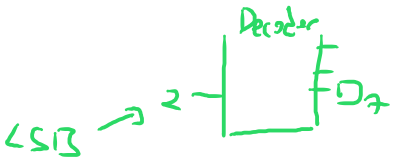
n=3

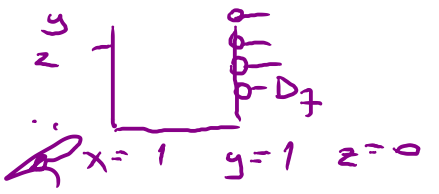
x	y	z	D_7	D_6	D_5	D_4	D_3	D_2	D_1	D_0
0	0	0	0	0	0	0	0	0	0	1
1	1	0	0	1	0	0	0	0	0	0

Tümleyen çıkışlı









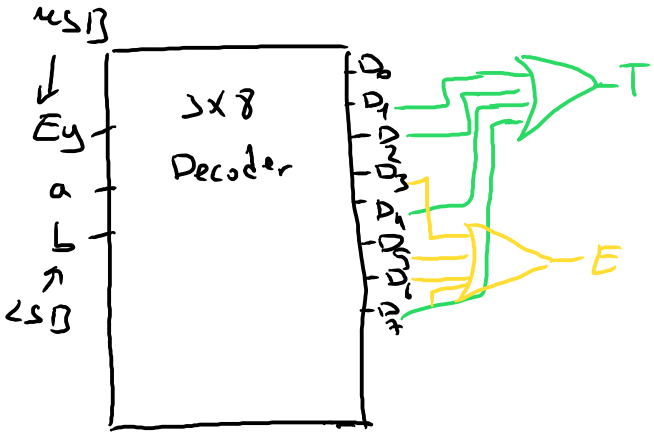
$D_0=1 \dots D_6=0 \dots D_7=1$

T.T. kod çözücü ile tasarla.

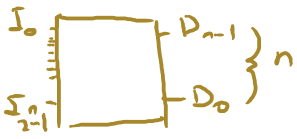
a	b	E_g	T	E
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

$T(E_g, a, b) = \Sigma(1, 2, 4, 7)$

$E(E_g, a, b) = \Sigma(3, 5, 6, 7)$



5) Kodlayıcılar (Encoder)



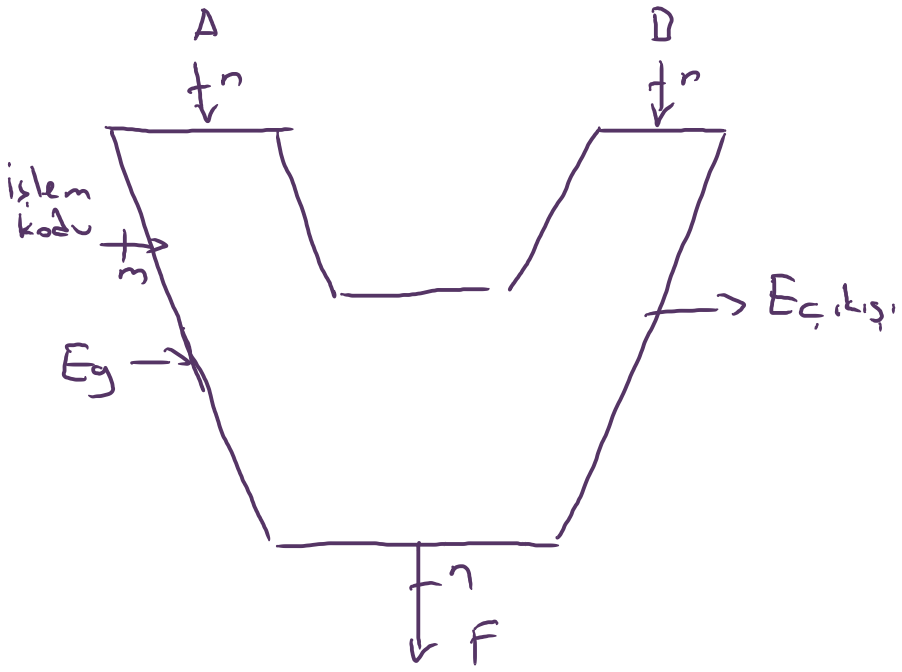
MSB Girişler LSB				Çıkışlar		
I_3	I_2	I_1	I_0	D_1	D_2	Ready

Σ_{2-1}^{n} - L→Ready

Ø→ önemsiz

0	0	0	0	Ø	Ø	0
0	0	0	1	0	0	1
0	0	1	Ø	0	1	1
0	1	Ø	Ø	1	0	1
1	Ø	Ø	Ø	1	1	1

6) ALU (Aritmetik Logic Unit)



