

**Welcome to my
Presentation**

Presentation on Digital Logic Design

Presented By:

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My Question is 1

Design of a combinational circuit that generates the 10's complement of a BCD digit

Design of a combinational circuit that generates the 10's complement of a BCD digit

Decimal	BCD	10's Complement P Q R S
0	0000	1 0 1 0
1	0001	1001
2	0010	1000
3	0011	0111
4	0100	0110
5	0101	0101
6	0110	0100
7	0111	0011
8	1000	0010
9	1001	0001

K-Map For P

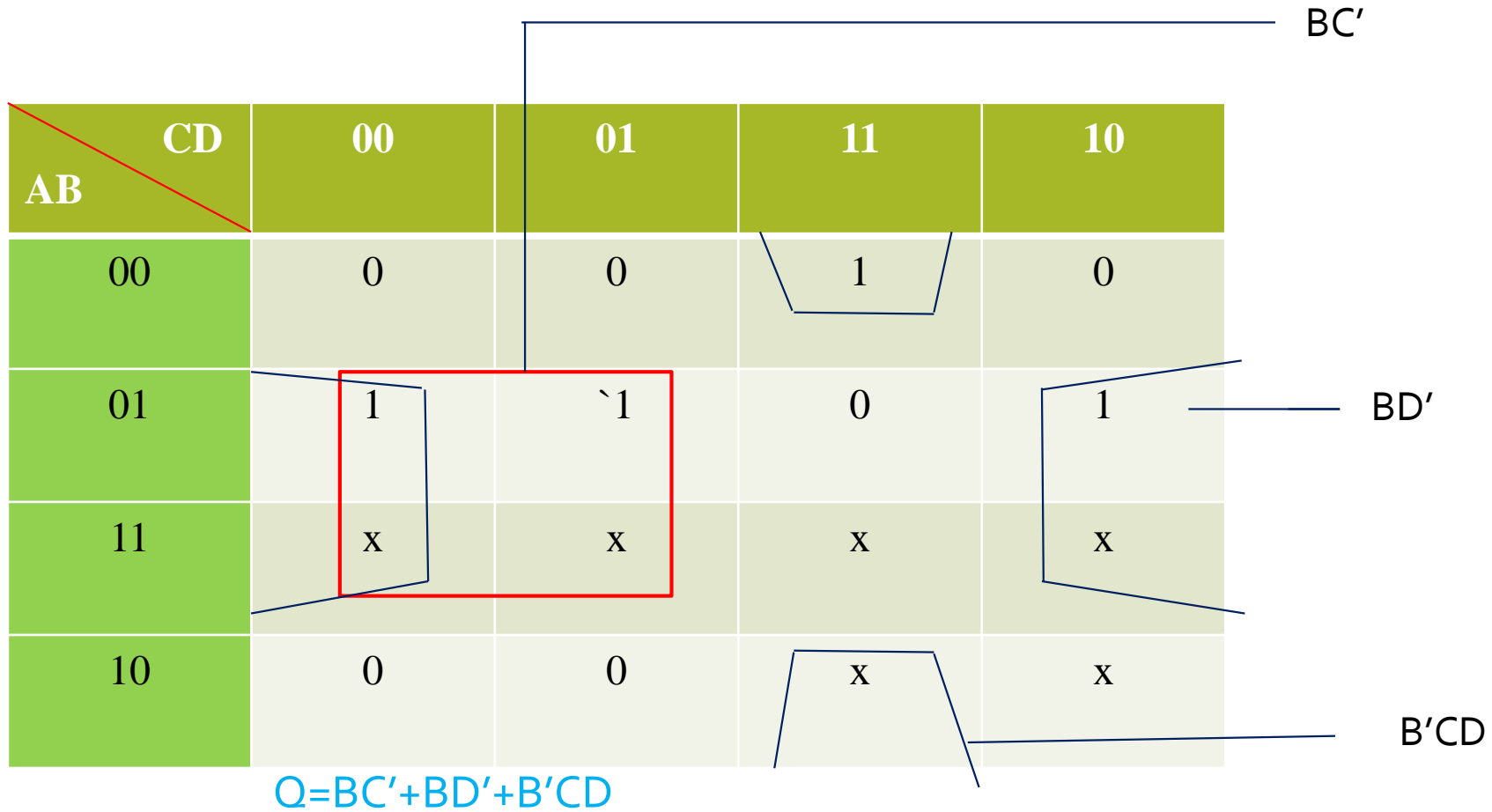
AB \ CD	00	01	11	10
00	1	1	0	1
01	0	0	0	0
11	x	x	x	x
10	0	0	x	x

