

Lab One Notes and Comments

Part 1:

Straight-forward experiment connection the 18 switches to the 18 red LED's. No issues encountered.

Part 2:

Straight-forward experiment to implement an 8 bit wide 2-to-1 MUX. Implemented using the code Dr. McLeod provided in his lab intro slides on D2L. No issues encountered.

Part 3:

Straight-forward experiment to implement a three bit wide 5-to-1 MUX. Implemented using code provided in the design files on the Altera UP Digital Logic Labs site. No issues encountered.

Part 4:

Implemented a seven segment display decoder. Derived the Boolean expressions for each LED (for practice). No issues encountered.

Part 5:

Re-used the 5-to-1 MUX from part 3 and the seven segment display decoder from part 4 to rotate the word 'HELLO' around 5 displays based on user selection. No issues encountered.

Part 6:

Re-used seven segment decoder from part 4 and used an implementation of a 3 bit wide 8-to-1 MUX (credited in the code) to rotate the word 'HELLO' around 8 displays based on user selection. No issues encountered