CE3101 Lab 6: CMOS Gates

Objectives

- Explore CMOS Gates

Prelab

<div style="text-align:right">student
check off</div>

- Checkout an Analog Discovery 2 kit from the Tech Center ☐
- Checkout needed components from the Tech Center ☐

Assignment

Part 1: CMOS Inverter

    a) Simulation: Simulate the Part1 circuit in MultiSim. First determine the switching point, then measure the gate delay(s) of the middle inverter. Note the 1MΩ resisters are present to help the simulation converge. ☐

    b) Implementation: Build the circuit from part a (without the resistors) and measure the middle inverter gate delays(s) using the simulated switching point as your reference. ☐

Part 2: CMOS Integrated Circuit

    a) Implementation: Using the schematics for Part2, measure the gate delays and rise/fall times for the second inverter for each part. ☐

Check Off

- Demo and document part 1   50%
- Demo and document part 2   50%

Demo (in-person or via Teams chat) and Report (in the box) due by 4:00 pm Wednesday of the week following the lab.