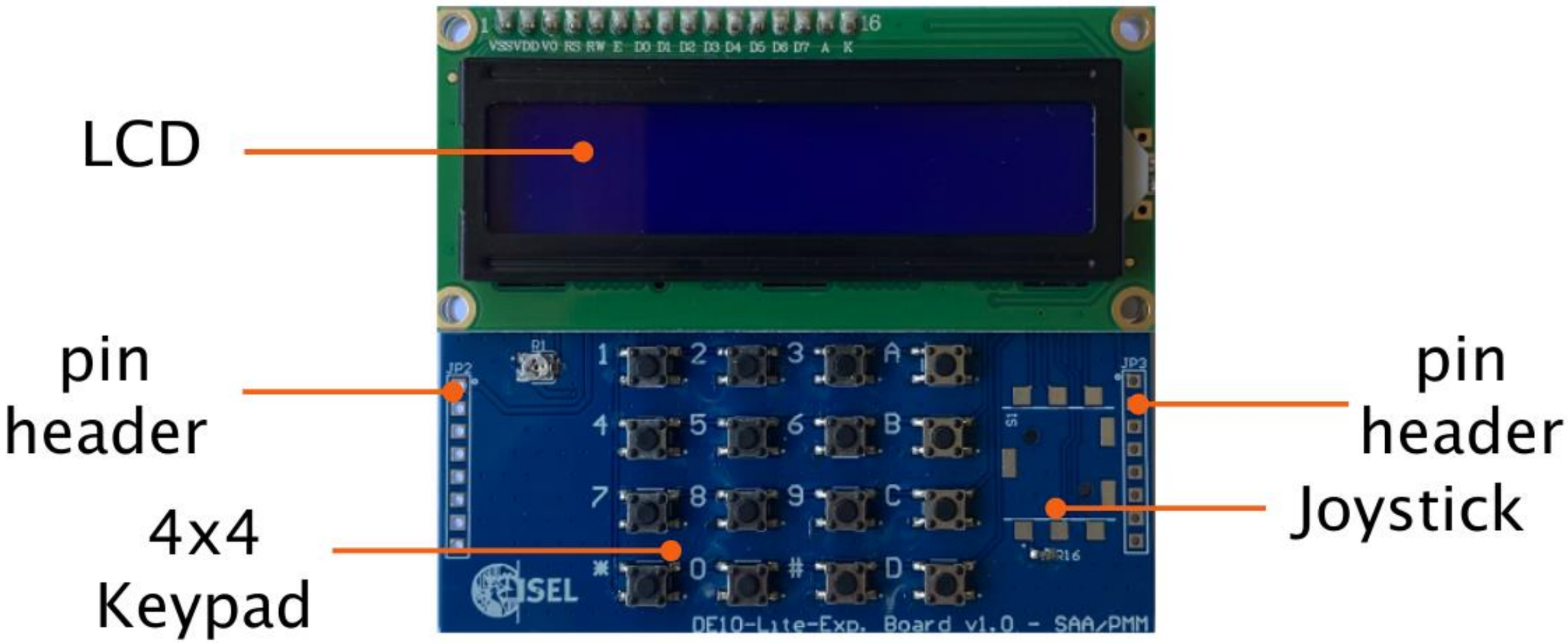
ISEL
DEETC
Departamento de
Engenharia Electrónica e
de Telecomunicações e
de Computadores

Laboratório de Informática e de Computadores

2021 / 2022 verão
LEIC

DE10-Lite Exp. Board v1.0



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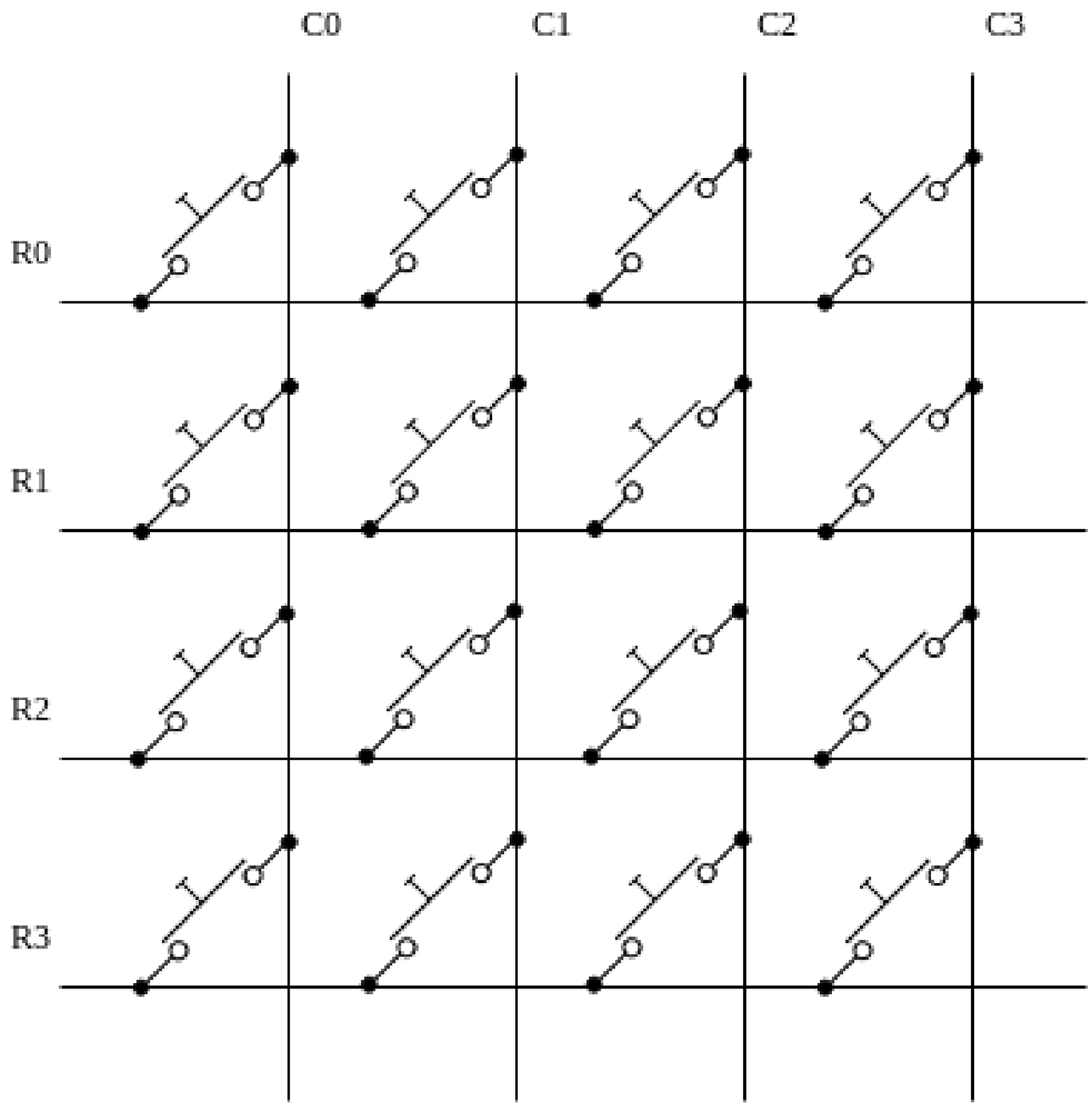

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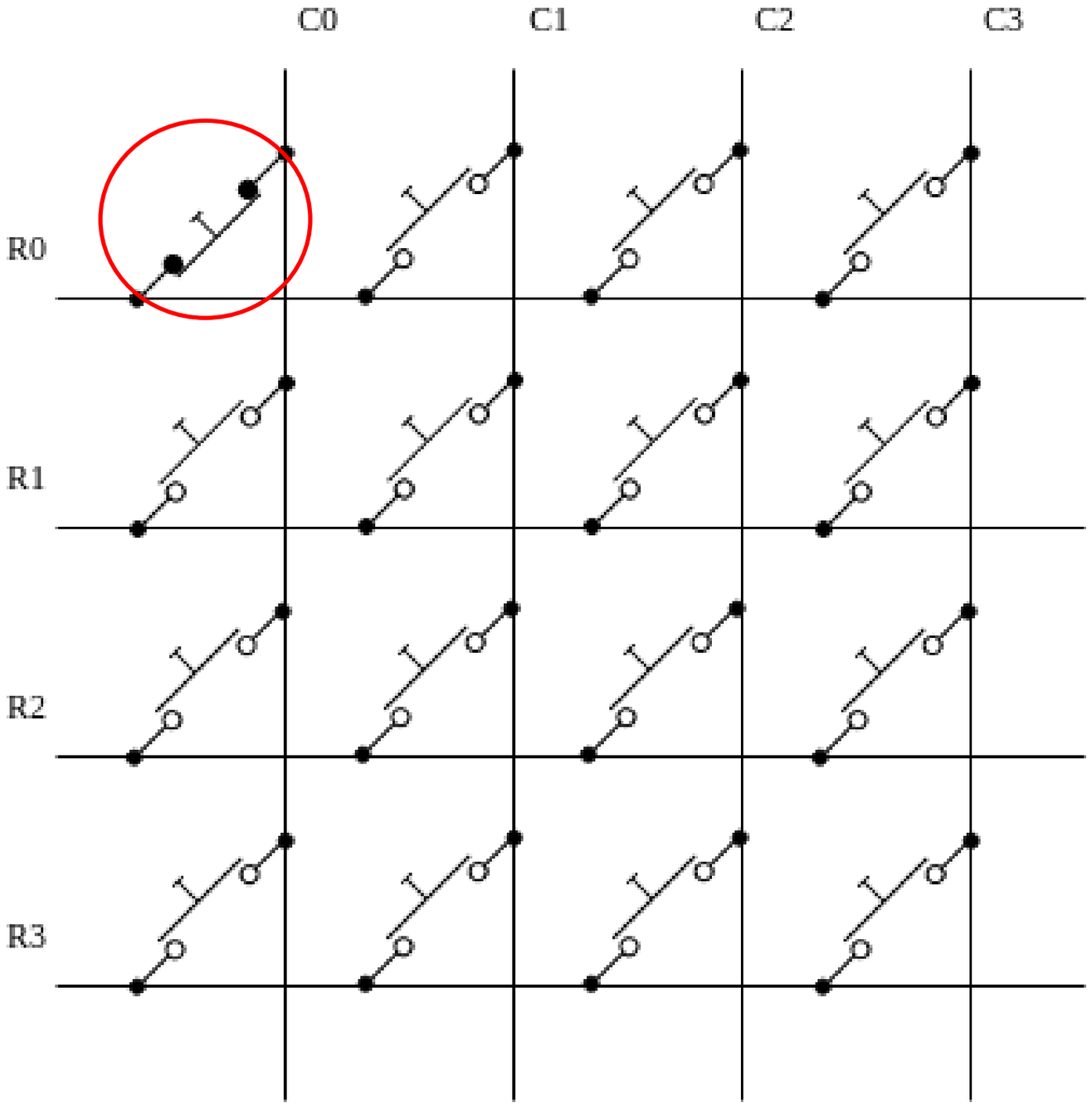

