

Projeto de SCS

Equipe:

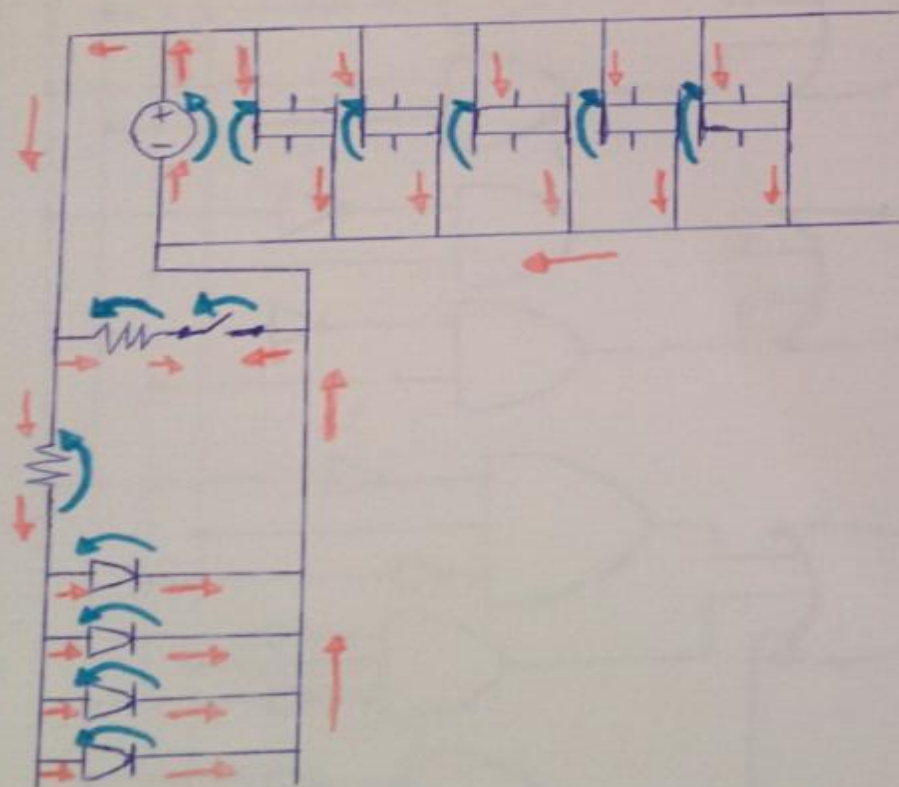
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Descrição

- Este projeto consiste em um mecanismo de catracas inteligentes para resolver problemas de gerenciamento de filas.

CONVENÇÃO DO CIRCUITO



• v
• i

c = Contraria = Saida

TABELA VERDADE

$\neg C3$				$\neg C2$		$\neg C3$		$\neg C4$							
A	B	C	D	A.B	$\bar{A}.\bar{B}$	A.B + $\bar{A}.\bar{B}$	$\bar{A}.C$	$\bar{B}.C$	$\bar{A}.C + \bar{B}.C$	$\bar{A}.\bar{C}.D$	$\bar{A}.\bar{B}.D$	$\bar{B}.\bar{C}.D$	$\bar{A}.\bar{C}.D + \bar{A}.\bar{B}.D + \bar{B}.\bar{C}.D$		
0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0	0	0	1	0	0	0	0	0	0	1	1	1	1		
0	0	1	0	0	0	0	1	1	1	0	0	0	0		
0	0	1	1	0	0	0	1	1	1	0	1	0	1		
0	1	0	0	0	1	1	0	0	0	0	0	0	0		
0	1	0	1	0	1	1	0	0	0	1	0	0	1		
0	1	1	0	0	1	1	1	0	1	0	0	0	0		
0	1	1	1	0	1	1	1	0	1	0	0	0	0		
1	0	0	0	0	0	0	0	0	0	0	0	0	0		
1	0	0	1	0	0	0	0	0	0	0	0	1	1		
1	0	1	0	0	0	0	0	1	1	0	0	0	0		
1	0	1	1	0	0	0	0	1	1	0	0	0	0		
1	1	0	0	1	0	1	0	0	0	0	0	0	0		
1	1	0	1	1	0	1	0	0	0	0	0	0	0		
1	1	1	0	1	0	1	0	0	0	0	0	0	0		
1	1	1	1	1	0	1	0	0	0	0	0	0	0		

