Computer Logic 1

Lab 1 - Deliverable

Giorgio Grigolo

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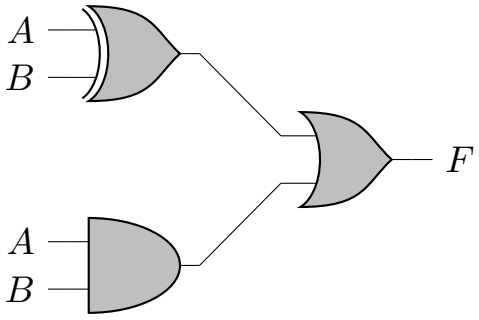
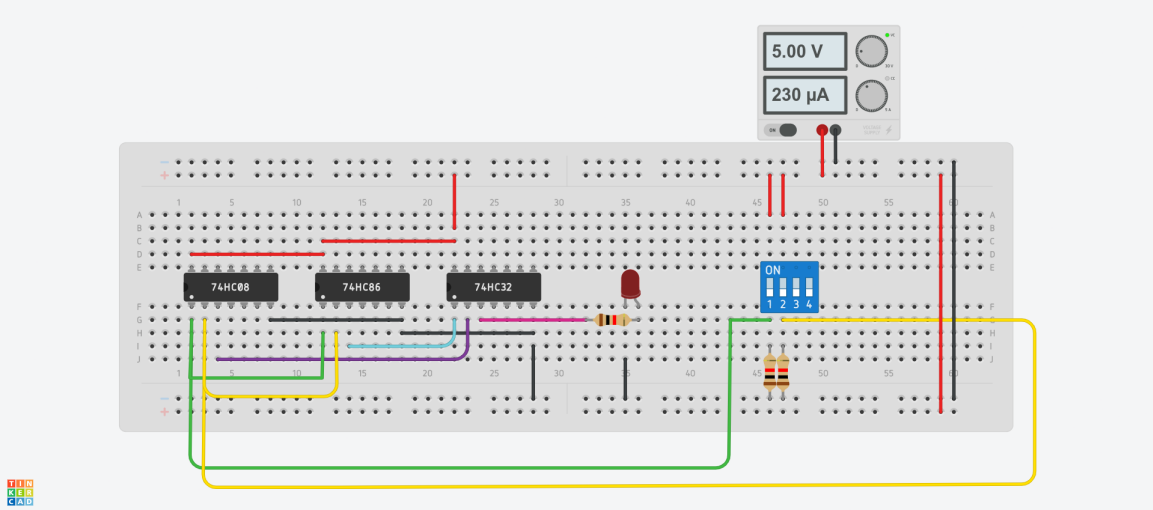
Truth Table and Schematic

Below are the worked out values of the truth table for the boolean expression $(A \cdot B) + (A \oplus B)$ and its representation in a schematic using logic gates.

A	B	$A \cdot B$	$A \oplus B$	F
0	0	0	0	0
0	1	0	1	1
1	0	0	1	1
1	1	1	0	1



Tinkercad Schematic



My breadboard setup for this lab session.

All possible input combinations

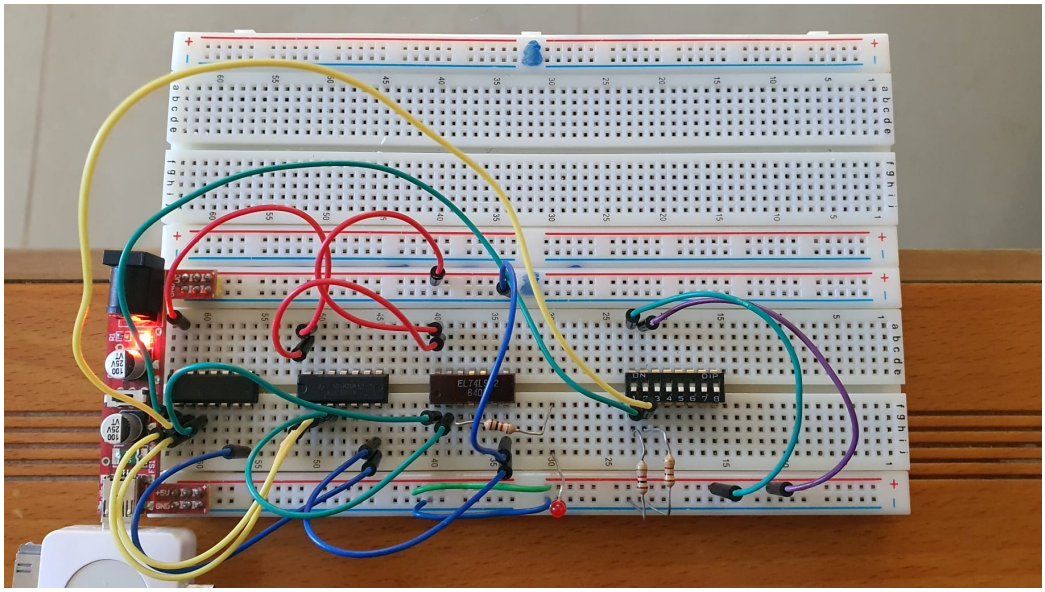


Figure 1. All switches are off. $A = 0$, $B = 0$ and so $F = 0$.

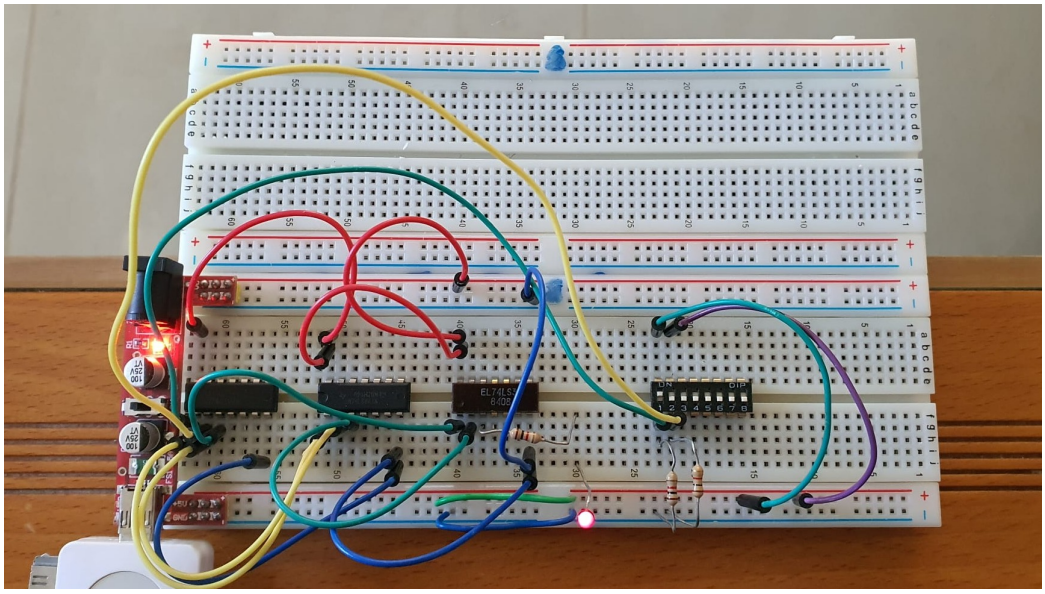


Figure 2. Only switch 1 is turned on. $A = 1$, $B = 0$ and so $F = 1$.