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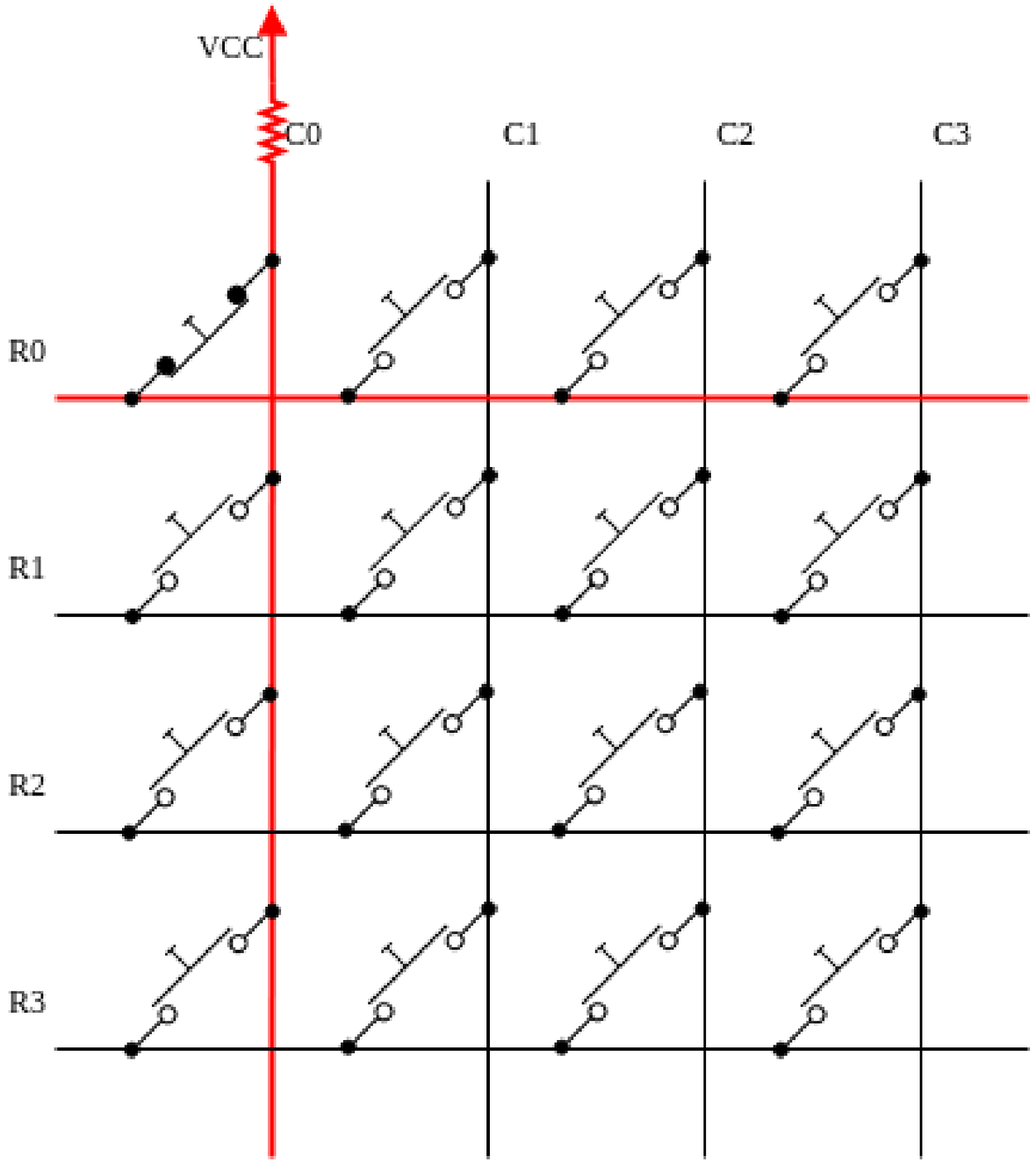

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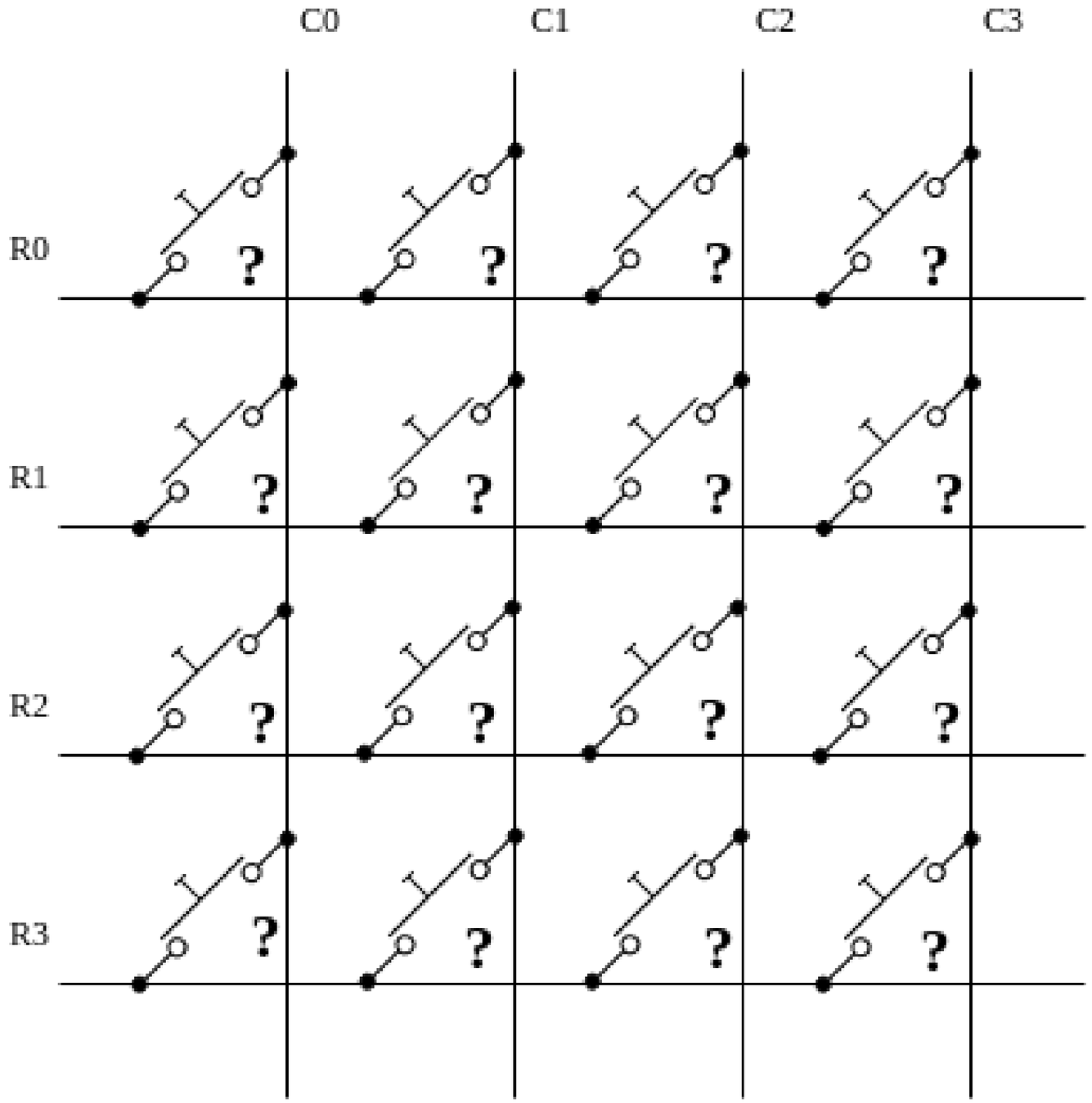

