LAB 5

Laboratory Report for CS 2420

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*Abstract* – This lab was a primer on the use and practicality of Karnaugh Maps (Kmaps) when reducing both product of sum and sum of product logical equations. It is also a refresher on the translation of logic gates drawn as figures to both truth tables and logical equations.

# Introduction

It is important for digital logic students to understand the logical backbones of the circuits they are creating. A relatively easy approach to this task is the use of both truth tables and Kmaps. To accomplish this task, I translated a picture of a circuit into a truth table. Then I used the truth table to figure out both the POS and SOP logical expressions. I then used a Kmap to reduce that expression to its simplest form. Kmaps were further used to reduce a variety of functions. Finally, I built a circuit (digitally) from the expression that were reduced in the previous portions of the lab.

# Experimental Method

For the first portion of the lab, I translated a circuit diagram into a truth table that represents its logical outputs.

# Results

This is where you present and talk about your results.  Almost all results should go in a table, such as the ones you fill out in lab.  Any calculations you made should also be included.  Pictures of your calculations and/or tables, so long as they are readable, are fine if you are having formatting issues.  You also need to explain your results, such as where they what you expected, do they seem correct, do they closely match expected values, etc.

# Conclusion

If you had any difficulty in the lab and your results seem off, this is where you say why things seemed off and mention if you could have done anything to prevent it.  Explain what you learned in lab.