

EE214: Homework

Wadhwani Electronics Lab, IIT Bombay

Wednesday 3rd February, 2021

Please complete the following assignments before your next lab turn.

1. Revise logic design using K maps, binary and BCD arithmetic circuits.
2. Prof Virendra Singh's lecture no 6 and 22A, . Prof Dinesh Sharma's lecture on 21/1/2021 will help to understand BCD addition clearly.
3. Write the VHDL description of a 4-1 multiplexer with enable as shown in figure below. Write the tracefile to test all possible combinations of inputs. Simulate it and check the correctness of your description. You will be required to use this in the next week's Lab.
4. Generate the .svf file for the this design. Note that In1, In2, In3, In4 are the four inputs and S2 and S1 are the select lines. You can use six on-board switches for the input and select lines and the output may be shown on one of the on-board LEDs.
5. Be ready with on-board demo for this design before next lab session

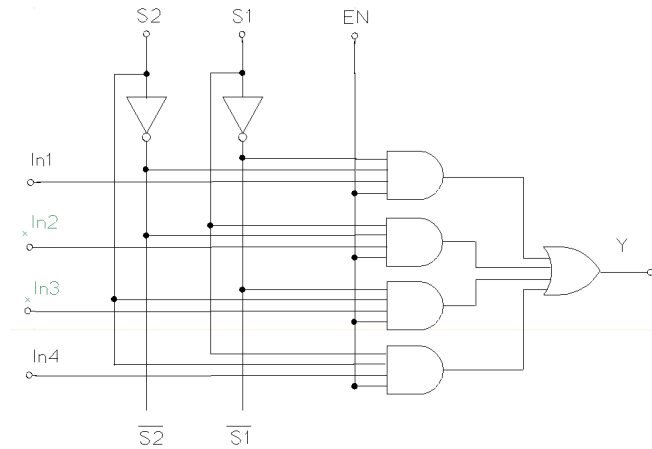


Figure 1: 4-1 Multiplexer