EE 3921

Dr. Johnson

Homework 2

1) Create code for an asynchronous 4 bit barrel shifter with a falling edge load_bar signal to initialize the shifter. Inputs: 4 bit data word to be loaded, loadb signal to load the input, 2 bit shift value, 1 bit direction value. Outputs: 4 bit shifted output.

40pts

Can you make it generic ???

2 Synthesize your barrel shifter and provide the RTL   20pts

3) Simulate your barrel shifter, provide the testbench and simulation results