ELC 2137 Lab 4: Subtractor

Forrest Knee

February 24, 2021

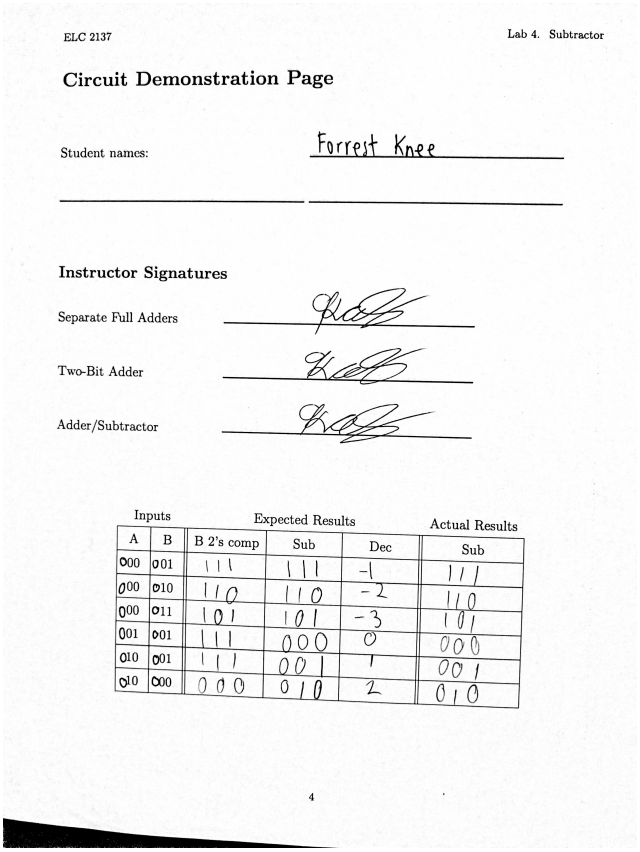
Summary

This lab involved adding onto our adder circuit to make a subtractor. A key component was converting the input into a 2's compliment.

Q&A

1. Two full adders were used at recomendation of the book.
2. There are 32 required combinations.
3. The table covers no duplicate results that require the same circuit elements.
4. I obtained no discrepencies in my data compared to expectations.

Deliverables



ELC 2137 Lab 4. Subtractor

Circuit Demonstration Page

Student names: Forrest Knee

Instructor Signatures

Separate Full Adders

Two-Bit Adder

Adder/Subtractor

Inputs		Expected Results			Actual Results
A	B	B 2's comp	Sub	Dec	Sub
000	001	111	111	-1	111
000	010	110	110	-2	110
000	011	101	101	-3	101
001	001	111	000	0	000
010	001	111	001	1	001
010	000	000	010	2	010

4

Figure 1: Demonstration Page

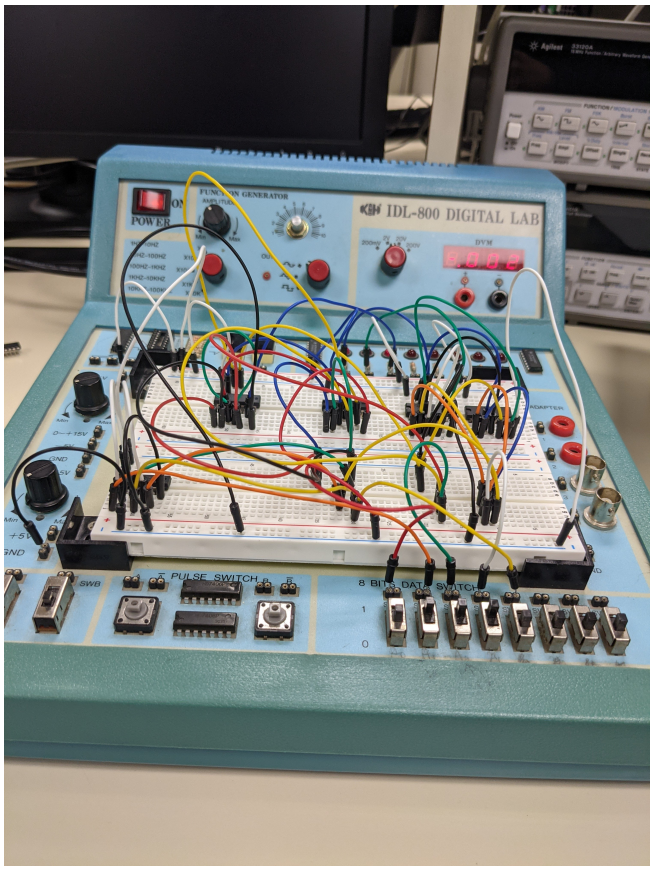


Figure 2: Subtractor

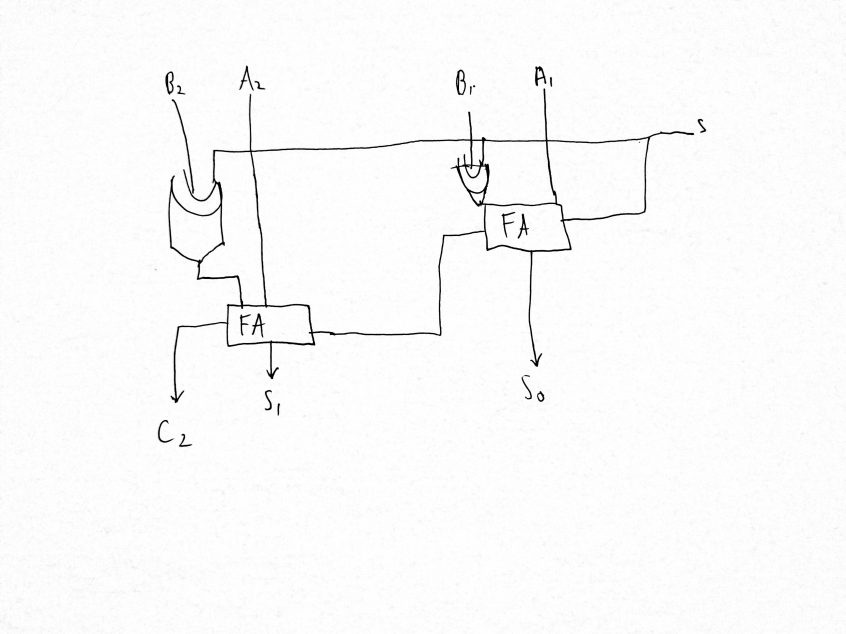


Figure 3: Schematic