MAPA DE KARNAUGH

C1

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

= A

→ A=1 B=0/1 C=0/1 D=0/1

C2

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

= B

→ A=0/1 B=1 C=0/1 D=0/1

C3

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

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

→ A=0 B=0/1
C=1 D=0/1

→ A=0/1 B=0 C=1 D=0/1

C4

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

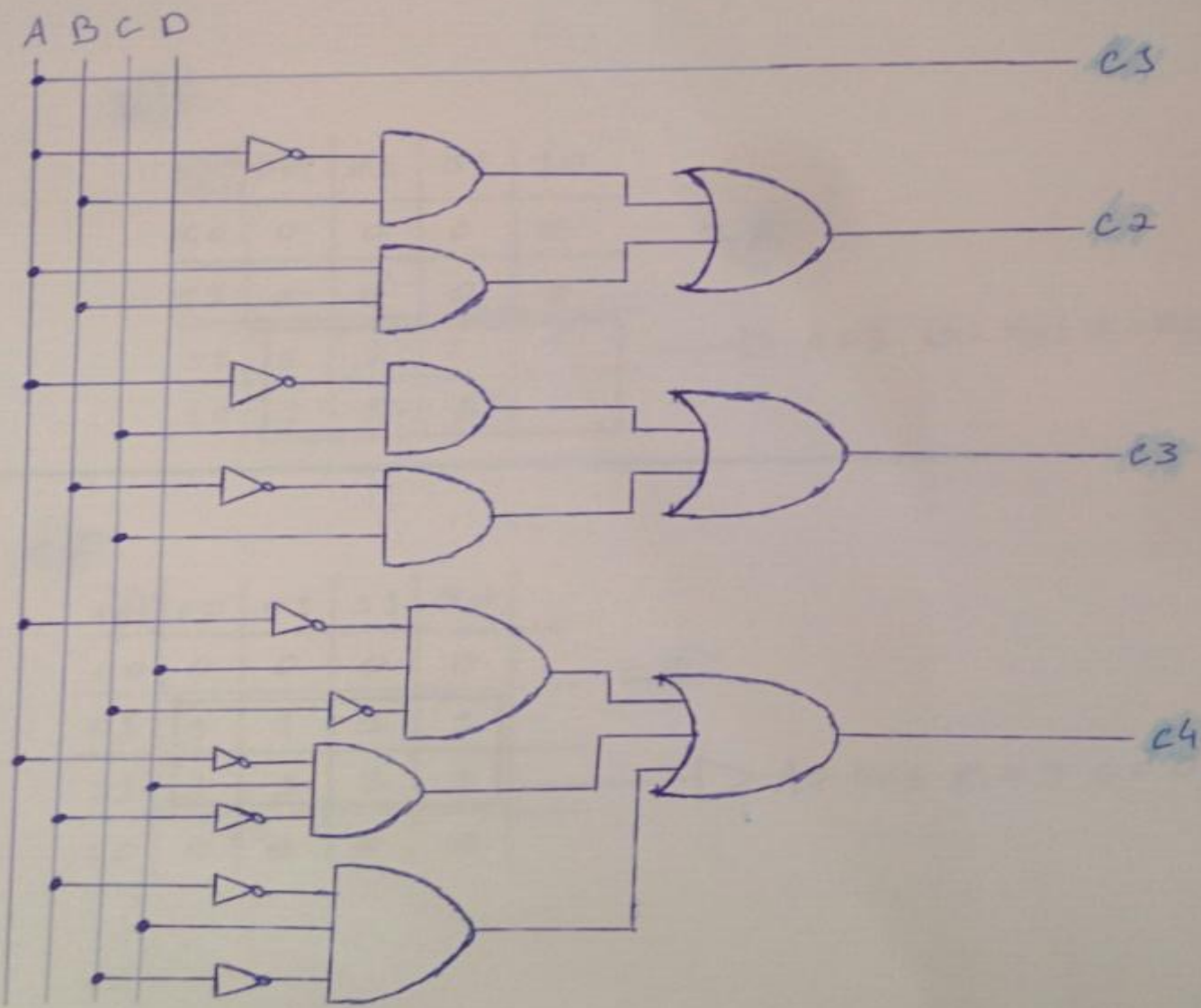
= $\bar{A} \cdot \bar{B} \cdot D + \bar{A} \cdot \bar{C} \cdot D + \bar{B} \cdot \bar{C} \cdot D$