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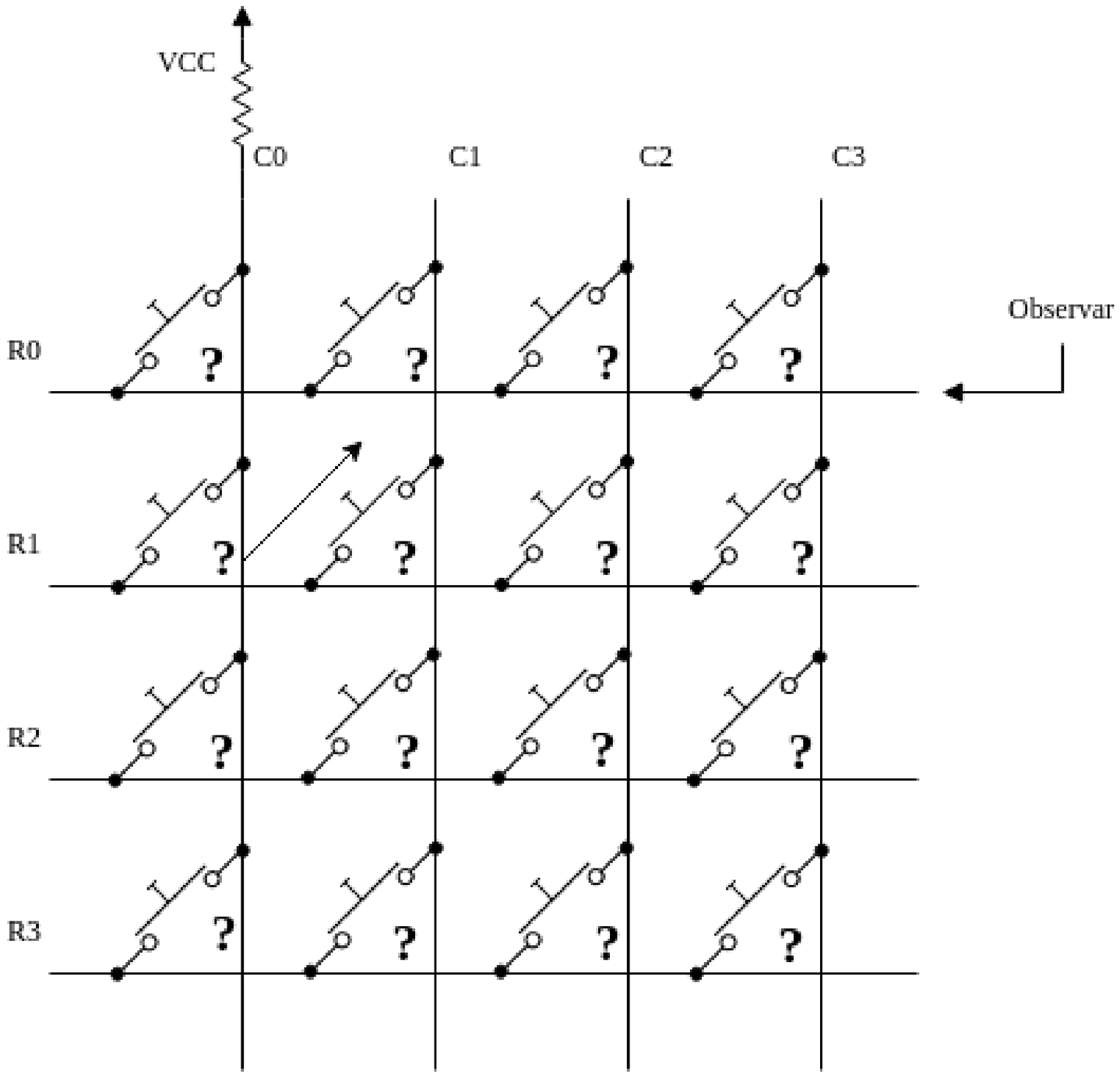

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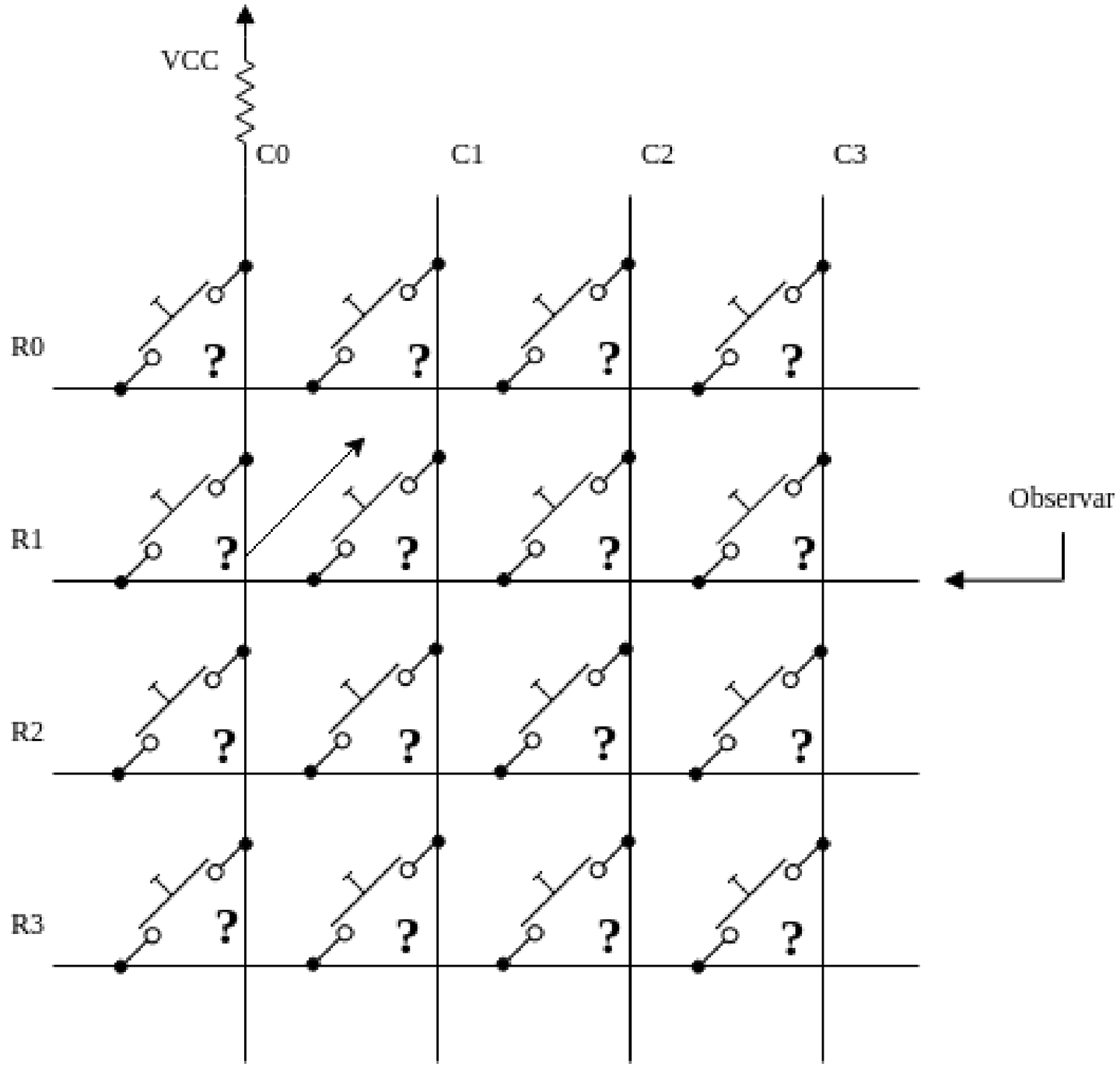

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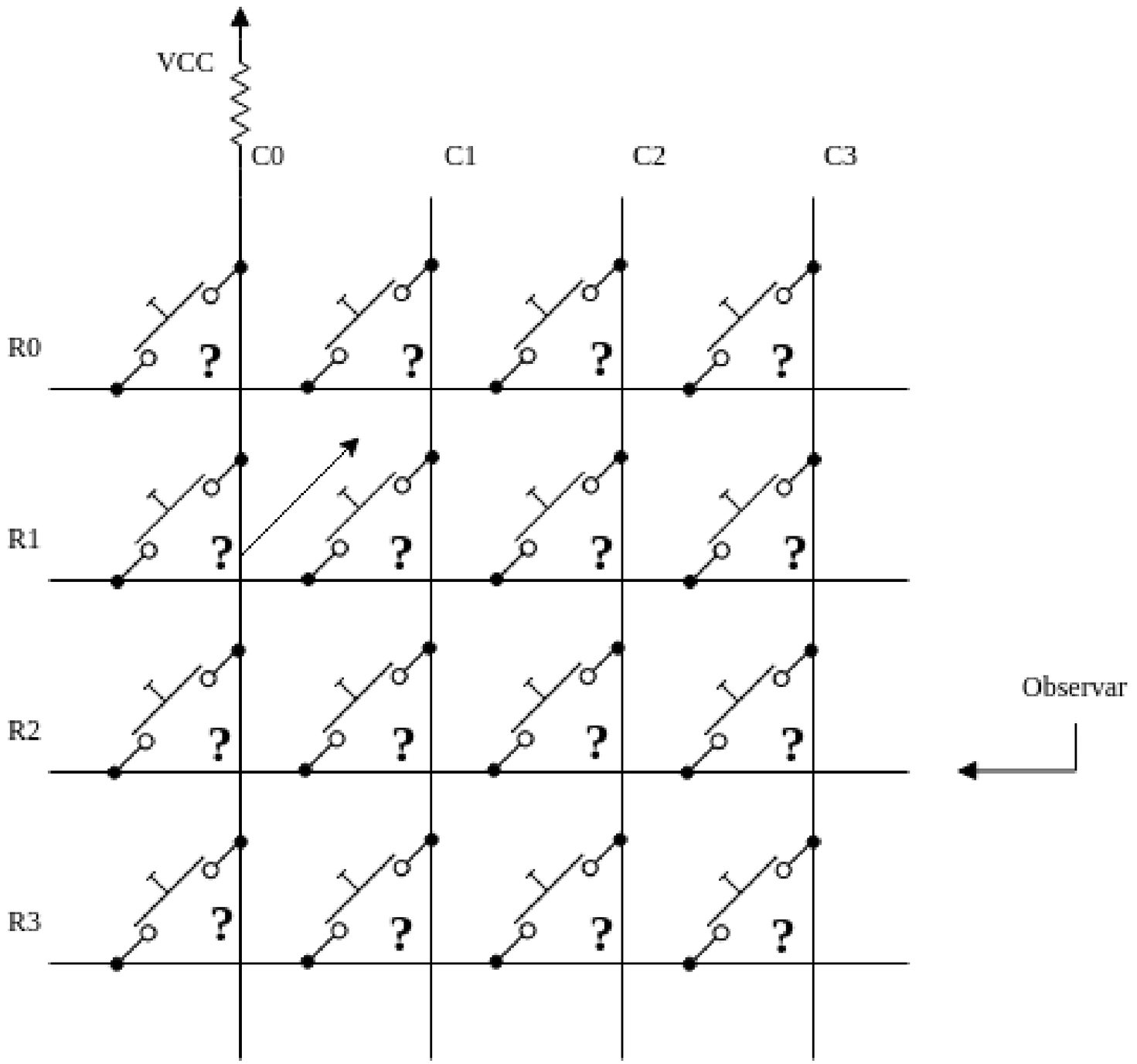

