Lab 9

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Prelab:

Diagram

Description automatically generated with low confidence

A picture containing calendar

Description automatically generated

Purpose:

The purpose of lab 9 was to design a circuit that used multiplexers to multiply two 2-bit binary numbers.

Lab Procedure:

We started the lab by using Multism to simulate our two level form circuits. We used the Word Generator that was set to an internal clocking frequency of 1KHz, an initial address of 0000, a final address of 000F, and a pattern that counted up. We also used the Logic Analyzer that was set to the same internal clocking frequency as the Word Generator and clocks per division to 2, then we connected the Word Generator to the Logic Analyzer with four multiplexers, each representing W, X, Y, and Z outputs, and having the different inputs for each that we found in the prelab.

Multism screenshot-

A screenshot of a computer

Description automatically generated with medium confidence

Conclusion:

In this lab, we created a circuit with multiplexers that would multiply two 2-bit binary numbers. WE proved that for the inputs from 0000 to 1111, there was a correctly multiplied output for each.

Finally, I believe physically constructing a circuit is more beneficial to my learning experience.

Observations:

The main observation I have to improve my performance on future experiments is to further learn how the multiplexer works.