

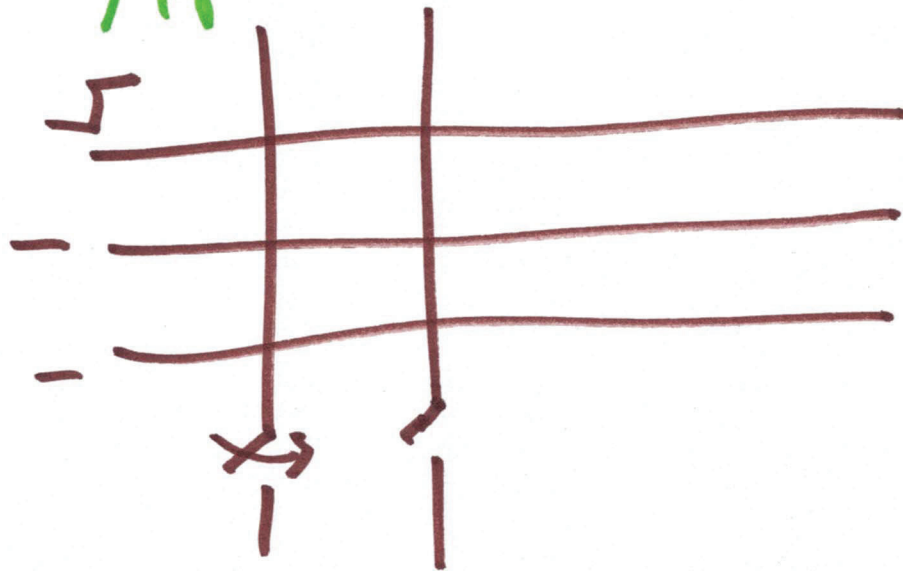
CPE 100

Digital
logic

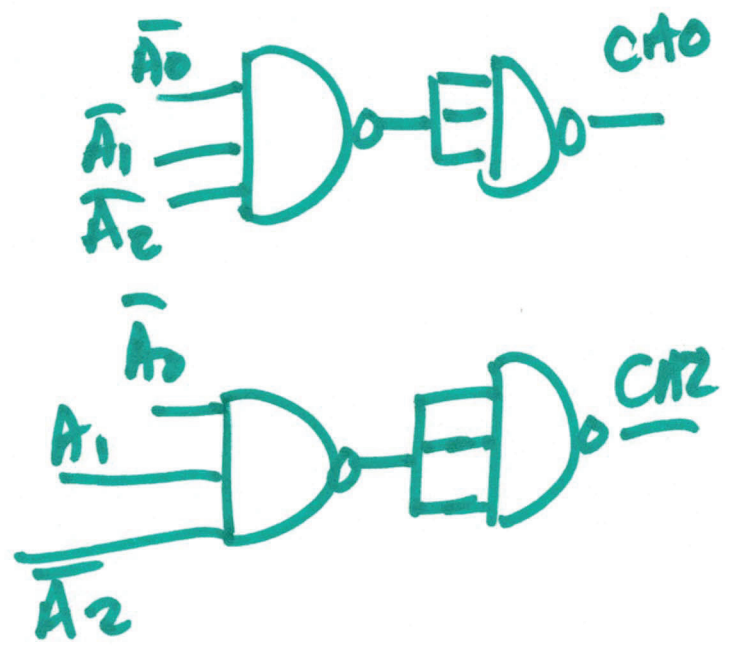