$A'B'C'$

$A'B'D'$

$P = A'B'C' + A'B'D'$

K-Map For Q



K-Map For R

CD	00	01	11	10
AB				
00	1	0	1	0
01	1	0	1	0
11	x	x	x	x
10	1	0	x	x

$C'D'$

CD

$$R = C'D' + CD$$

K-Map For R

CD AB	00	01	11	10
00	0	1	1	0
01	0	1	1	0
11	x	x	x	x
10	0	1	x	x

S=D

D

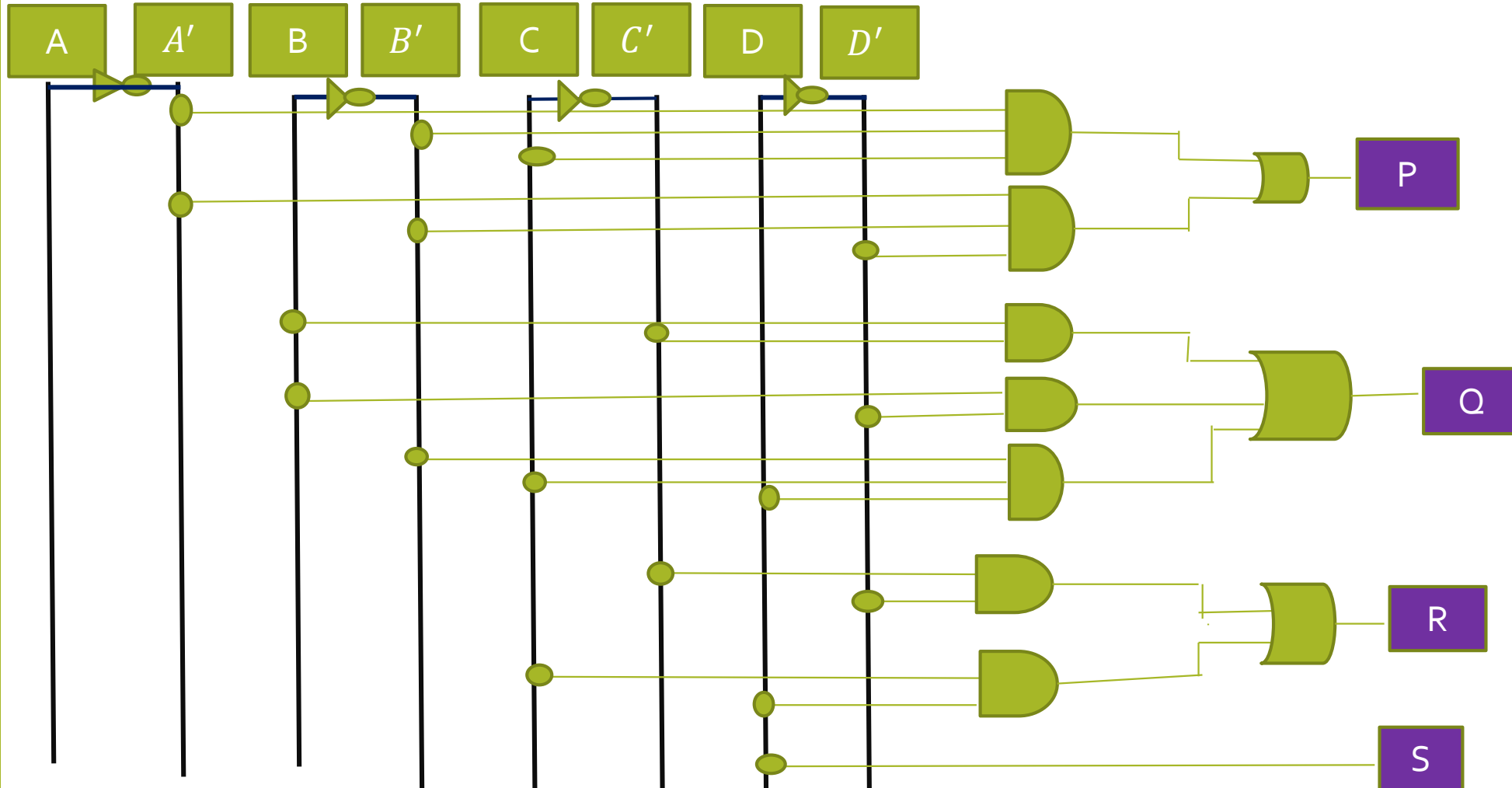
Circuit Diagram

$$P = A'B'C' + A'B'D'$$

$$R = C'D' + CD$$

$$Q = BC' + BD' + B'CD$$

$$S = D$$



Thank You