Assignment 1 - 4:1 Multiplexer

COEN 122L - Fall 2018
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Description

A multiplexer's job is to receive n inputs and pass one through based on the value of the select input. In this case, our 4 to 1 multiplexer will receive 4 one-bit inputs, and assign the output to the input that corresponds to the value of the select. For example, if the two-bit select reads 2 (10), then out_data = in_data_2 (refer to figure 1).

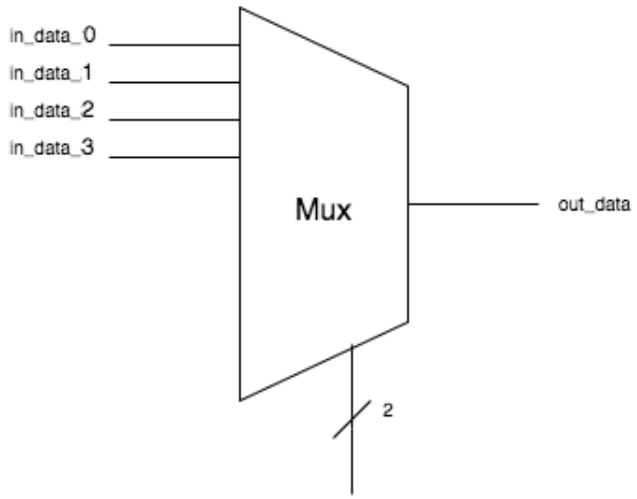

Figure 1: 4:1 Multiplexer

Assignment

In this lab, you will create a 4:1 multiplexer using Verilog. This component should have 4 one-bit inputs, a two-bit select, and a one-bit output. The bulk of the multiplexer code can be done using various if-else statements. Based on the values of the select, assign the output to the appropriate input.

Deliverables

To receive full credit, you will need to demo your working code. In addition, you must submit your source code (commented), your test-bench code (commented), and a screenshot of your waveform. To submit online, make sure everything is in a zipped folder (name the folder firstname_lastname.zip) and turn it into Camino. Please copy your code into individual .txt files and include those in the folder.