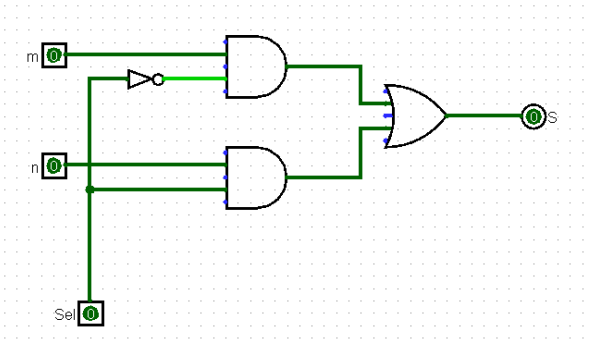
Exercício Prático 02 - AC II

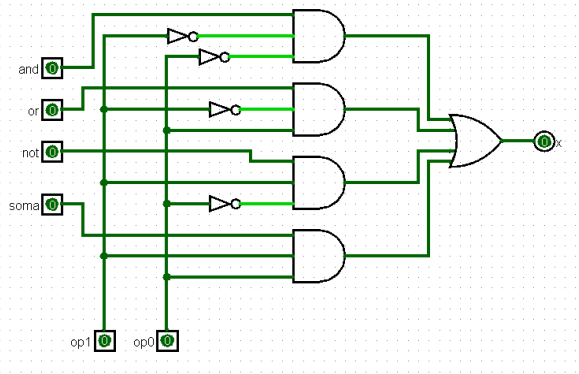
Sophia Carrazza Ventorim de Sousa - PUC Minas

