

ECE2411: Logic Circuit II, Spring 2018

Lab1. Design simulation with ModelSim

Objective: Learn basics of using ModelSim software, from create project to write and compile simple models and a testbench to run simulation with testbench, and verify the models.

1. Simulate and test basic binary logic gate models.
 - a. Create a project for testing basic gate models.
 - b. Add two new files for each basic gate, AND, OR and NOT, using two different methods to model each one of those basic gates.
 - c. Write a single testbench to test all the models you wrote. It must test all the possible input combinations.
 - d. Simulate with ModelSim, record the testbench output for your report.
 - e. Analyze the test results, check if two different modelling method of same gate generated same result? Also answer the question if the testbench has fully verified those models, and explain why so.