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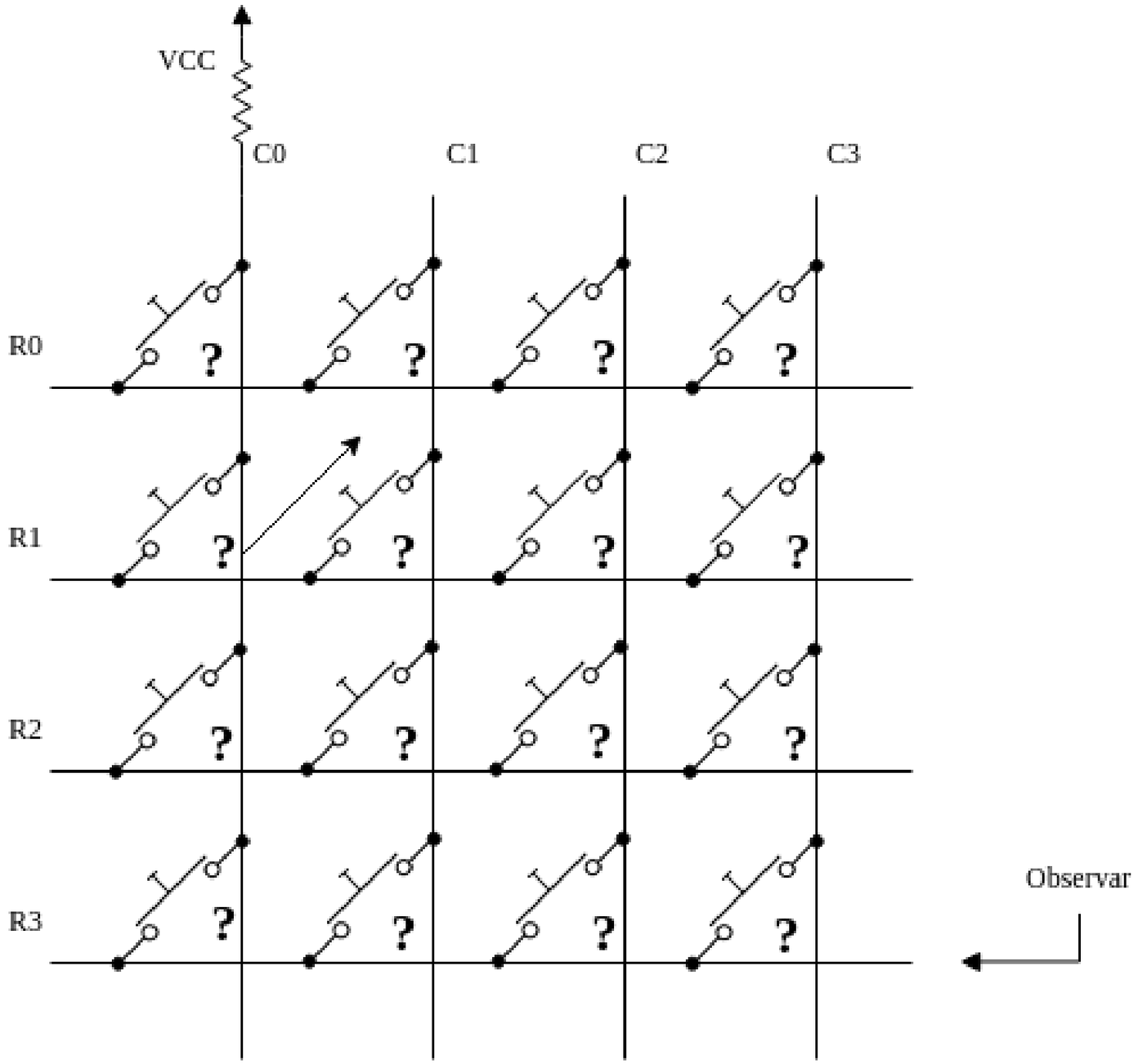

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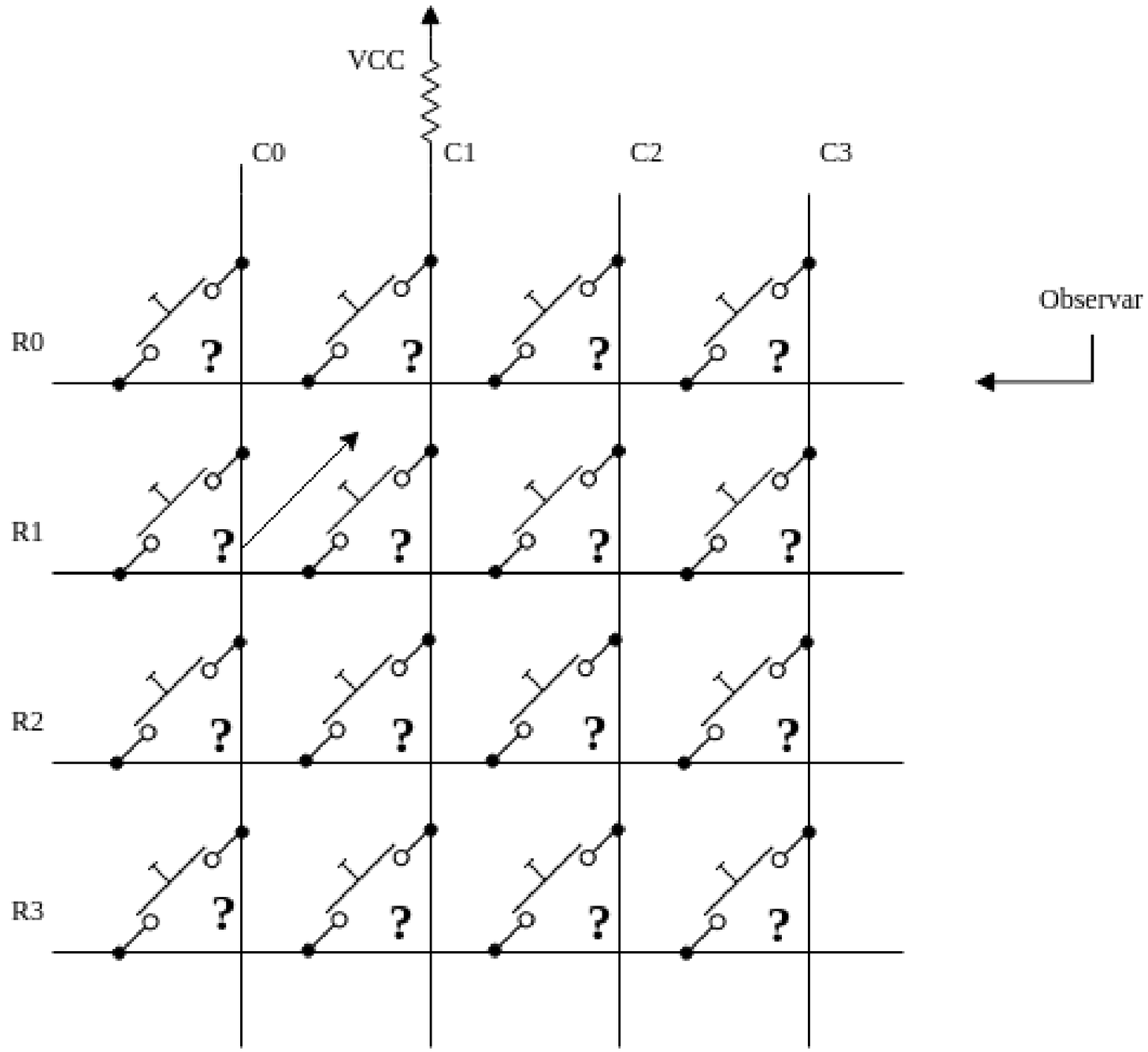

