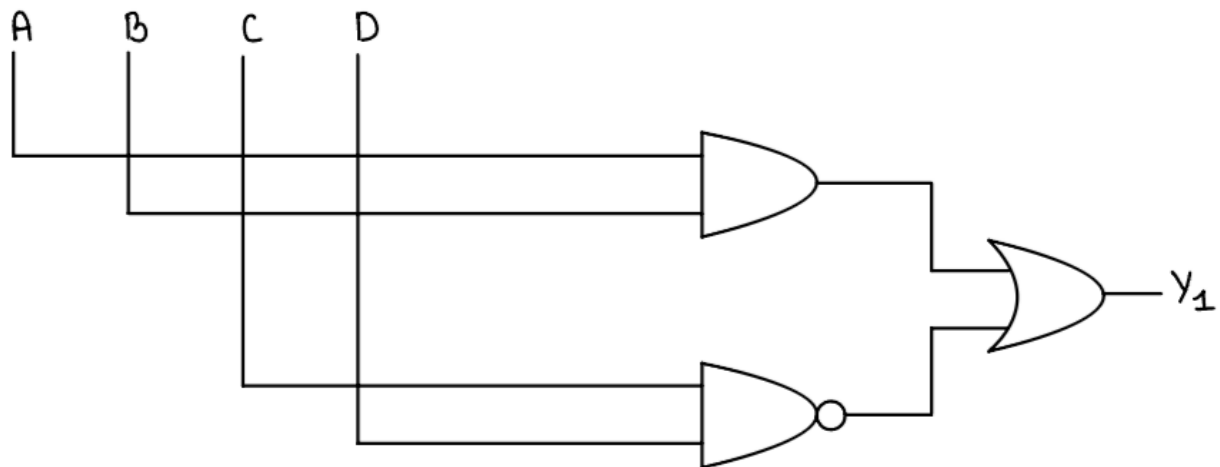Chhay Lay Heng
CS 4141.115
Oct 6, 2023

Experiment 1 Post-Lab
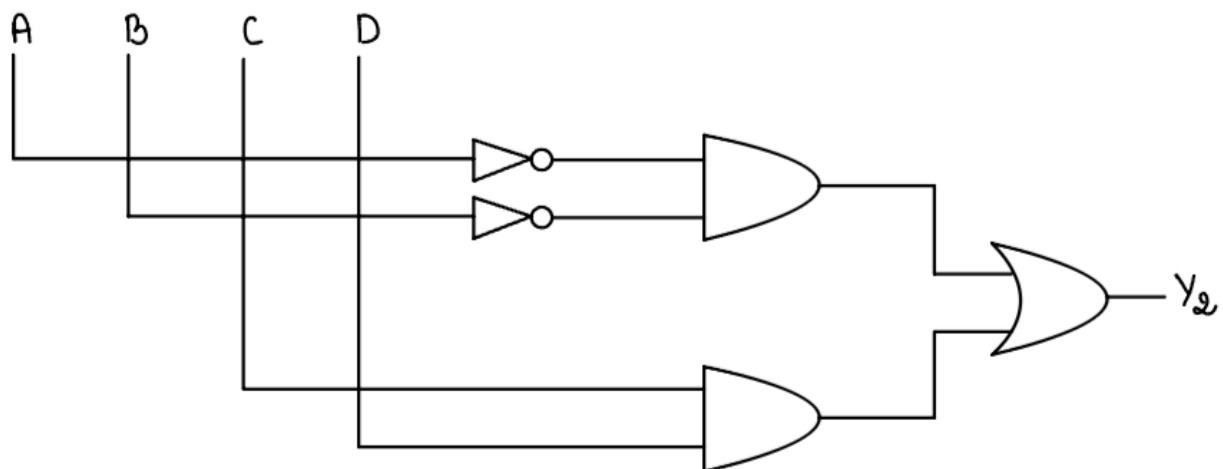
Partners: Korbin Schulz and Bennett Quigley