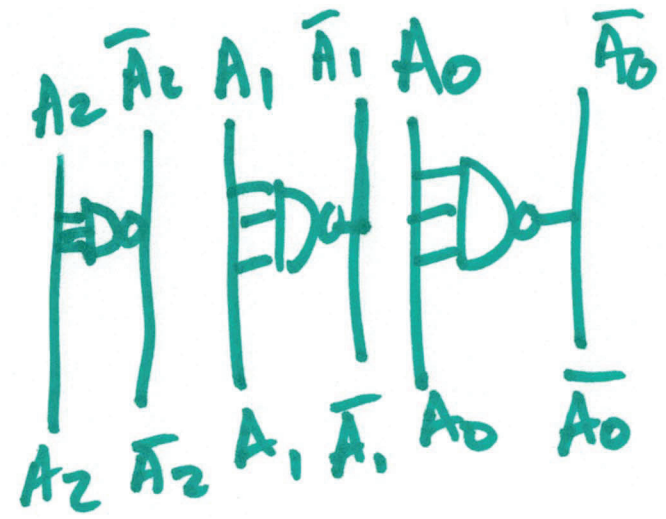
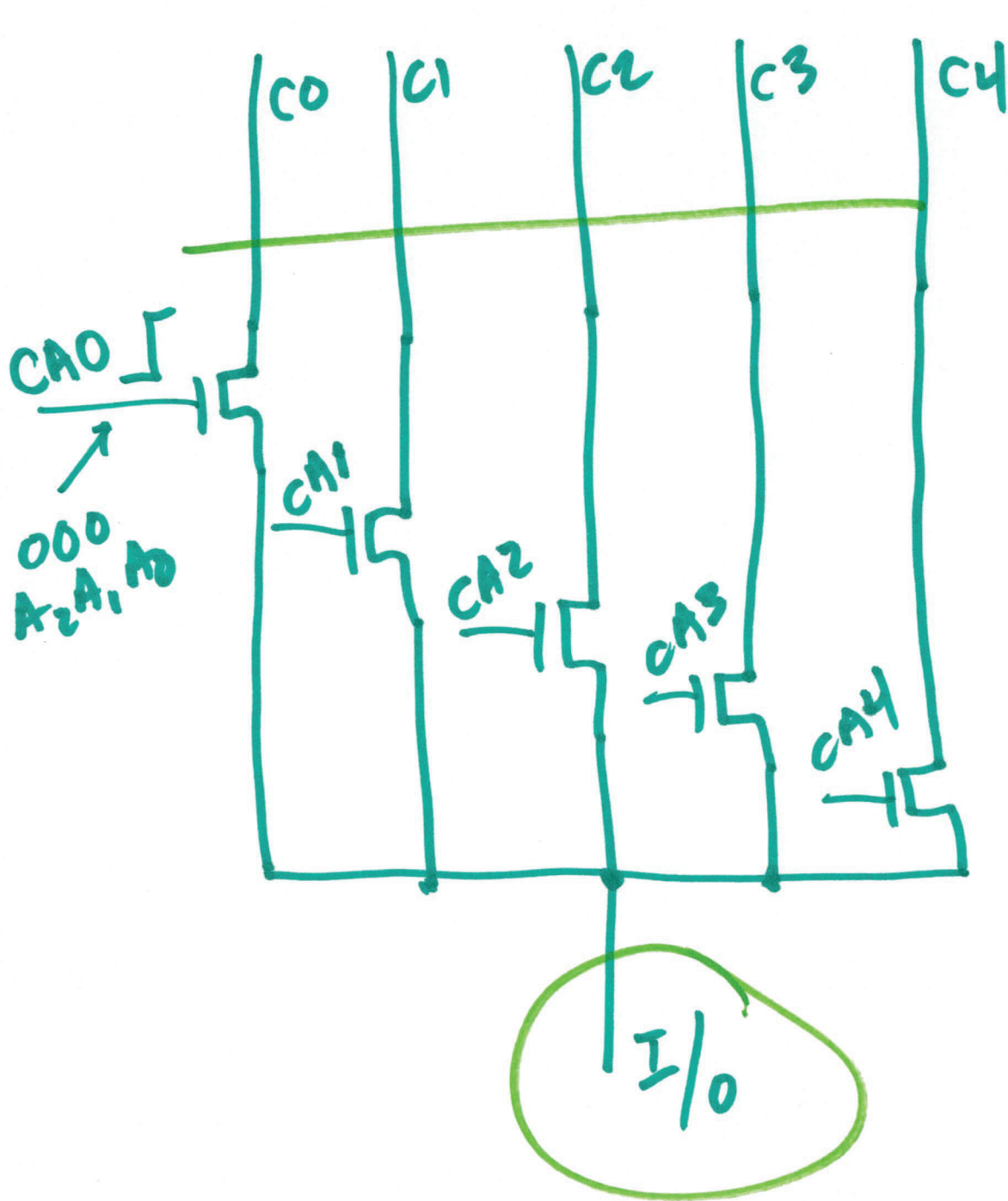
Lecture 23

DESIGN

April 21, 2021



1)



2)

