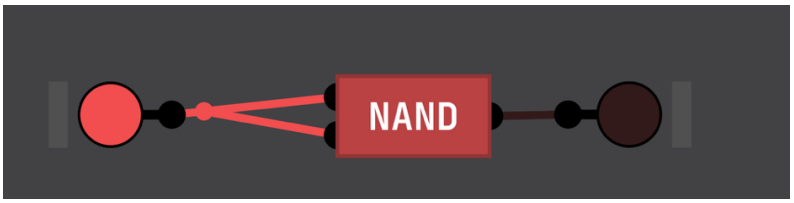
ENR 325 Assignment #4

Due: 10/2/25 10:00 pm

Task 1: Let's play a bit more on the Digital Logic Sim

At the start of a new project, we only have NAND gate available:

But we can build other gates with NAND, here's the NOT (inverter) for example:

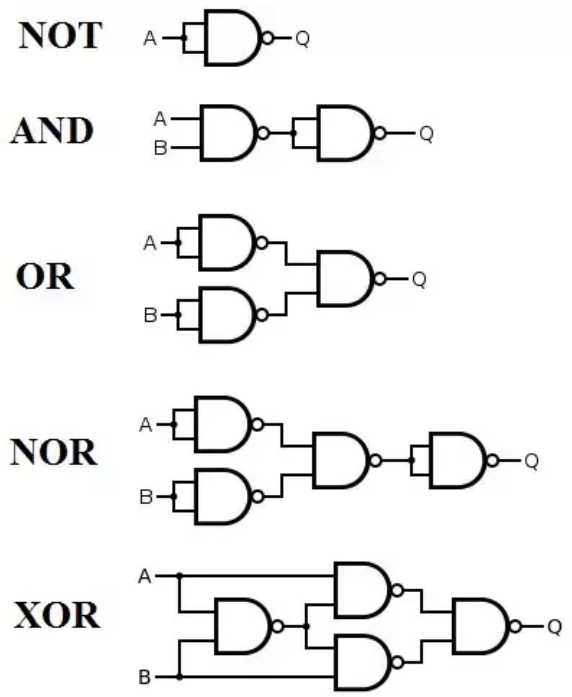


And we can save it as NOT gate:

So now your task is to build all the other gates and save them into your current project: AND, OR, NOT, NOR and XOR

Send me a screen capture of all the gates you built with NAND. (or NAND + other gates, for example, an AND gate can be built with NAND and NOT).

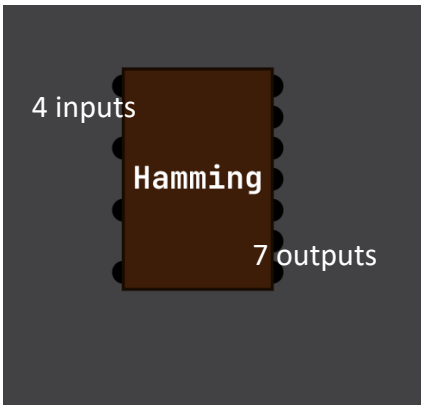
Here's a helper file below:



Task 2: build a Hamming (7,4) in the digital logic sim.

We talked about even parity check can be down with one logic function XOR.

So now your task is to build a Hamming (7,4) with the XOR gate you built in task one.
Send me a screenshot of the Hamming encoder chip you built:



You have to show what is under the hood. If you want to do extended Hamming (plus total parity check), even better!

For detailed instruction, search Ben Eater's Hamming code video on YouTube. But I suggest you try to work it out on your own first.