Parte 1

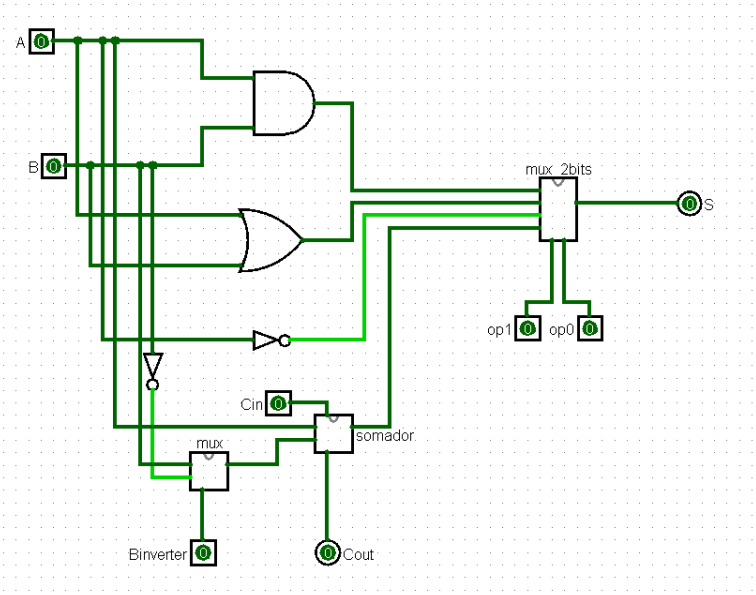
ULA 1bit-



MUX 1bit

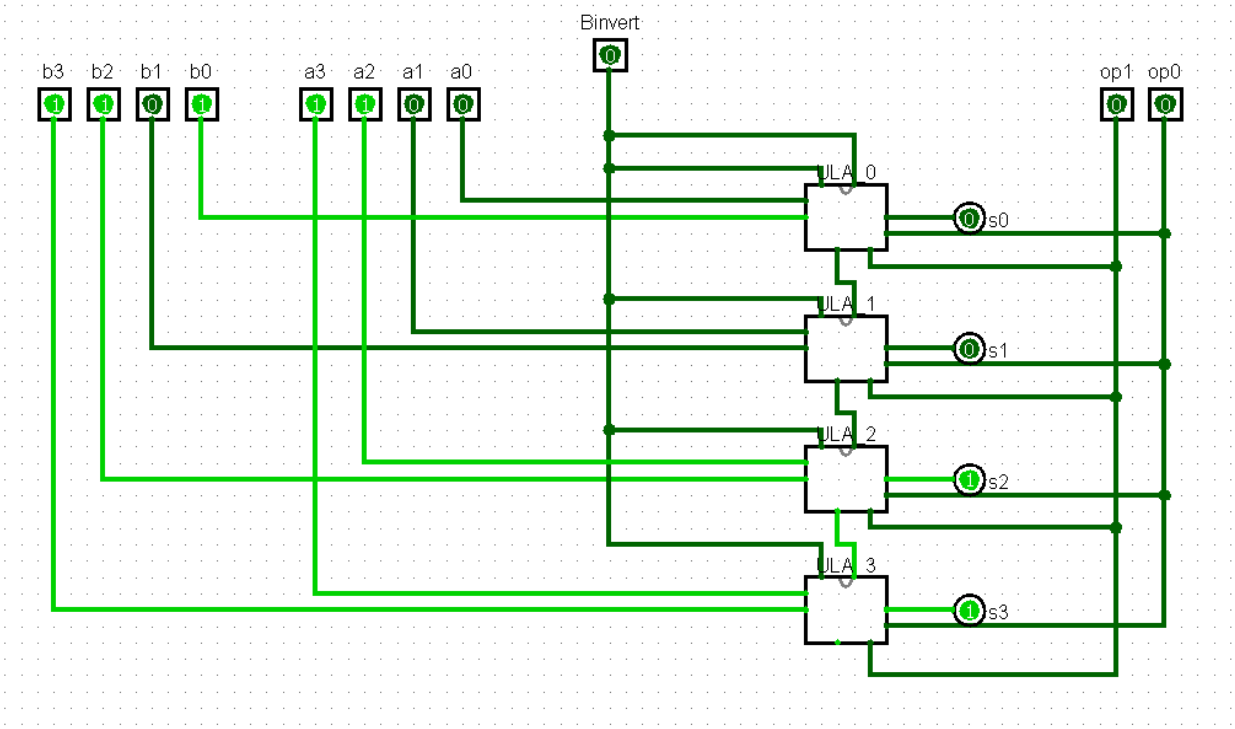


MUX 2bits



ULA 1bit

ULA 4bits-

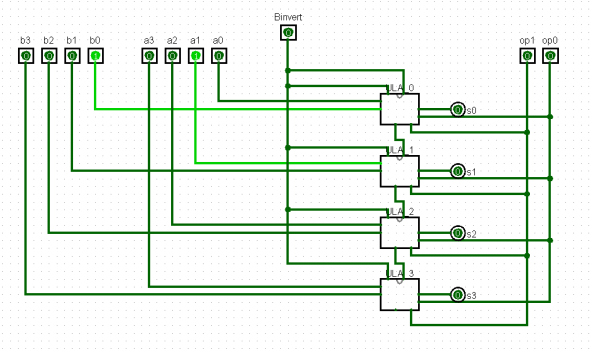


ULA 4bits

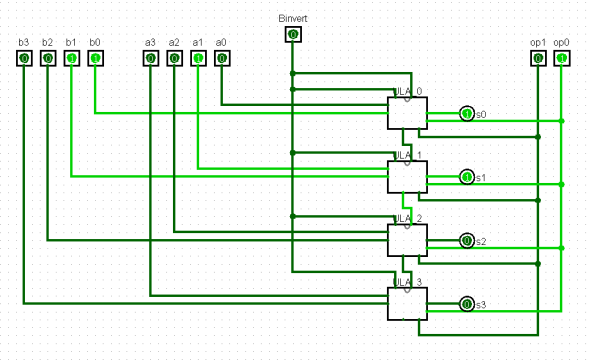
Tabela de resultados-

Instrução realizada	Binário (A,B,Op.code)	Valor em Hexa (0x …)	Resultado em binário
AND(A,B)	0010 0001 00	(0000 1000 0100) = 0x084	0000
OR(A,B)	0010 0011 01	(0000 1000 1101) = 0x08d	0011
SOMA(A,B)	0010 0011 11	(0000 1000 1111) = 0x08f	0101
NOT(A)	1100 0011 10	(0011 0000 1110) = 0x30e	0011
AND(B,A)	1100 1101 00	(0011 0011 0100) = 0x334	1100

