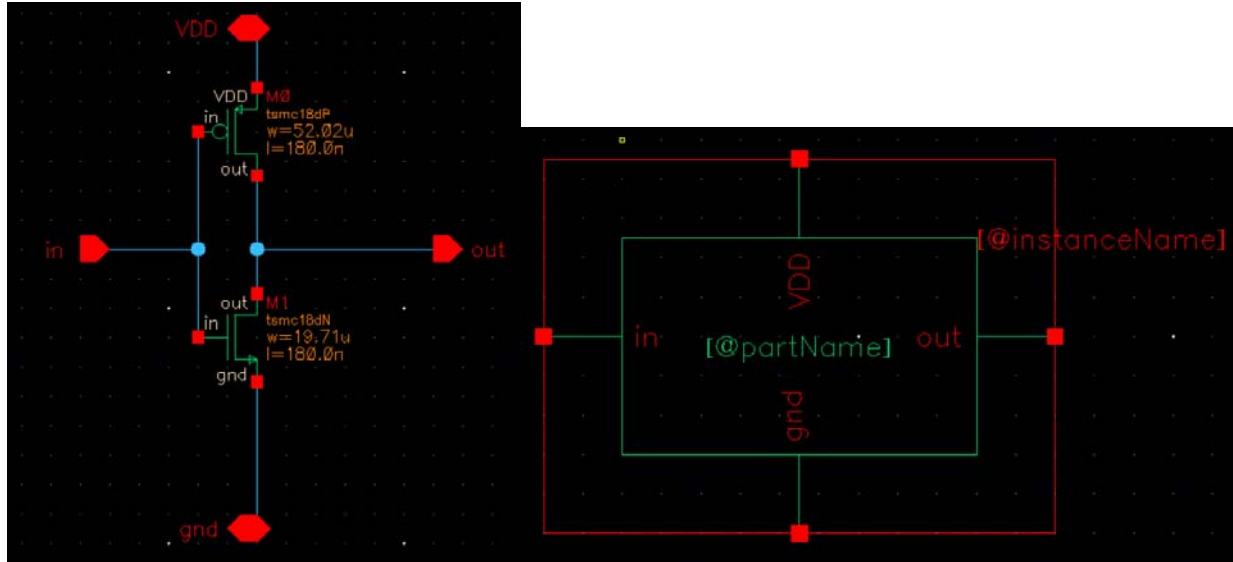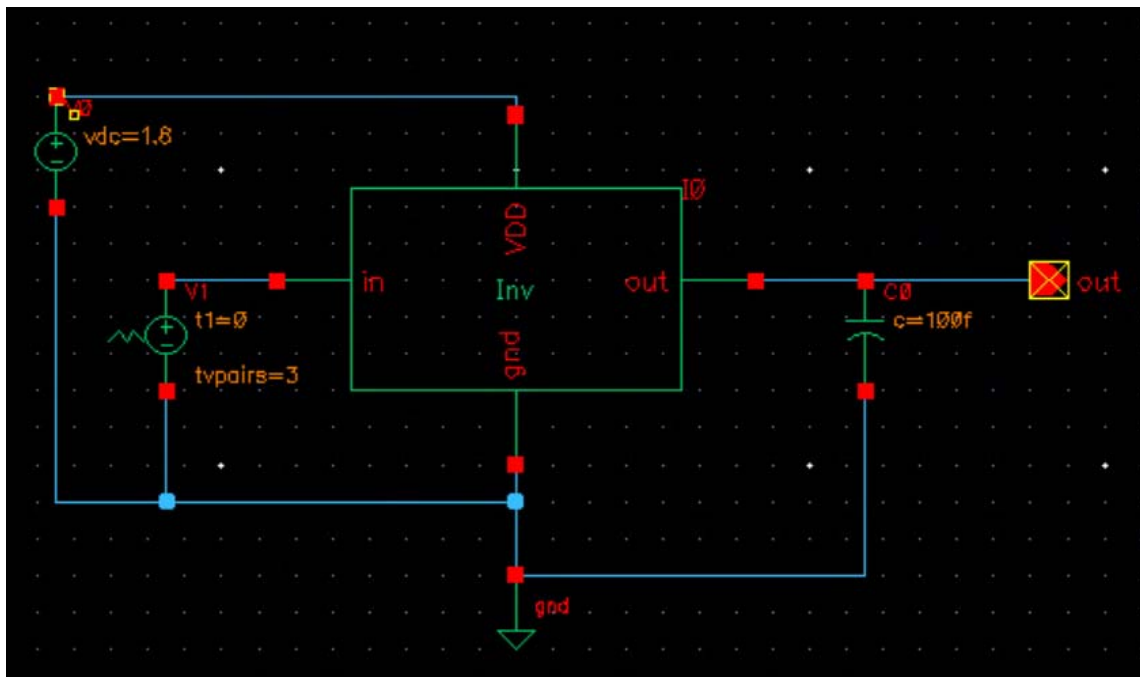# ECE 546 SP2024 Homework 9 Solution
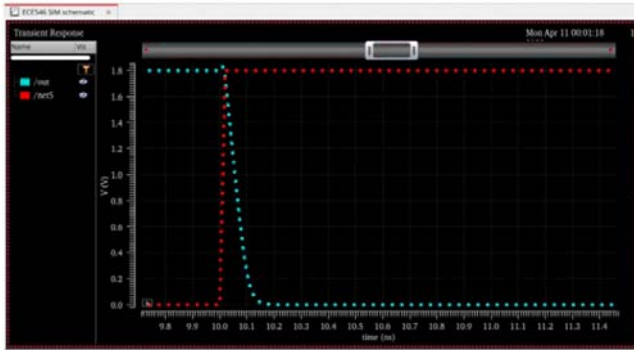
Following the steps in the homework, we have:

1. The inverter schematic and symbol (Note: this inverter is tuned to match with 50 ohms, you don't have to do it in this homework, just a good practice to have).
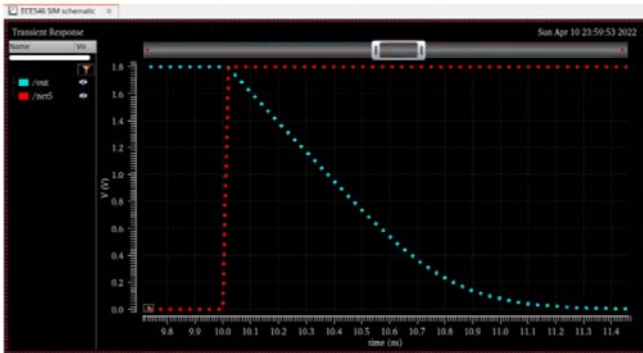

2. The test schematic of a single inverter.

3. Simulation results of the test schematic (Cap = 10 f F & 100 f F)
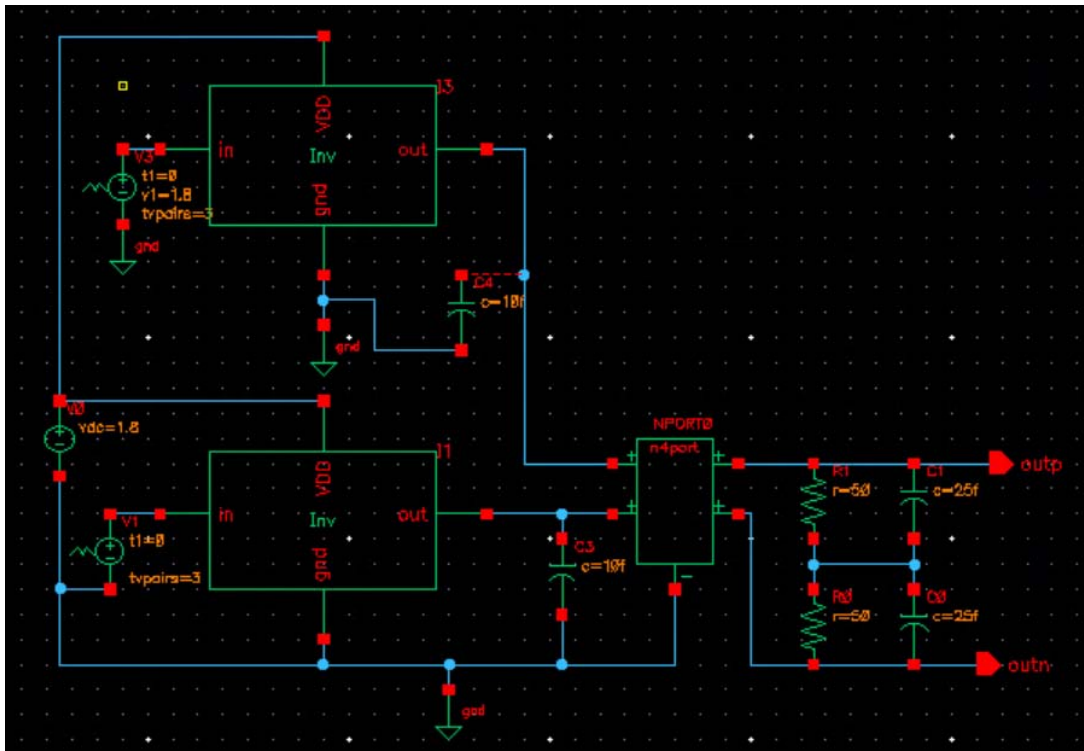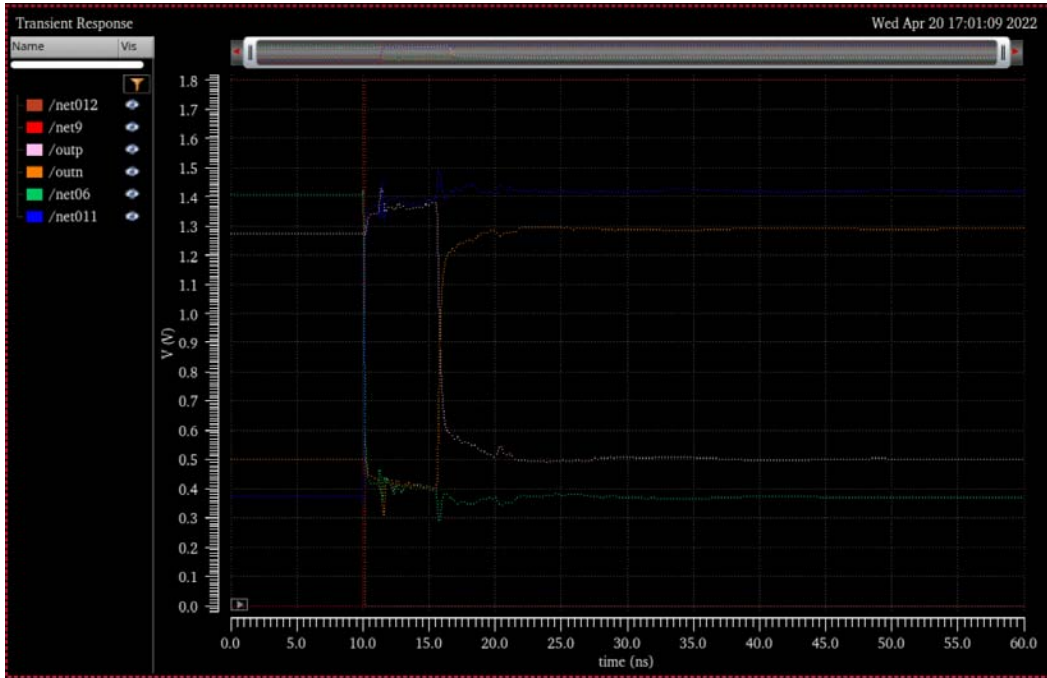

10 fF

100 fF (takes longer time to fall)

4. Differential channel schematic.

5. Simulation results (Note: Because of the matching in step 1, the TX and RX voltages shown below is a lot higher than your results. You should be getting around ± 200 mV at the TX node).

Raw data:

Differential signaling: