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CourseCSE 231.1 L

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Assessment : 02

Full Adder Circuit using Multiplexer

A Multiplexer here has 4 inputs and 1 output. The end result is to carry out a full adder with appropriate calculations. In order to do so, I have used a NOT Gate, IC 7404, for implementing the inputs of the full adder.

Truth Table for Full Adder

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

K-map for Full adder

Carry

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

Sum

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

Respective Canonical Form

C=∑(3,5,6,7)

S=∑(1,2,4,7)

Inputs

Sum : I0=C I1=C' 13=C I2= C'

Carry: I0=0 I1=C 13=1 I2= C

A Full Adder using Multiplexer (Logisim)