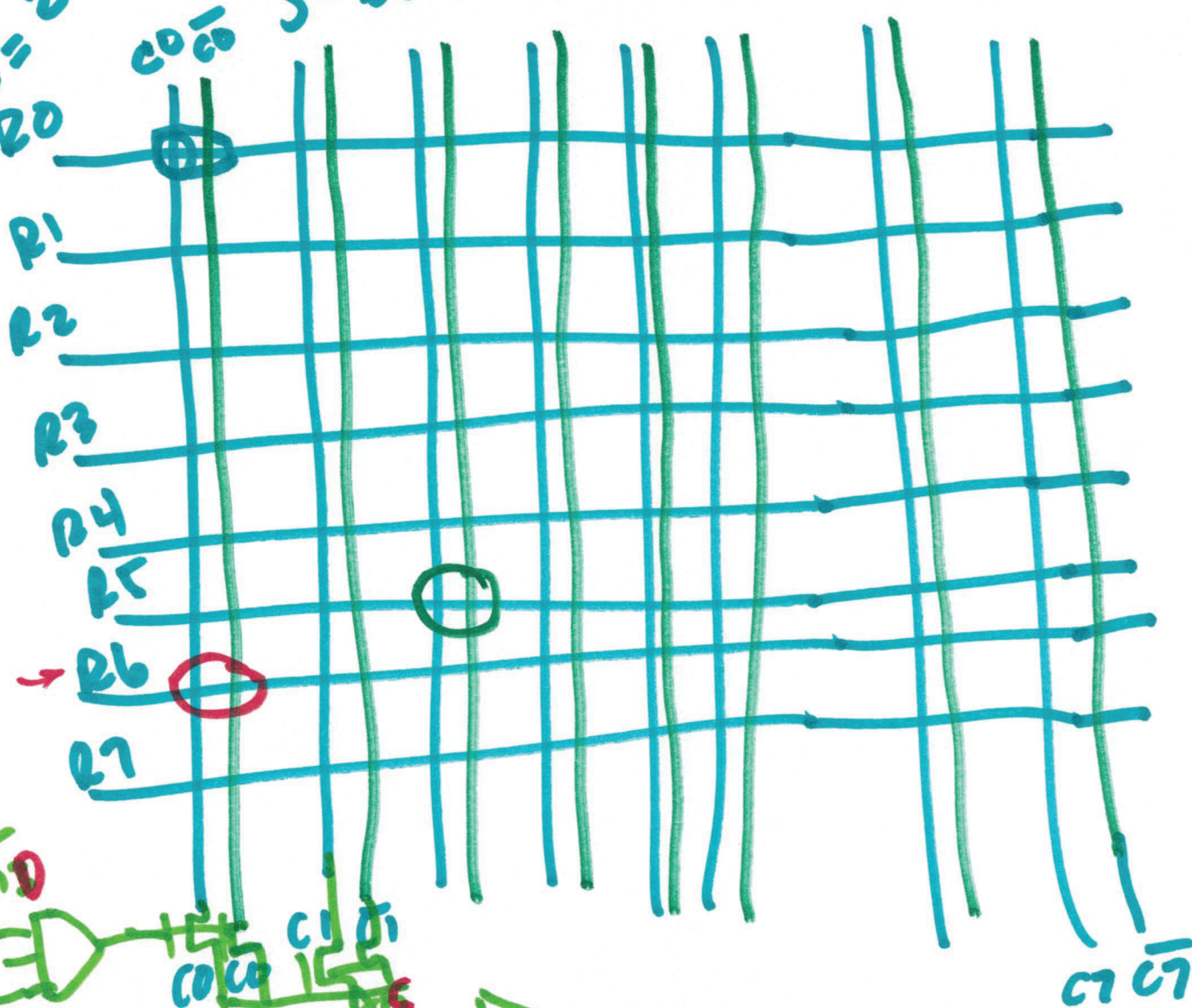
Register File (RF)