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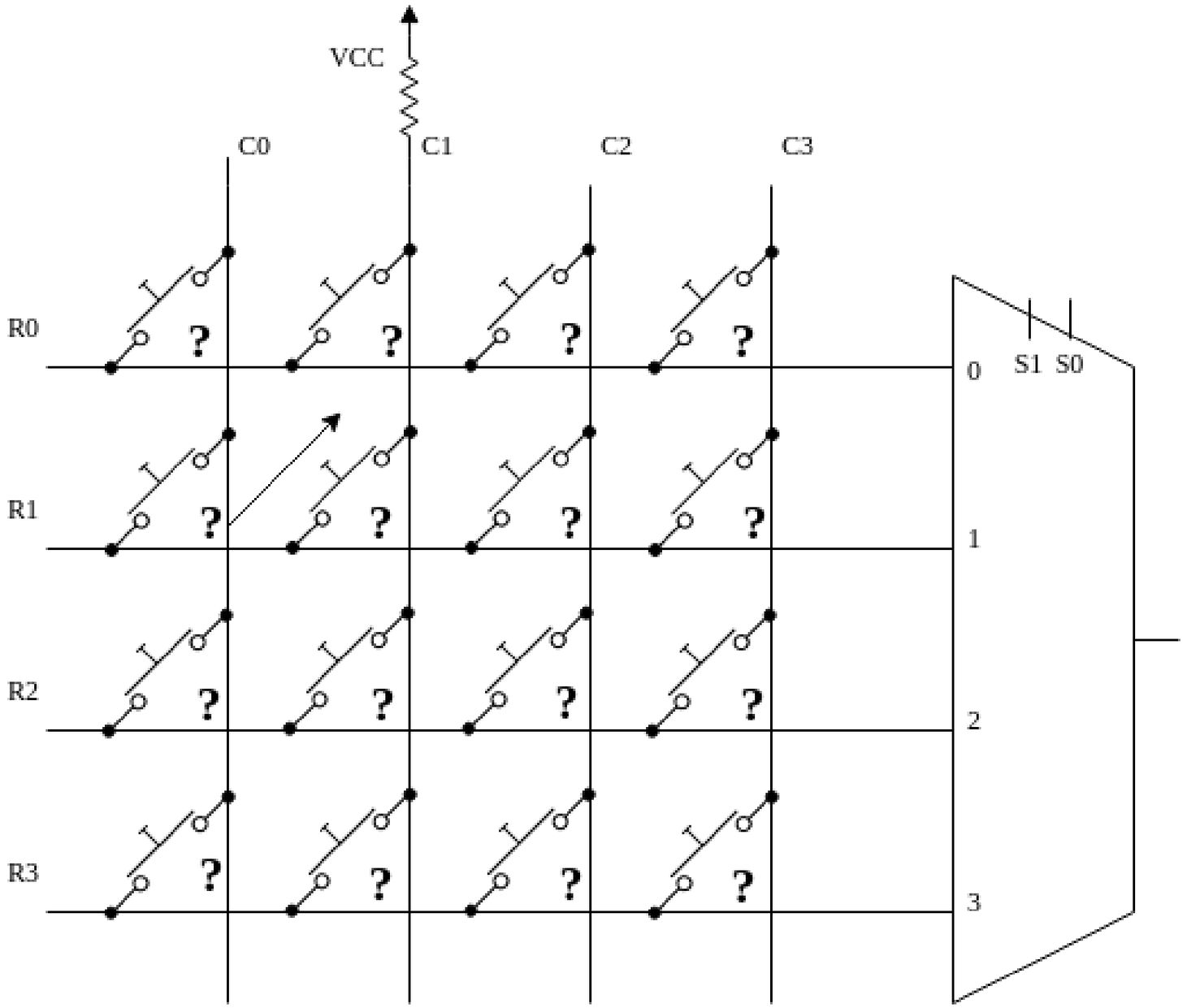

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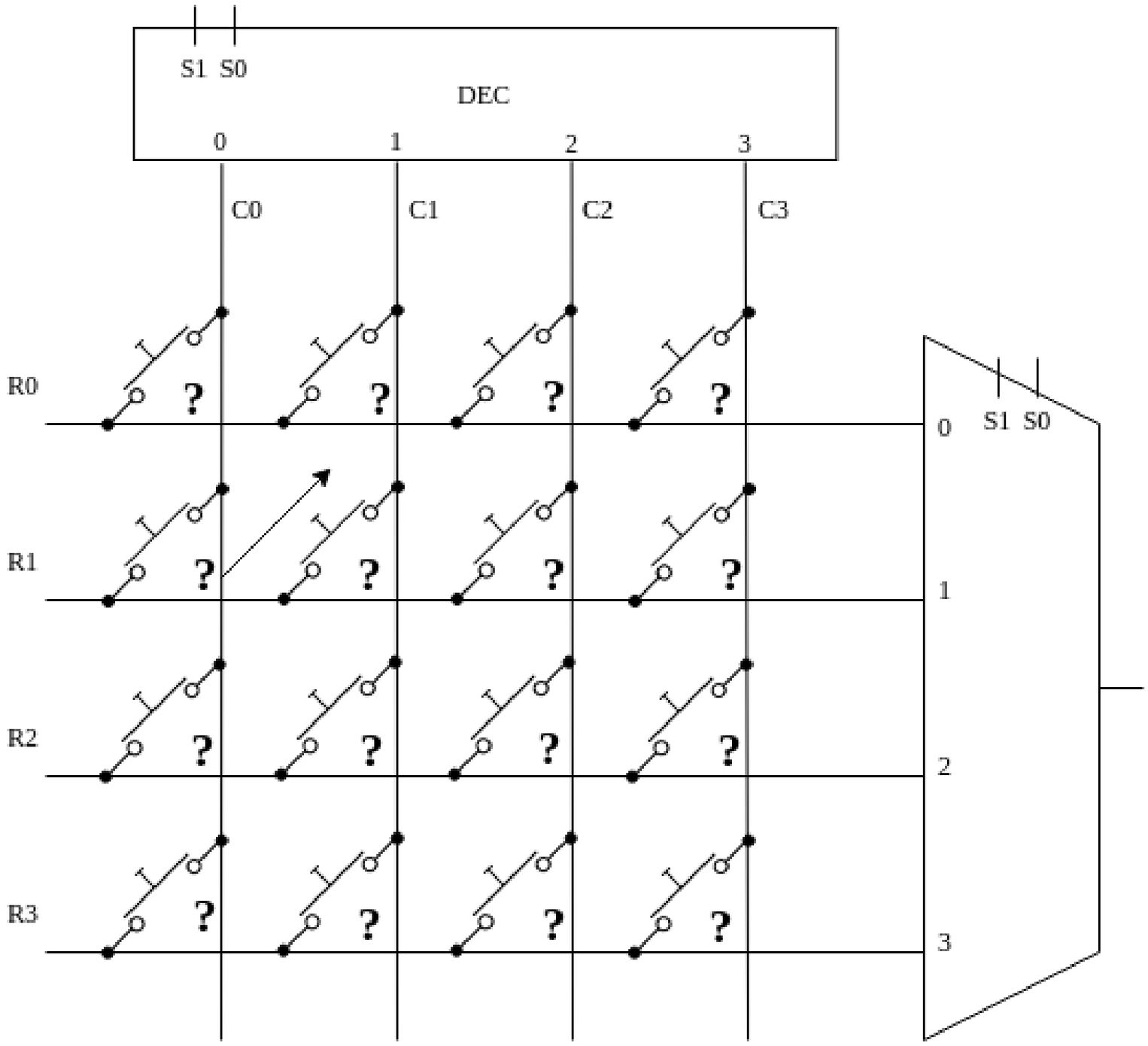

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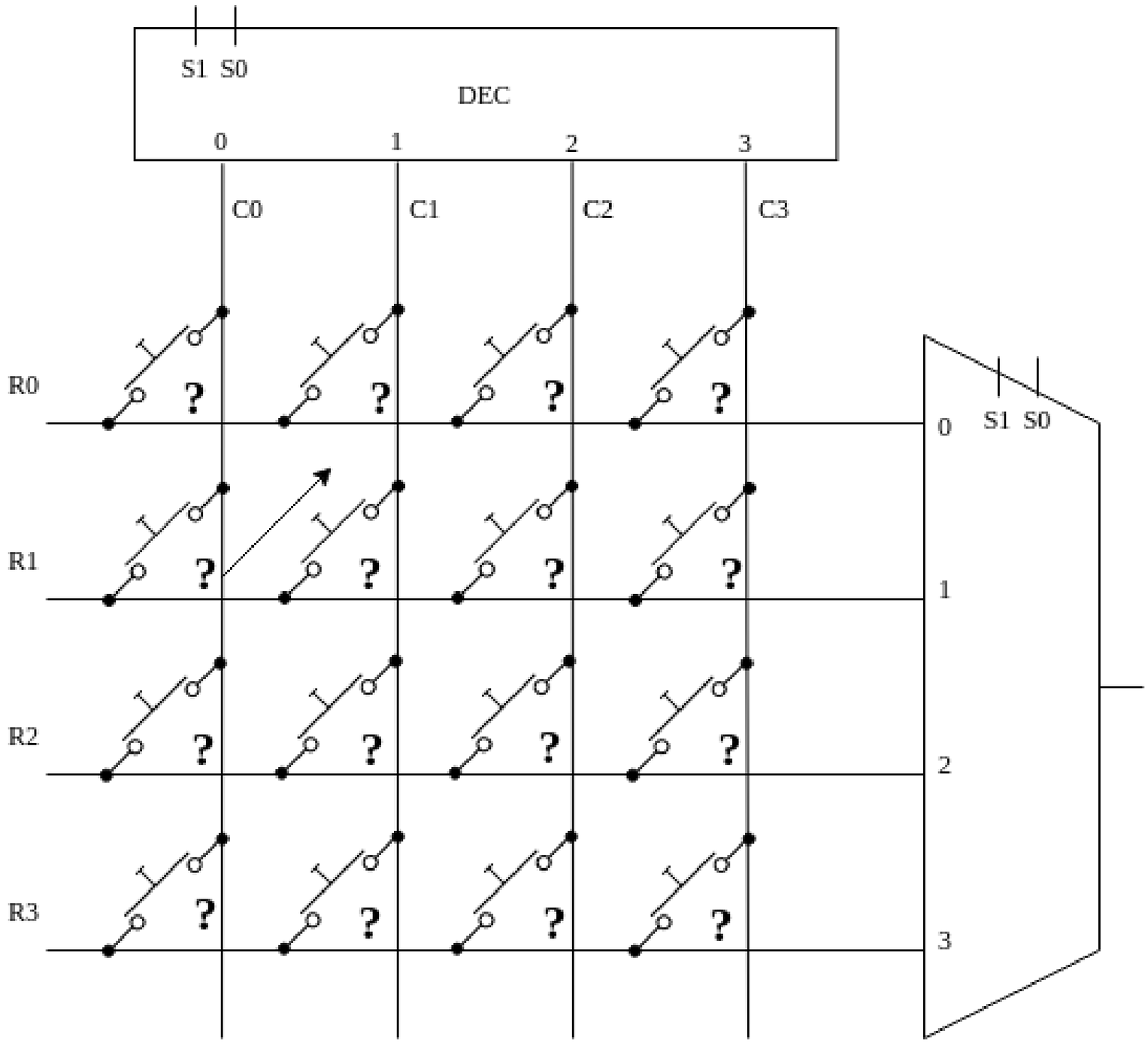
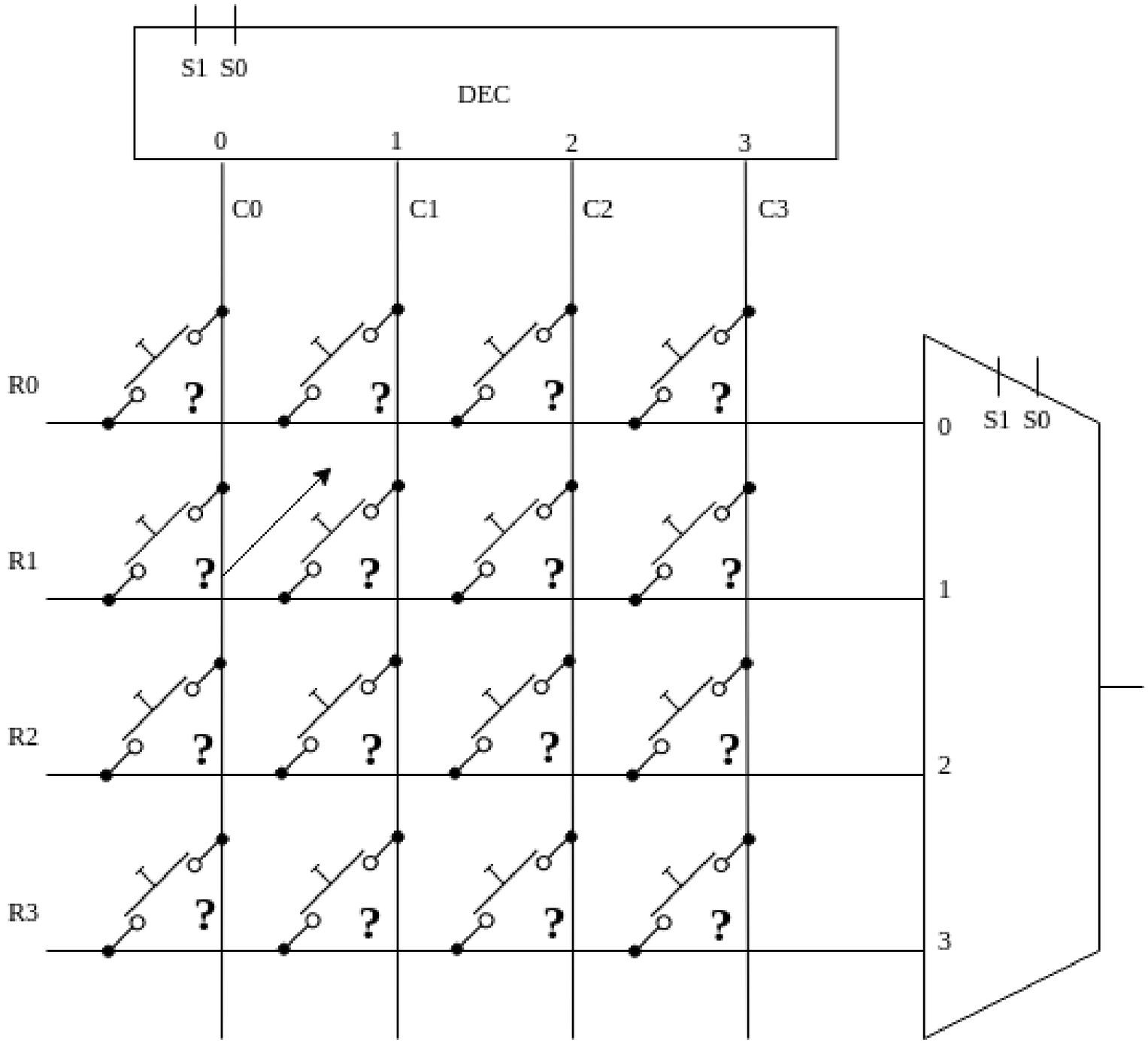
Problemas?