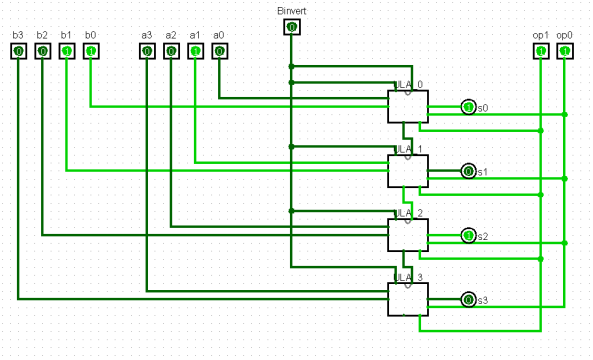
Testes-



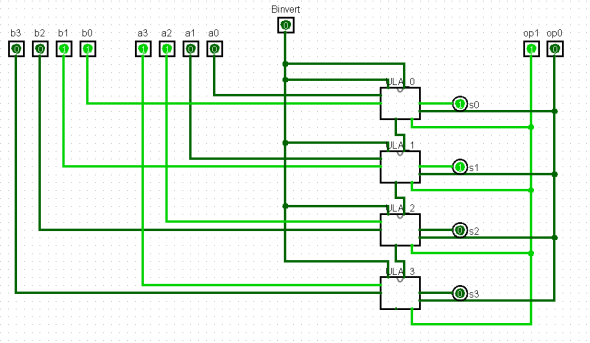
teste1



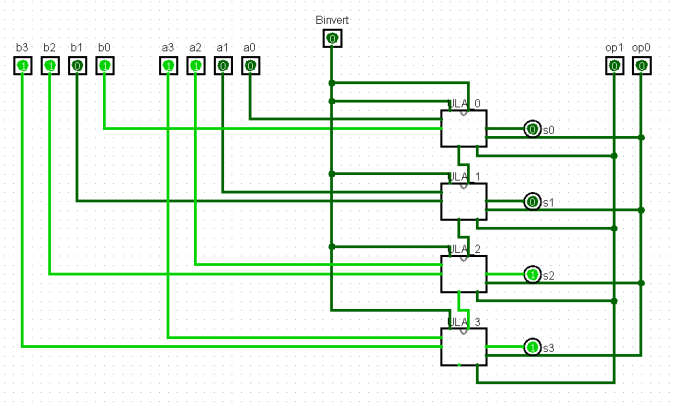
teste2



teste3



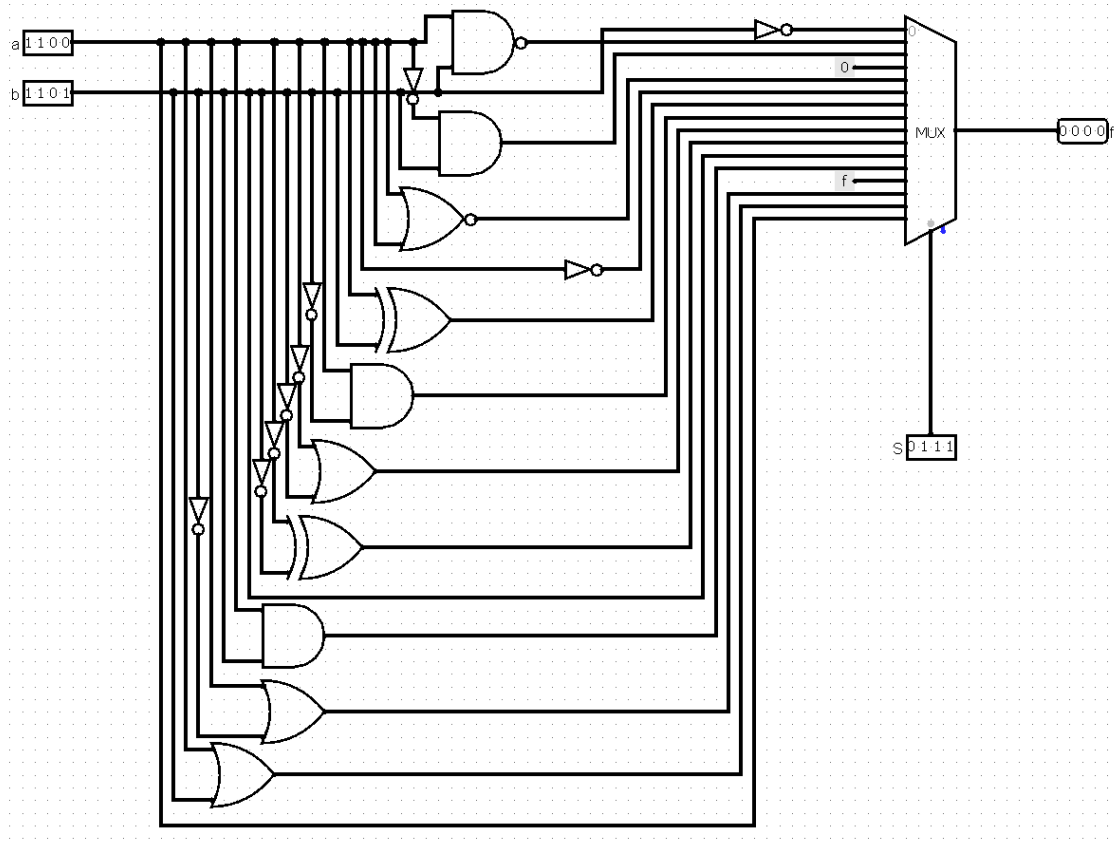
teste4



teste5

Parte 2

Circuito 74181-

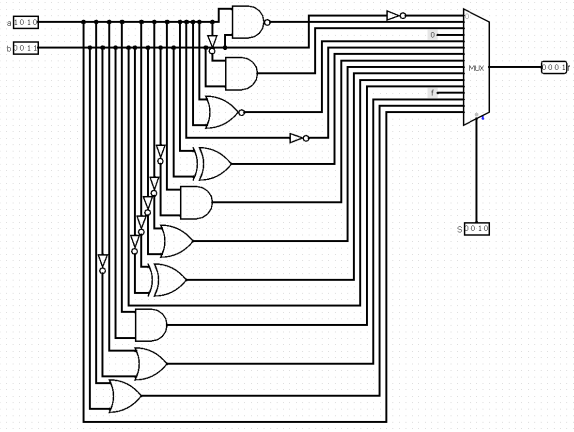


CD7

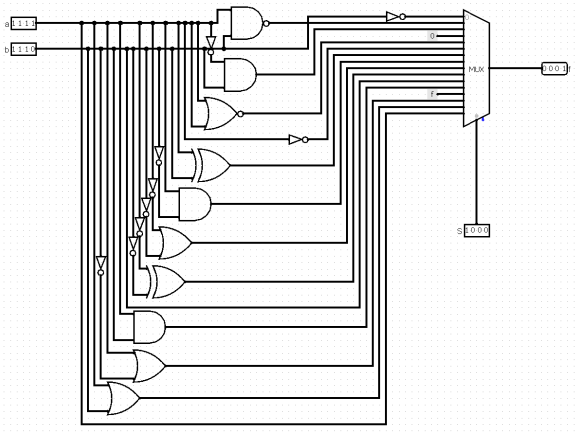
Tabela-

Instruções	Binário	Resultado da operação
450	0100 0101 0000	1010
CB1	1100 1011 0001	0111
A32	1010 0011 0010	0001
C43	1100 0100 0011	0000
124	0001 0010 0100	1110
785	0111 1000 0101	1000
9B6	1001 1011 0110	0010
