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Lab # 2

Lab Section - 1B

1/17/2020

Part 1: For the first part of this lab, the goal was to upload the given ce100.bit file to the board and verify that it displayed the right data on the oscilloscope. This required us to plug in the oscilloscope and upload the bitstream to the hardware correctly. It also taught us how to adjust the oscilloscope to give us the view we were looking for. I set the oscilloscope to the following:

Vertical Graduations:	1V
Horizontal Graduations:	µs
Vertical Gain:	2V
Sweep Rate:	20µs
Frequency of wave 1:	6.1kHz
Frequency of wave 2:	97.62kHz

This gave me the following graph on the oscilloscope:
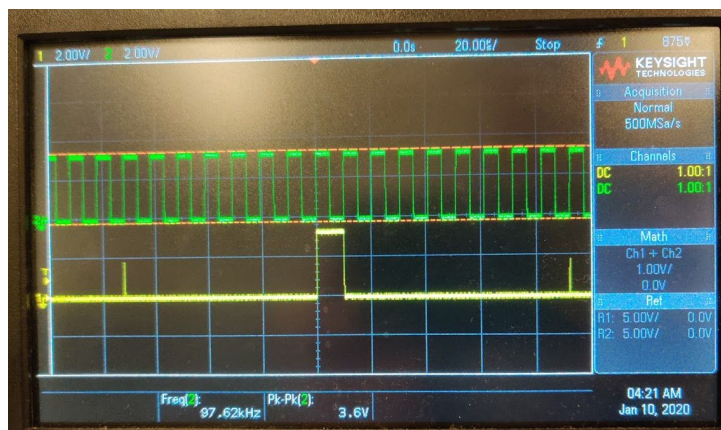
Part 2: For part 2, we were required to make 4 logic gates with the input being switches and buttons, and the output being LEDs on the board. For this, I first followed the example given to us about creating an AND gate, then added the OR, NOT, and XOR. I also had to comment out and rename the correct switches, buttons, and LEDs on the constraints file. The result was the following:
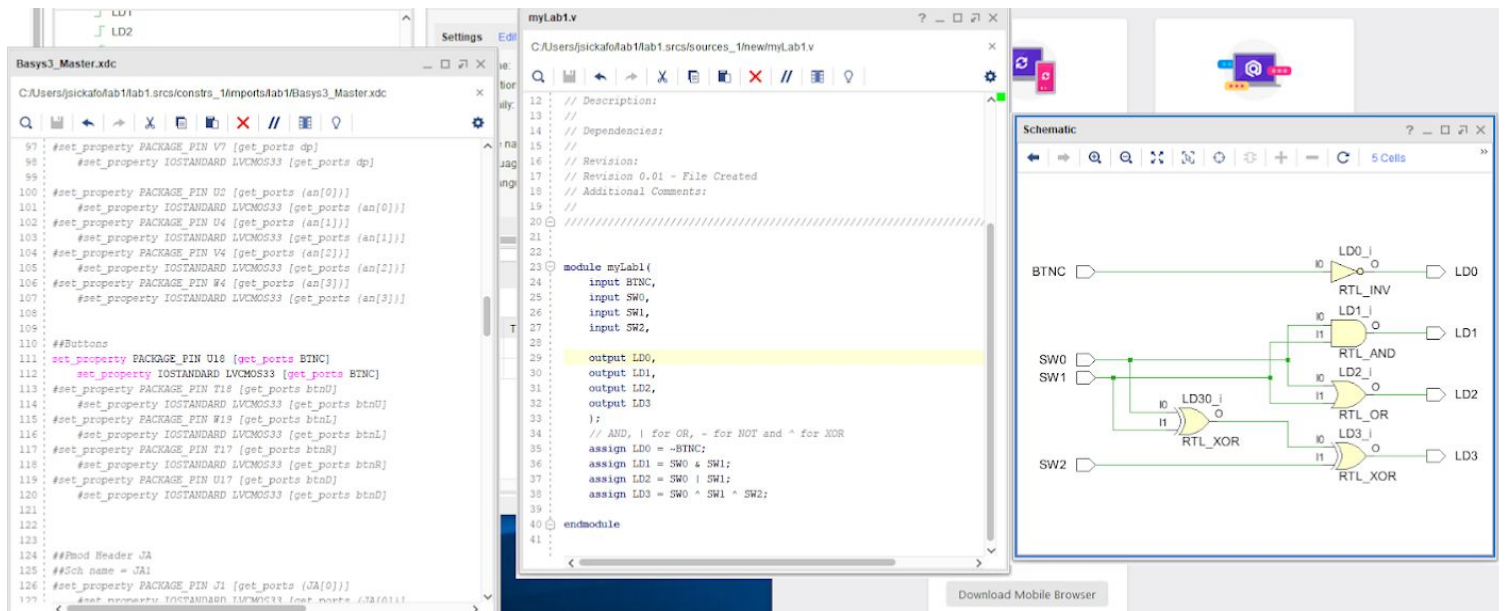
This gave me the right results on the board.

CSE 100L

Part 1

After uploading the Ce100.bit file to the board and running it, the multimeter displays two wave forms like this

Vertical graduations: V V

Horizontal: us

Frequency of #2: 97.62kHz

Vertical gain: 2V

Sweep rate: 20us   Frequency of #1: 61kHz

- Frequency of #1 wouldn't work because it can't find peaks.
- When not in single mode, there is a line under it's squares:

-I just had to zoom out

Part 2

I first followed the example of creating and running my AND on the board. I then changed variable names to sw0, sw1, etc. because it made more sense. I created separate files for my OR, my NOT, and my XOR, but I couldn't figure out how to combine into one bit file.

I remade a my Lab1.v where I programmed what was asked.

AS
Part 1
6045
12:47PM
1/9/20

LAB 1 PART 2
1849
12:56 PM
1/9/20