Keypad: Scan

Problemas?

Qual o nível lógico na entrada 0 do Mux se nenhum botão da linha 0 é premido?



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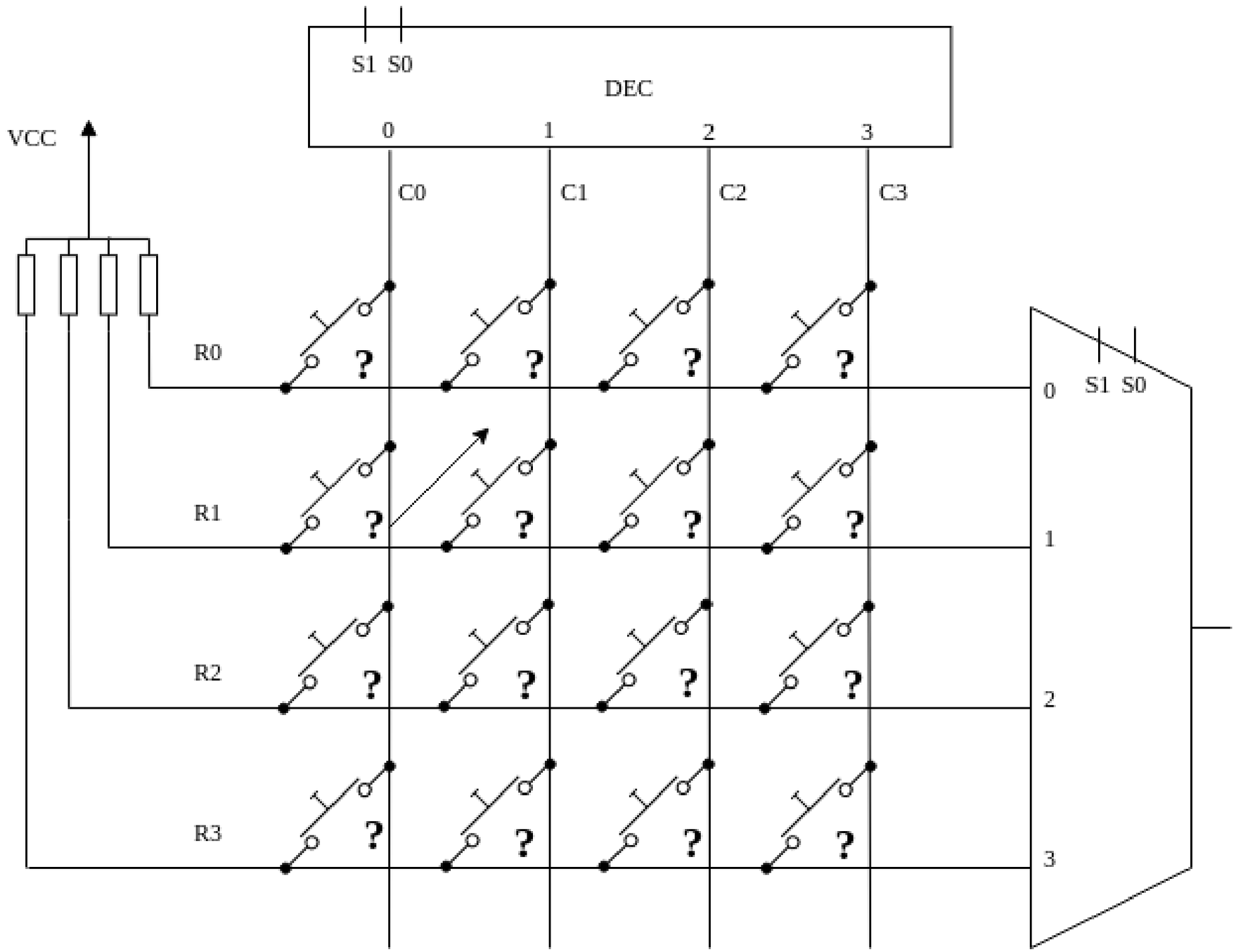

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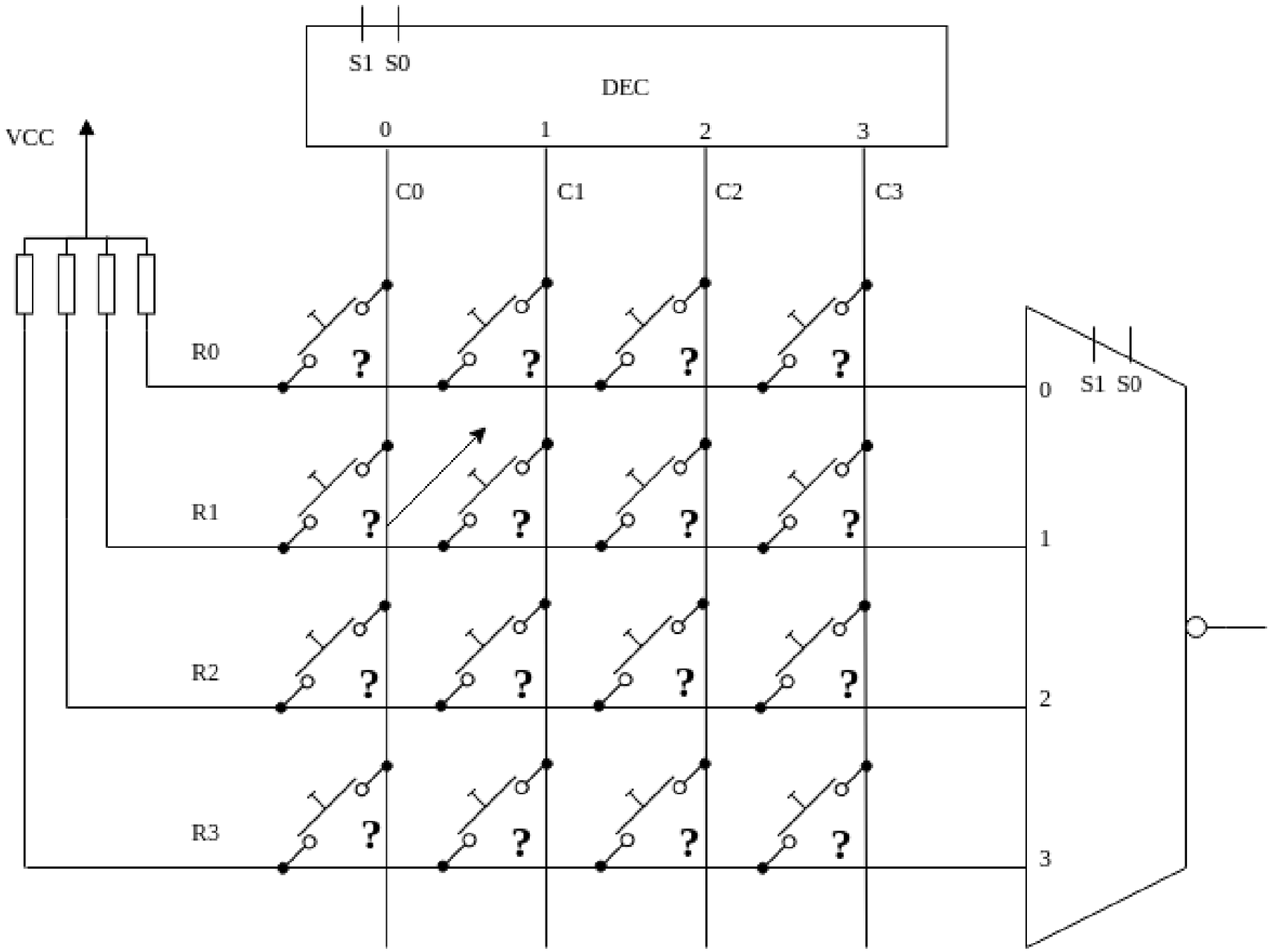