→ A=0 B=0
C=0/1 D=1

→ A=0
B=0/1 C=0
D=1

→ A=0/1 B=0 C=0 D=1

CIRCUITO LÓGICO E SIMPLIFICAÇÃO DE EXPRESSÃO BOOLEANA

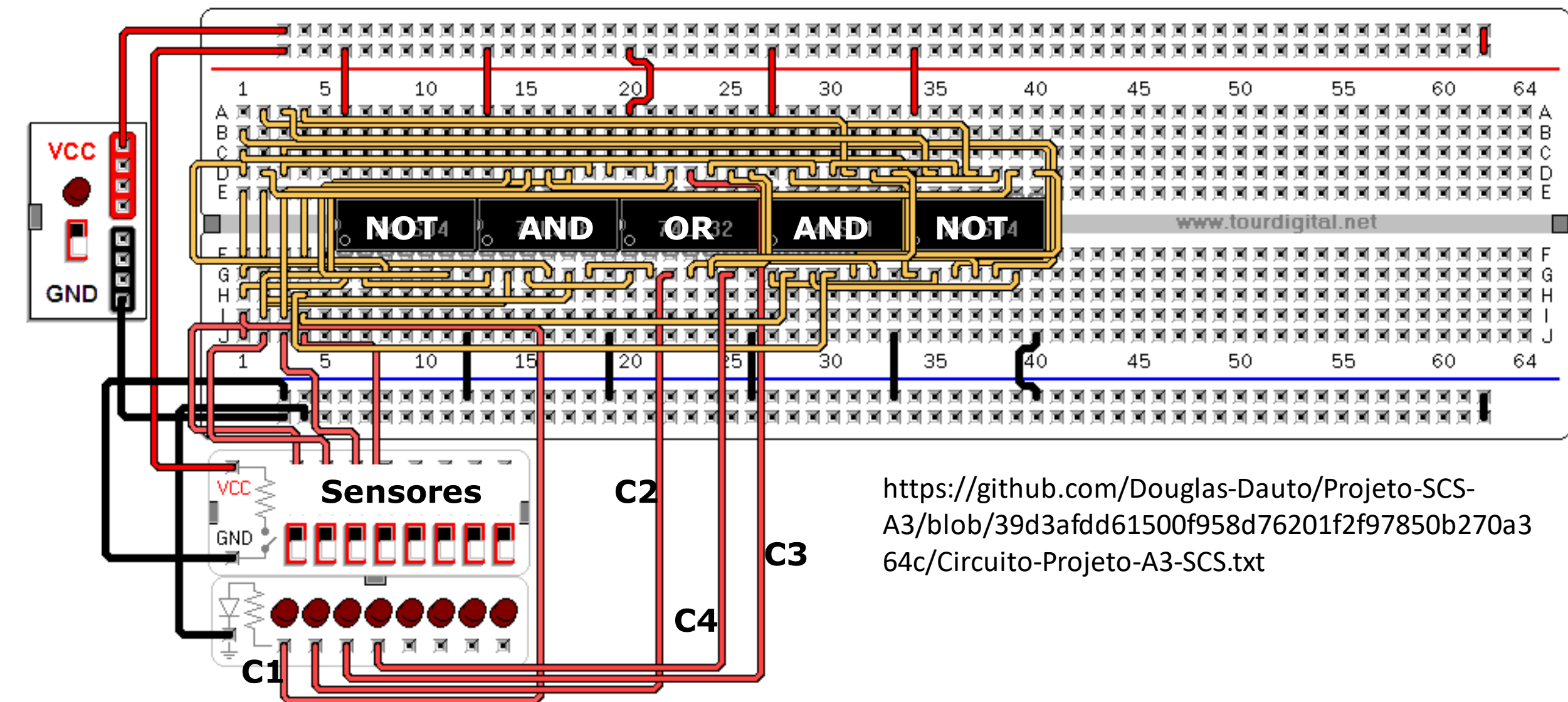


$$S = A \rightarrow C1$$

$$S = B \rightarrow C2$$

$$S = \bar{A}.C + \bar{B}.C \rightarrow C3$$

$$S = \bar{A}.\bar{B}.D + \bar{A}.\bar{C}.D + \bar{B}.\bar{C}.D \rightarrow C4$$



<https://github.com/Douglas-Dauto/Projeto-SCS-A3/blob/39d3afdd61500f958d76201f2f97850b270a364c/Circuito-Projeto-A3-SCS.txt>