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 CS 4141.115  
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## Experiment 2 Post-Lab

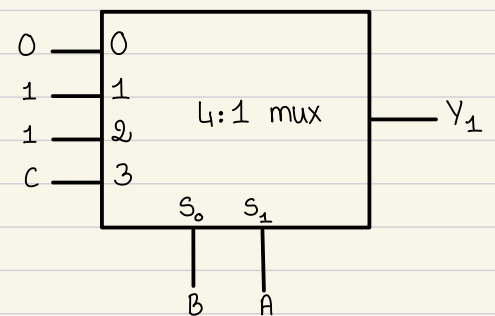
Partners' name: Korbin Schulz and Bennett Quigley

$$Y_1 = A'B + AB' + AC$$

### . Truth Table

A	B	C	$Y_1$		
0	0	0	0	] $A'B'$	0
0	0	1	0		
0	1	0	1	] $A'B$	1
0	1	1	1		
1	0	0	1	] $AB'$	1
1	0	1	1		
1	1	0	0	] $AB$	C
1	1	1	1		

### . Logic Diagram

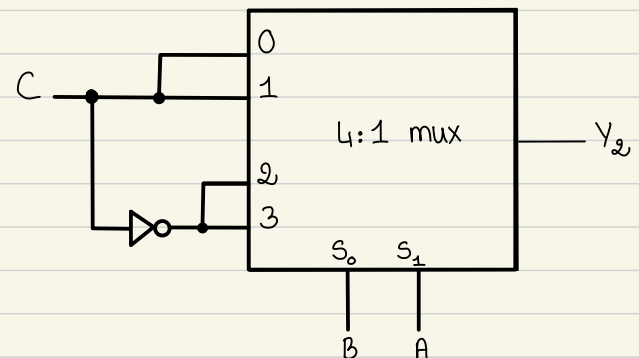


$$Y_2 = A'B'C + A'BC + AB'C' + ABC'$$

### . Truth Table

A	B	C	$Y_2$		
0	0	0	0	] $A'B'$	C
0	0	1	1		
0	1	0	0	] $A'B$	C
0	1	1	1		
1	0	0	1	] $AB'$	$C'$
1	0	1	0		
1	1	0	1	] $AB$	$C'$
1	1	1	0		

### . Logic Diagram



• Truth table for the Full Adder

A	B	C	Sum	Carry
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

• Logic Diagram for Full Adder using the Decoder