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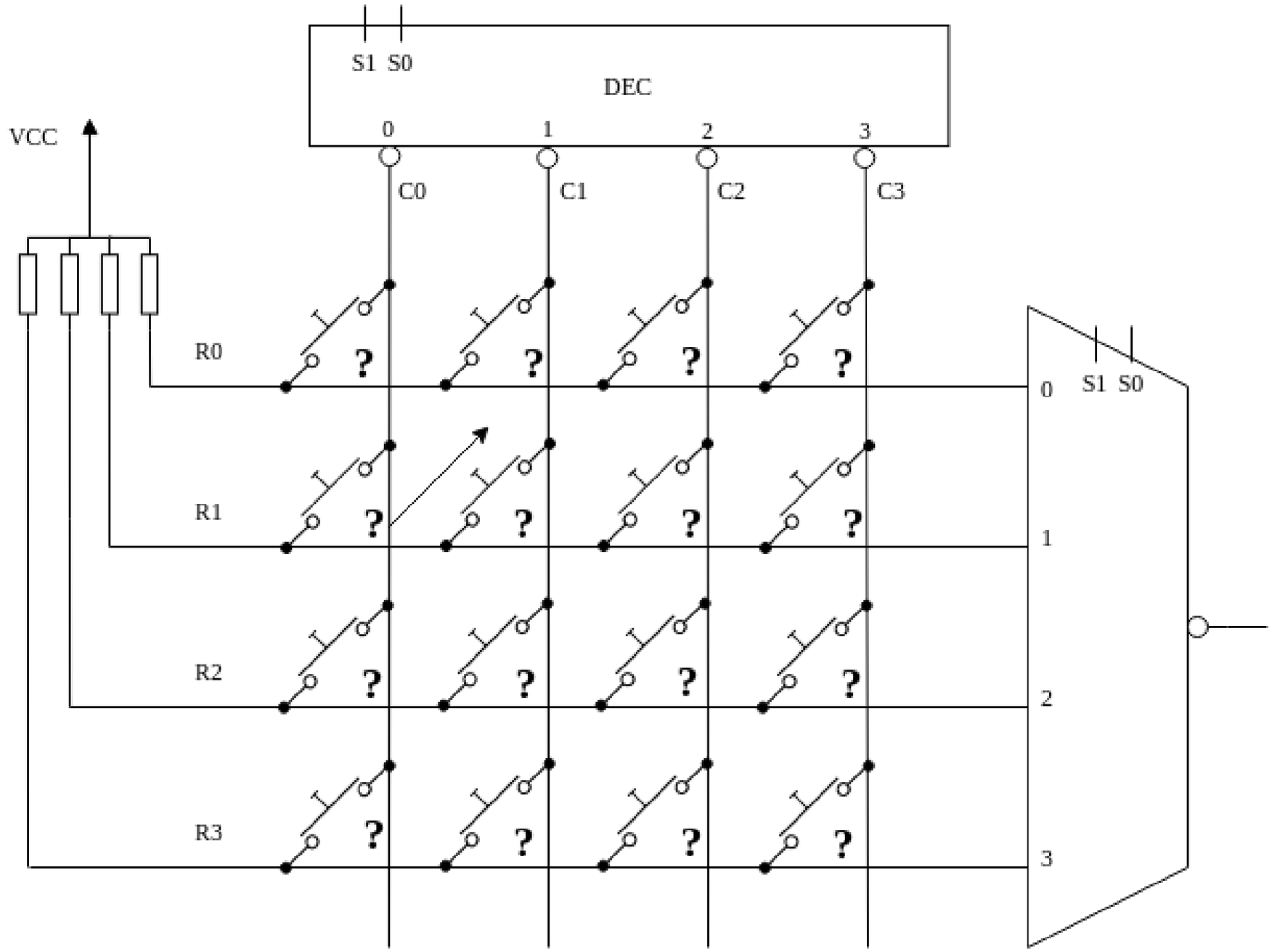

