



ATIVIDADE 2 - PROJETO DE DECODIFICADOR C-2 PARA DISPLAY DE 7-SEGMENTOS

CURSO: TECNOLOGIA EM ANÁLISE E DESENVOLVIMENTO DE SISTEMAS

DISCIPLINA: ARQUITETURA E ORGANIZAÇÃO DE COMPUTADORES

PERÍODO LETIVO: 2022-02

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| <i>mintermo</i> | A | B | C | D | a | b | c | d | e | f | g | sin | C-2 |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|-----|-----|
| 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 2 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 |
| 3 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 3 |
| 4 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 4 |
| 5 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 5 |
| 6 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 6 |
| 7 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 7 |
| 8 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -8 |
| 9 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | -7 |
| 10 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | -6 |
| 11 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | -5 |
| 12 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | -4 |
| 13 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | -3 |
| 14 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | -2 |
| 15 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | -1 |



| E_{AB} | 00 | 01 | 11 | 10 |
|----------|----|----|----|----|
| 00 | 1 | 1 | 1 | 1 |
| 01 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 |

$$\sim C/D + \sim A.B + A.\sim B$$

| F_{AB} | 00 | 01 | 11 | 10 |
|----------|----|----|----|----|
| 00 | 1 | 1 | 1 | 1 |
| 01 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 |

$$\sim A.\sim B + A.B + A.\sim C + \sim C.\sim D + B.C.D$$

| g_{AB} | 00 | 01 | 11 | 10 |
|----------|----|----|----|----|
| 00 | 1 | 1 | 1 | 1 |
| 01 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 |

$$C.\sim D + \sim C.B + \sim B.C + A.\sim D$$

| g_{AB} | 00 | 01 | 11 | 10 |
|----------|----|----|----|----|
| 00 | 1 | 1 | 1 | 1 |
| 01 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 |

A



— ♥ — ♥ —

A

| AB \ CD | 00 | 01 | 11 | 10 |
|---------|----|----|----|----|
| 00 | 1 | | 1 | 1 |
| 01 | | 1 | 1 | 1 |
| 11 | | 1 | | 1 |
| 10 | 1 | 1 | 1 | 1 |

$A \cdot \sim B + C \cdot \sim D + \sim A \cdot C + \sim B \cdot \sim D + \sim C \cdot D$

B

| AB \ CD | 00 | 01 | 11 | 10 |
|---------|----|----|----|----|
| 00 | 1 | | | |
| 01 | 1 | 1 | | 1 |
| 11 | 1 | | | |
| 10 | 1 | | 1 | 1 |

$\sim C \cdot \sim D + \sim A \cdot B \cdot \sim C + \sim A \cdot B \cdot \sim D + A \cdot B \cdot C$

C

| AB \ CD | 00 | 01 | 11 | 10 |
|---------|----|----|----|----|
| 00 | 1 | | | 1 |
| 01 | | | | 1 |
| 11 | | | | 1 |
| 10 | 1 | | | 1 |

$\sim B \cdot \sim D + C \cdot \sim D$

D

| AB \ CD | 00 | 01 | 11 | 10 |
|---------|----|----|----|----|
| 00 | 1 | | 1 | 1 |
| 01 | | 1 | | 1 |
| 11 | | 1 | | 1 |
| 10 | 1 | | 1 | 1 |

$C \cdot \sim D + \sim B \cdot C + \sim B \cdot \sim D + B \cdot \sim C \cdot D$

tilibra