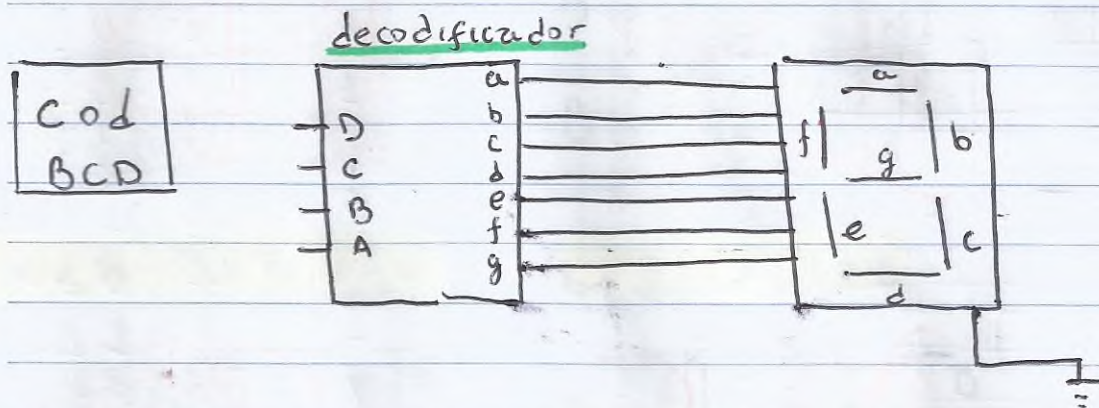


# Eletrônica Digital

## Projeto - Decodificador BCD - 7 seg

### usando Led de 7 segmentos

### catodo comum



D	C	B	A	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	0	1	0	1	1	0	1	1	0	1
0	0	1	1	1	1	1	1	0	0	1
0	1	0	0	0	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1	1	1	1
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	1	0	1	1
1	0	1	0	X	X	X	X	X	X	X
1	0	1	1	X	X	X	X	X	X	X
1	1	0	0	X	X	X	X	X	X	X
1	1	0	1	X	X	X	X	X	X	X
1	1	1	0	X	X	X	X	X	X	X
1	1	1	1	X	X	X	X	X	X	X



# Eletrônica Digital - Decodificador BCD - 7 seg - mapa de karnaugh

	A	$\bar{A}$		
B	1	1	1	1
$\bar{B}$	X	X	X	X
	$\bar{C}$	C	$\bar{C}$	C

$$a = B + D + AC + \bar{A}\bar{C}$$

	A	$\bar{A}$		
B	1	1	0	1
$\bar{B}$	X	X	X	X
	$\bar{C}$	C	$\bar{C}$	C

$$b = \bar{C} + AB + \bar{A}\bar{B}$$

	A	$\bar{A}$		
B	1	1	1	0
$\bar{B}$	X	X	X	X
	$\bar{C}$	C	$\bar{C}$	C

$$c = \bar{B} + A + C$$

	A	$\bar{A}$		
B	1	0	1	1
$\bar{B}$	X	X	X	X
	$\bar{C}$	C	$\bar{C}$	C

$$d = D + \bar{A}B + B\bar{C} + \bar{A}\bar{C} + A\bar{B}C$$

	A	$\bar{A}$		
B	0	0	1	1
$\bar{B}$	X	X	X	X
	$\bar{C}$	C	$\bar{C}$	C

$$e = \bar{A}B + \bar{A}\bar{C}$$

	A	$\bar{A}$		
B	0	0	1	0
$\bar{B}$	X	X	X	X
	$\bar{C}$	C	$\bar{C}$	C

$$f = D + \bar{A}C + \bar{A}\bar{B} + \bar{B}C$$

	A	$\bar{A}$		
B	1	0	1	1
$\bar{B}$	X	X	X	X
	$\bar{C}$	C	$\bar{C}$	C

$$g = D + \bar{B}C + \bar{A}B + B\bar{C}$$

$$a = B + D + AC + \bar{A}\bar{C}$$

$$b = \bar{C} + AB + \bar{A}\bar{B}$$

$$c = A + \bar{B} + C$$

$$d = D + \bar{A}B + B\bar{C} + \bar{A}\bar{C} + A\bar{B}C$$

$$e = \bar{A}B + \bar{A}\bar{C}$$

$$f = D + \bar{A}C + \bar{A}\bar{B} + \bar{B}C$$

$$g = D + \bar{B}C + \bar{A}B + B\bar{C}$$