CD7	1100 1101 0111	0000
FE8	1111 1110 1000	0001
649	0110 0100 1001	0010
D9A	1101 1001 1010	1001
FCB	1111 1100 1011	1100
63C	0110 0011 1100	1111
98D	1001 1000 1101	1111
76E	0111 0110 1110	0111
23F	0010 0011 1111	0010

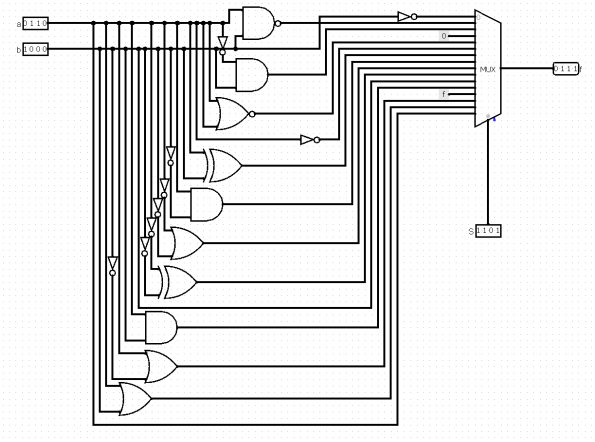
Testes-



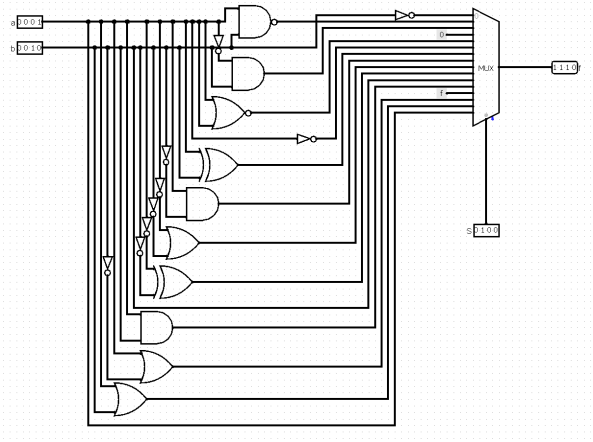
A32



FE8



98D



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Questão-

Se o objetivo fosse testar a ULA por inteiro, seria necessário preencher **4096** linhas na tabela (2^12, já que há 12 portas de entrada no circuito).