$Y_1 = (A \cdot B) + (C \cdot D)'$
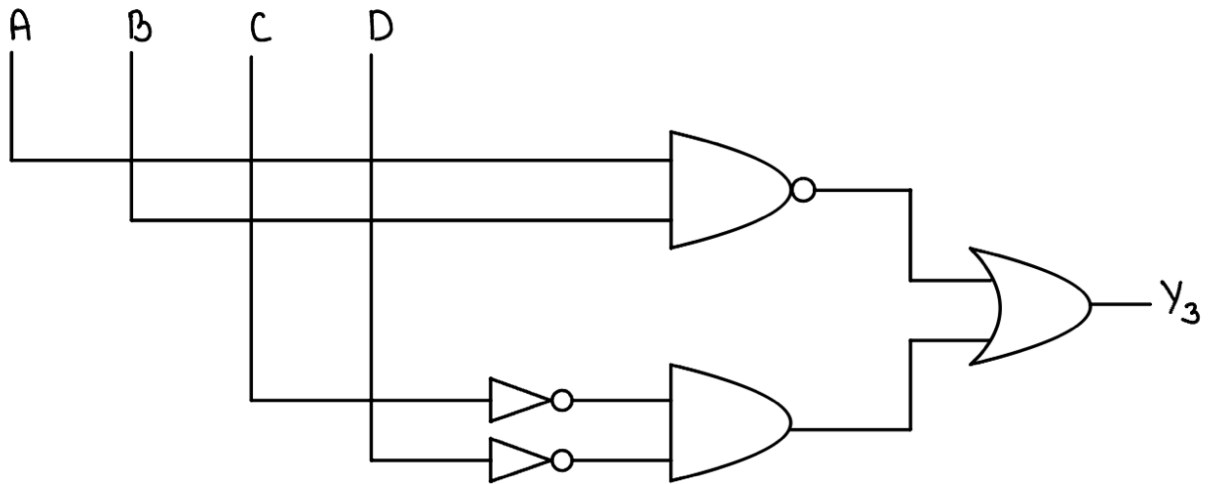

$Y_1 = (A \text{ AND } B) \text{ OR } \text{ NOT}(C \text{ AND } D)$

$Y_2 = (A' \cdot B') + (C \cdot D)$
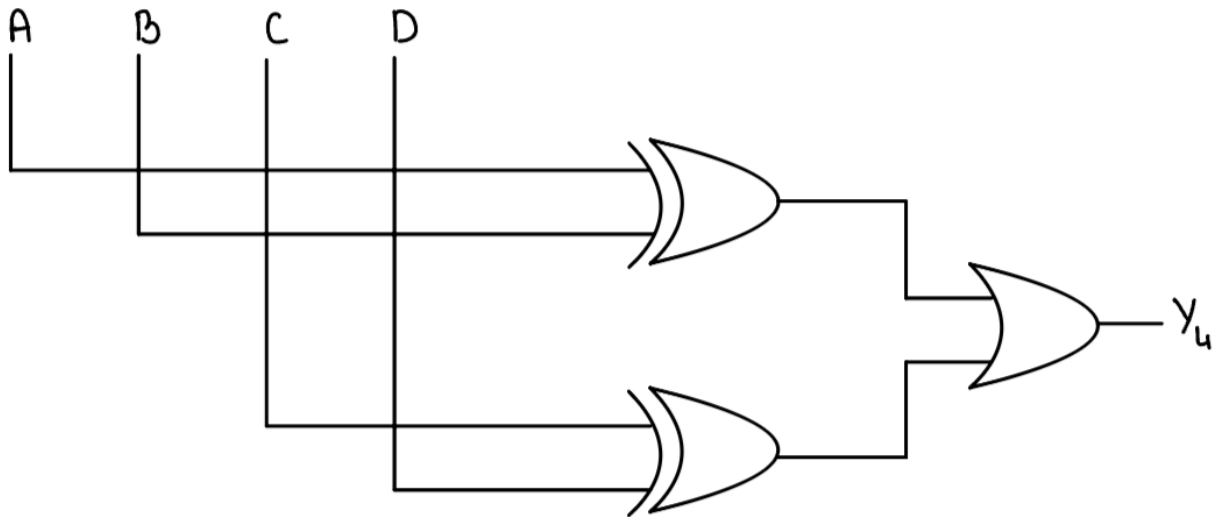

$Y_2 = (\text{NOT } A \text{ AND NOT } B) \text{ OR } (C \text{ AND } D)$

$Y_3 = (A \cdot B)' + (C' \cdot D')$

$Y_3 = \text{NOT (A AND B) OR (NOT C AND NOT D)}$

$Y_4 = (A \oplus B) + (C \oplus D)$

$Y_4 = \text{(A XOR B) OR (C XOR D)}$

Truth Table

A	B	C	D	Y_1	Y_2	Y_3	Y_4
0	0	0	0	1	1	1	0
0	0	0	1	1	1	1	1
0	0	1	0	1	1	1	1
0	0	1	1	0	1	1	0
0	1	0	0	1	0	1	1
0	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1
0	1	1	1	0	1	1	1
1	0	0	0	1	0	1	1
1	0	0	1	1	0	1	1
1	0	1	0	1	0	1	1
1	0	1	1	0	1	1	1
1	1	0	0	1	0	1	0
1	1	0	1	1	0	0	1
1	1	1	0	1	0	0	1
1	1	1	1	1	1	0	0