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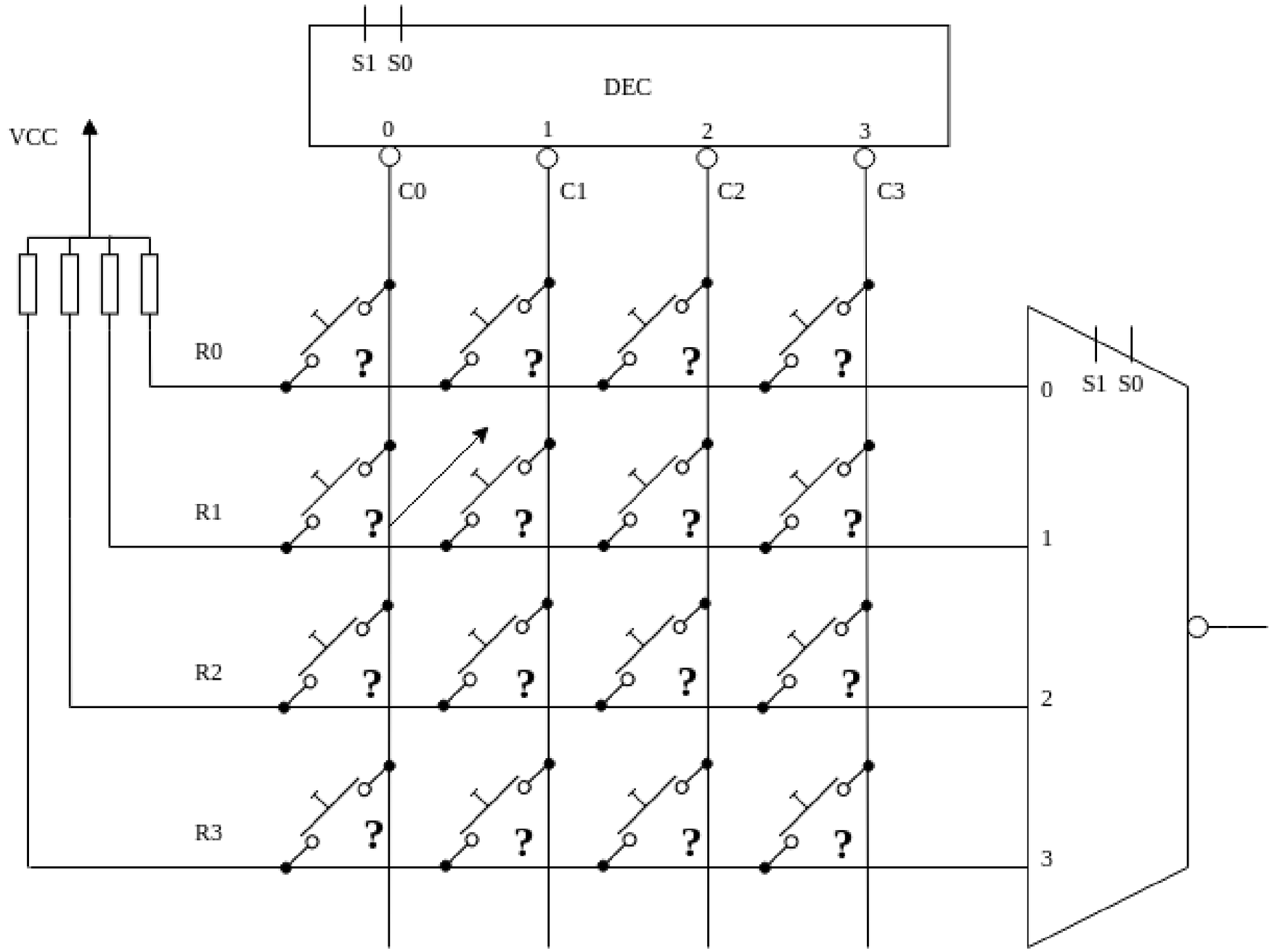
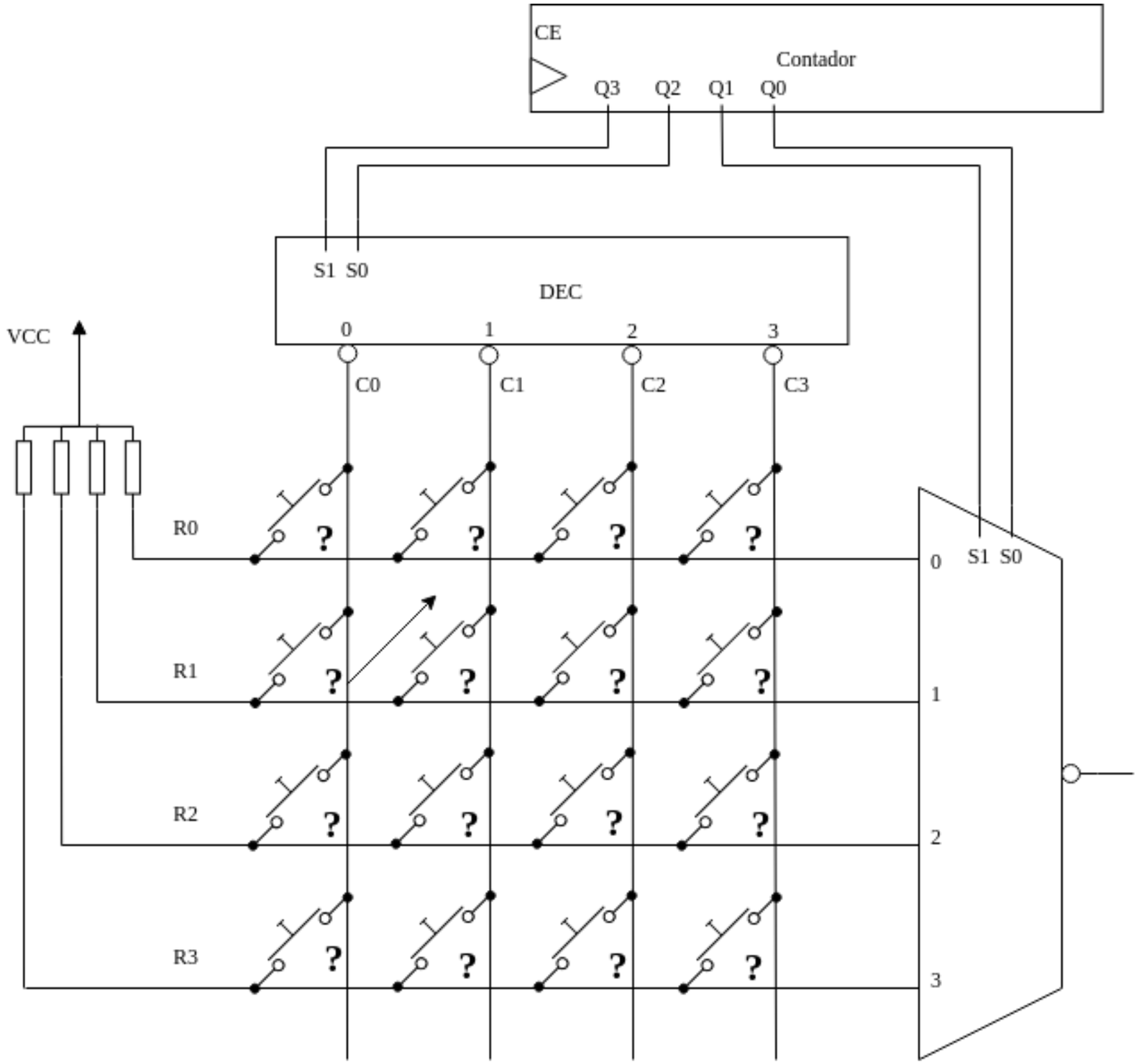
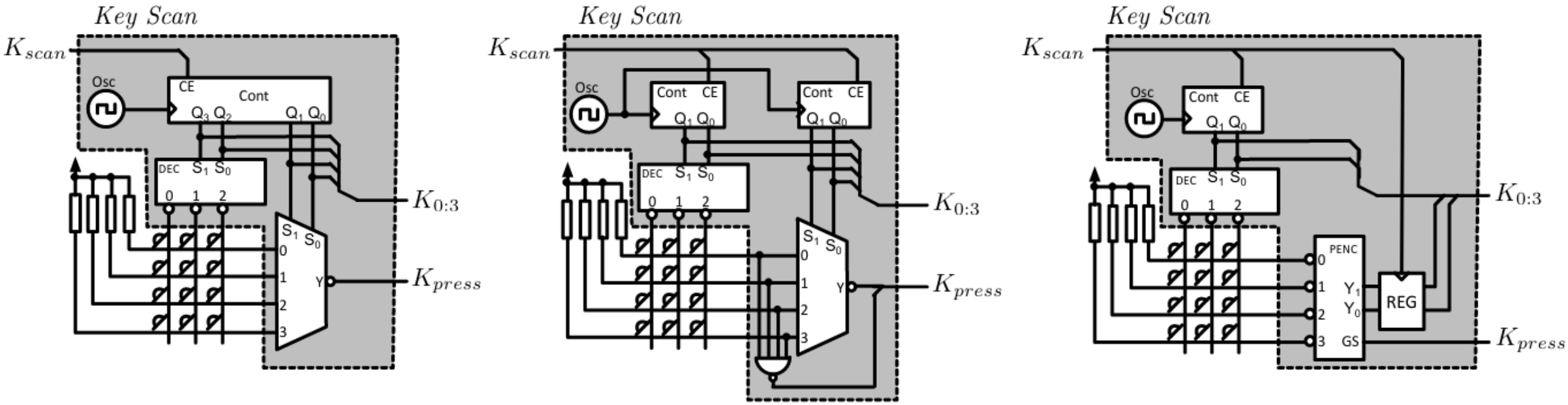


Automatização do Scan



Versões Alternativas

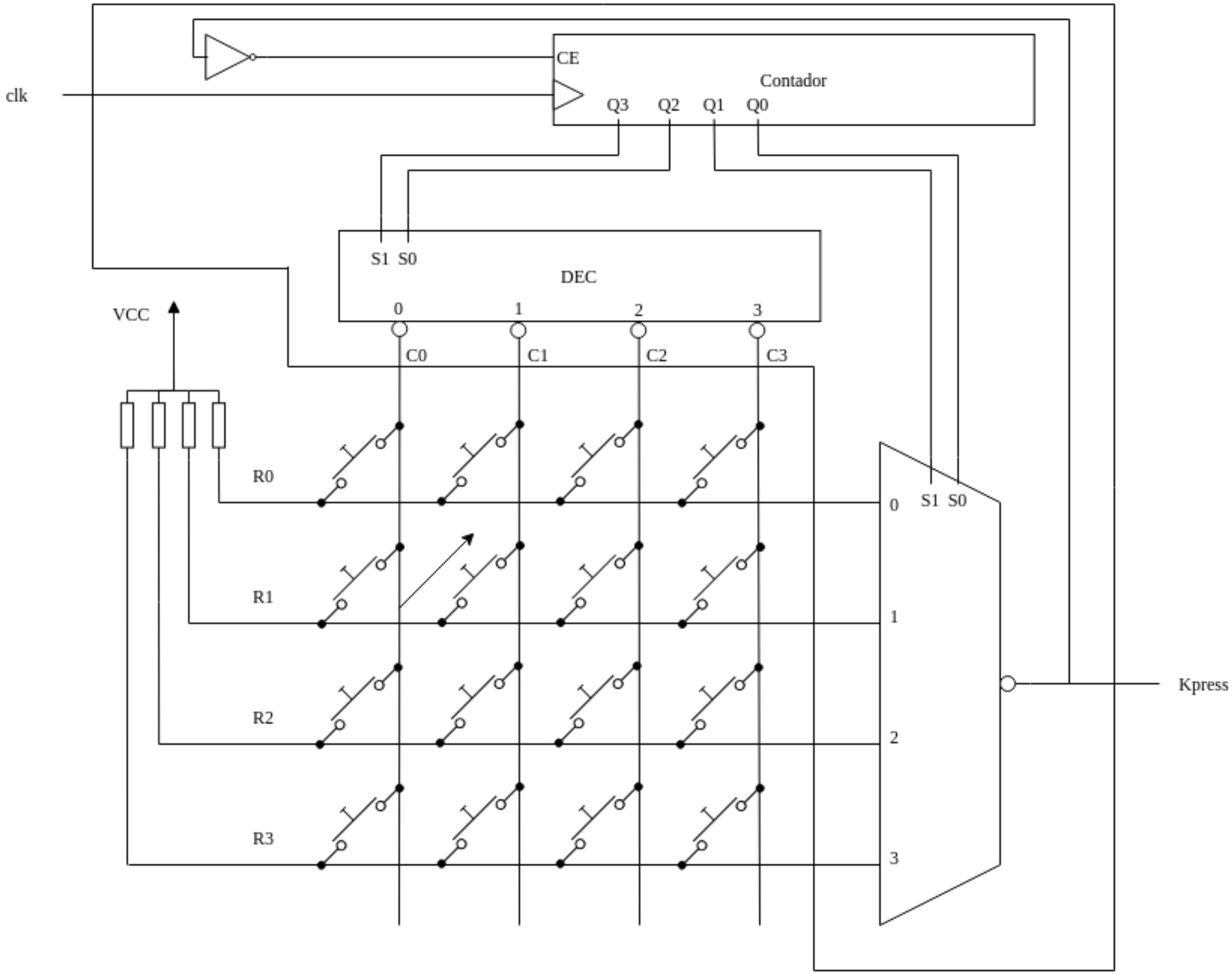


a) versão I b) versão II c) versão III

Figura 5 - Diagrama de blocos do bloco *Key Scan*

Objetivos do Dia

- Desenvolvimento do *Key Scan*
  - Passo 1: sem contador (DEC + MUX)
    - Seletores mapeados para chaves, *Kpress* mapeado para LED.
  - Passo 2: com contador
    - Ou: mapear *Kscan* para chave, usar clock lento.
    - Ou: conectar *not Kpress* ao CE do contador.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CE
Contador
Q3
Q2
Q1
Q0
S1
S0
DEC
0
1
2
3
VCC
C0
C1
C2
C3
R0
R1
R2
R3
0
S1
S0
1
2
3
Kpress