64 bits

64

$2^6 = 64$
 $000000 = 0$
 $111111 = 63 = 2^6 - 1$

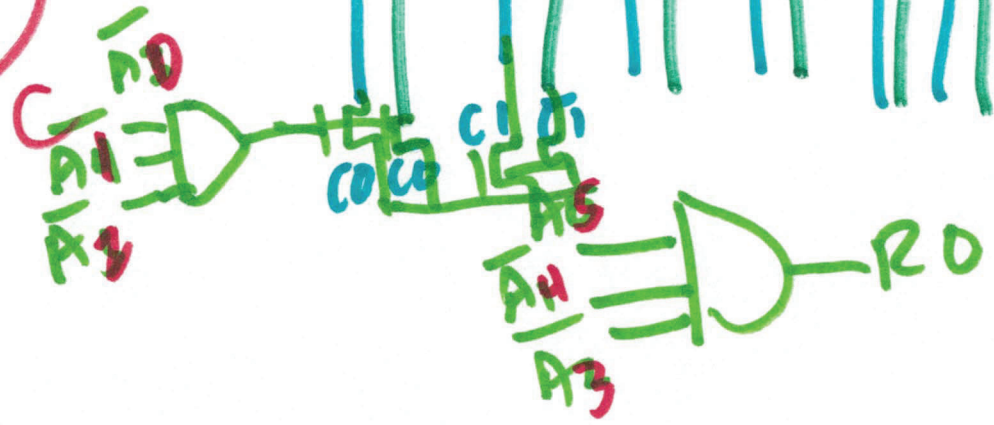
3-bit = col



$A_3 A_4 A_2 A_1 A_0$ 3-bit
 Rew

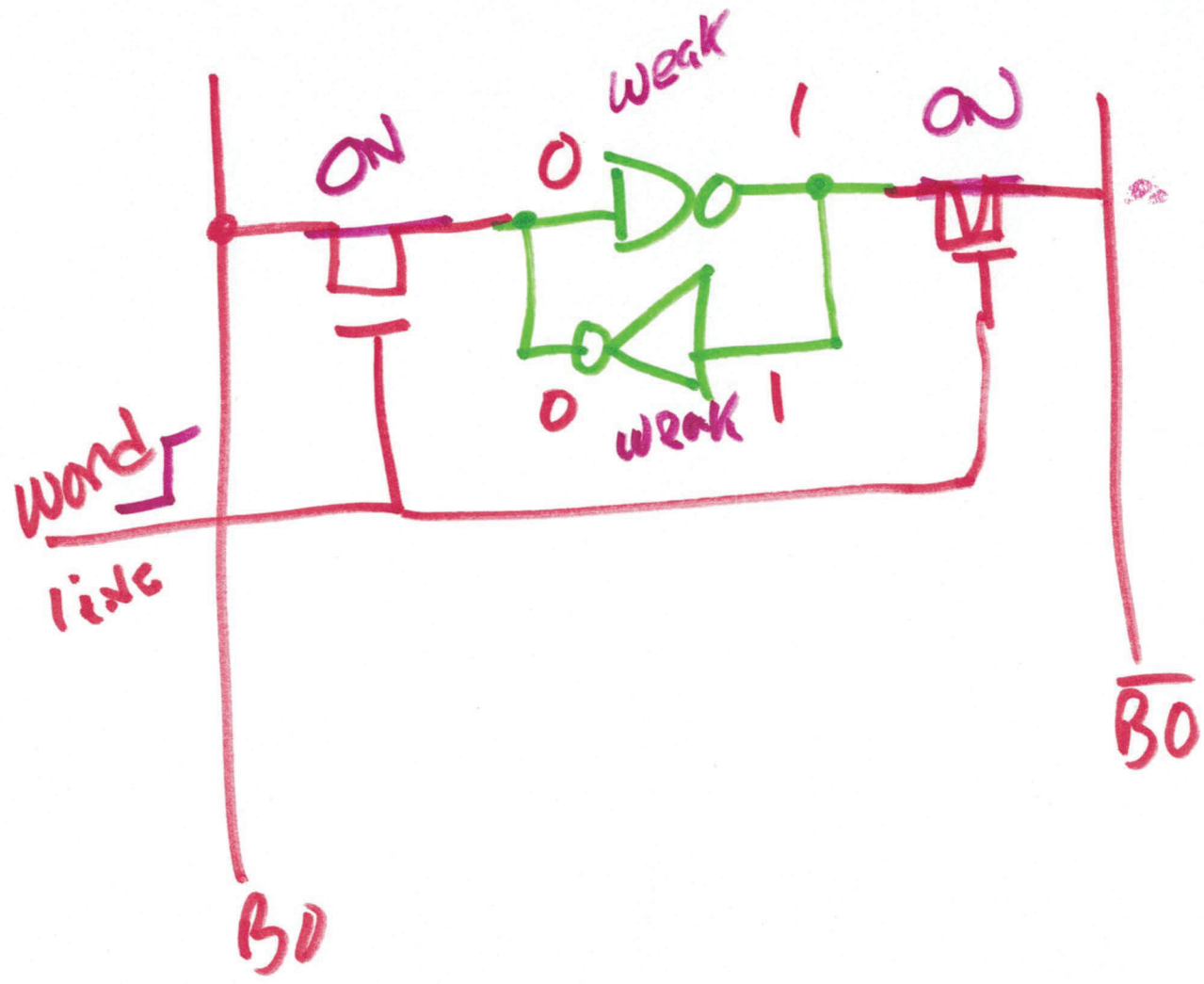
101
 2 010
 2 C

110 000
 2 2



3)

SRAM → Static Random Access Memory



Register file
32 x 32

4)

8 Rows x 8 cols. 64-bits

2-bit words

32 Addresses
5-bits

110 01
001 11
2 c

3-bits Row

100 10



5)