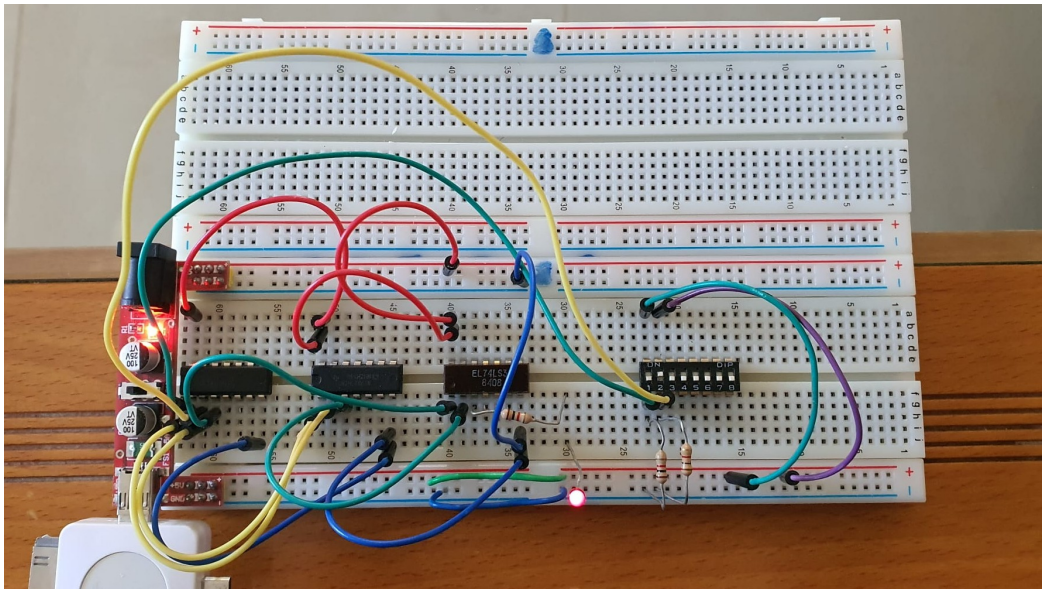


Figure 3. Only switch 2 is turned on. $A = 0$, $B = 1$ and so $F = 1$.

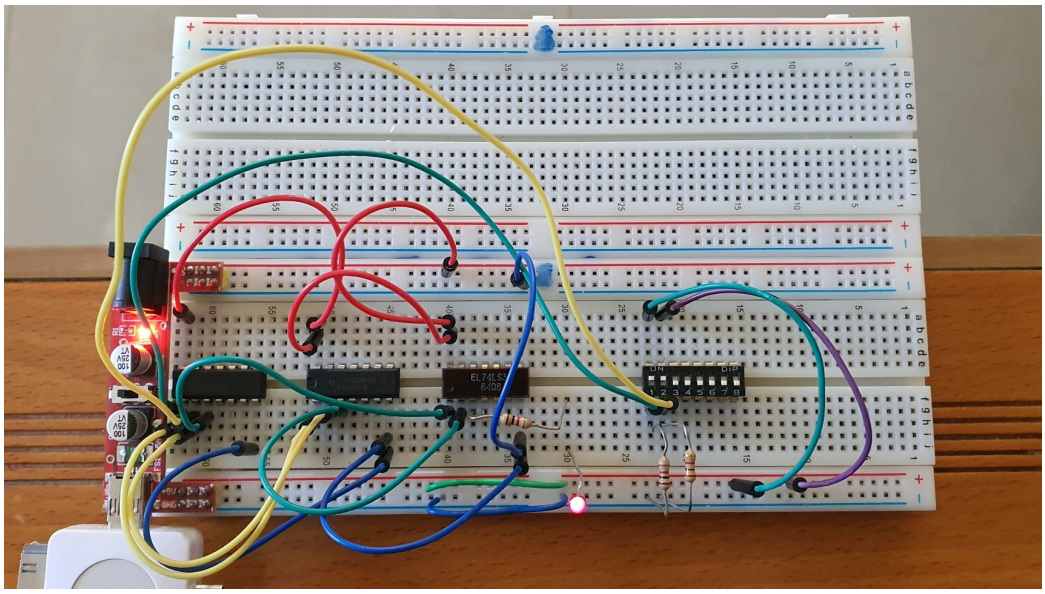


Figure 4. All switches are turned on. $A = 1$, $B = 1$ and so $F = 1$