① k bit 2 giriş

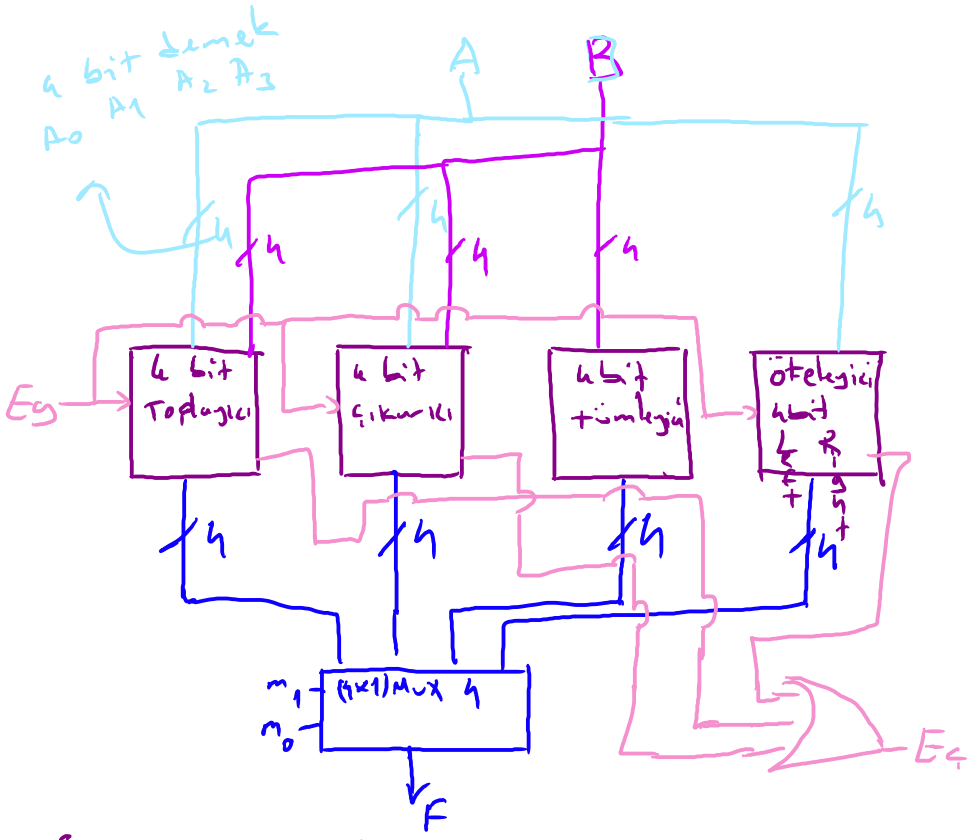
② → Eg, Eç

③ sonuç

④ işlem sayısı

m_1	m_0	işlem	Açıklama
0	0	$F = A + B$	A + B
0	1	$F = A - B$	A - B
1	0	$F = \overline{B}$	B'nin tümleyeni
1	1	$F = A_{sağ}$	A 1 bit sağa ötelenir

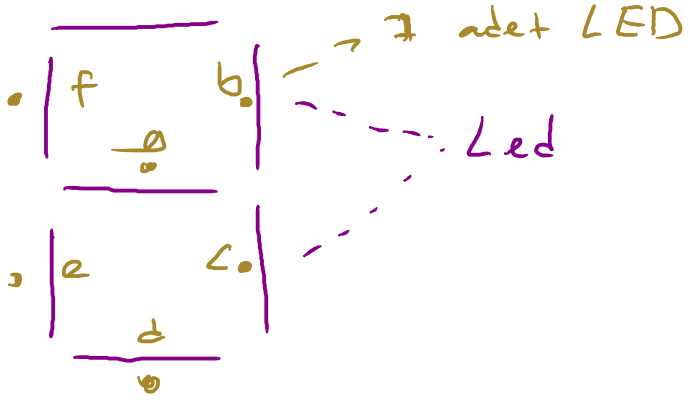
↳ sağa ötelenir.

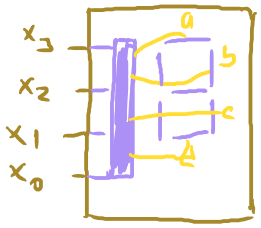


7 - Segment Display

- a

7 adet LED

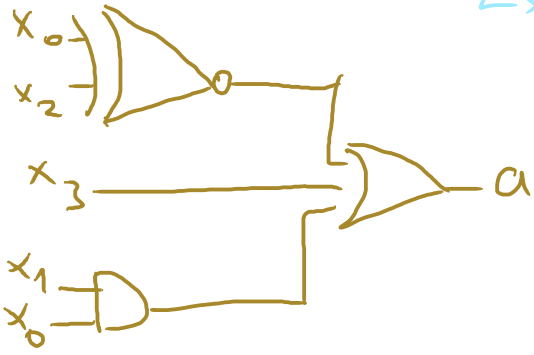




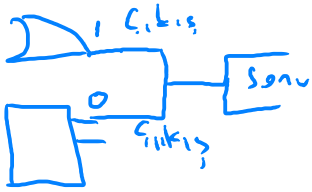
x_3	x_2	x_1	x_0	a	b	c	d	e	f	g
0	0	0	0	1	1	1	1	1	1	0
0	0	0	1	0	1	1	0	0	0	0
0	1	1	1	1	1	1	0	0	0	0
1	0	0	0	1	1	1	1	1	1	1
1	0	0	1	1	1	1	0	0	1	1
1	0	1	0	ø	ø	ø	ø	ø	ø	ø

a için

$a = x_3 + x_2x_0 + x_2'x_0' + x_1x_0$



Not: Çıkışlar birbirine bağlanmaz.

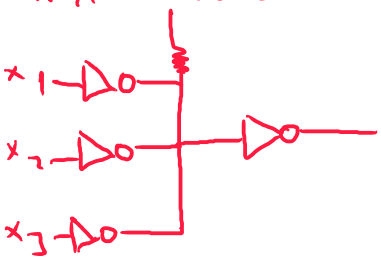


Sonuç ise 1 mi 0 mı olacak?

Bu sorunu Bufferlar çözer.

Tri state
üç durum

② Açık kollektörlü yapılar



Bölüm 8'den devam ediyoruz kitaptan artık yazmıyorum