



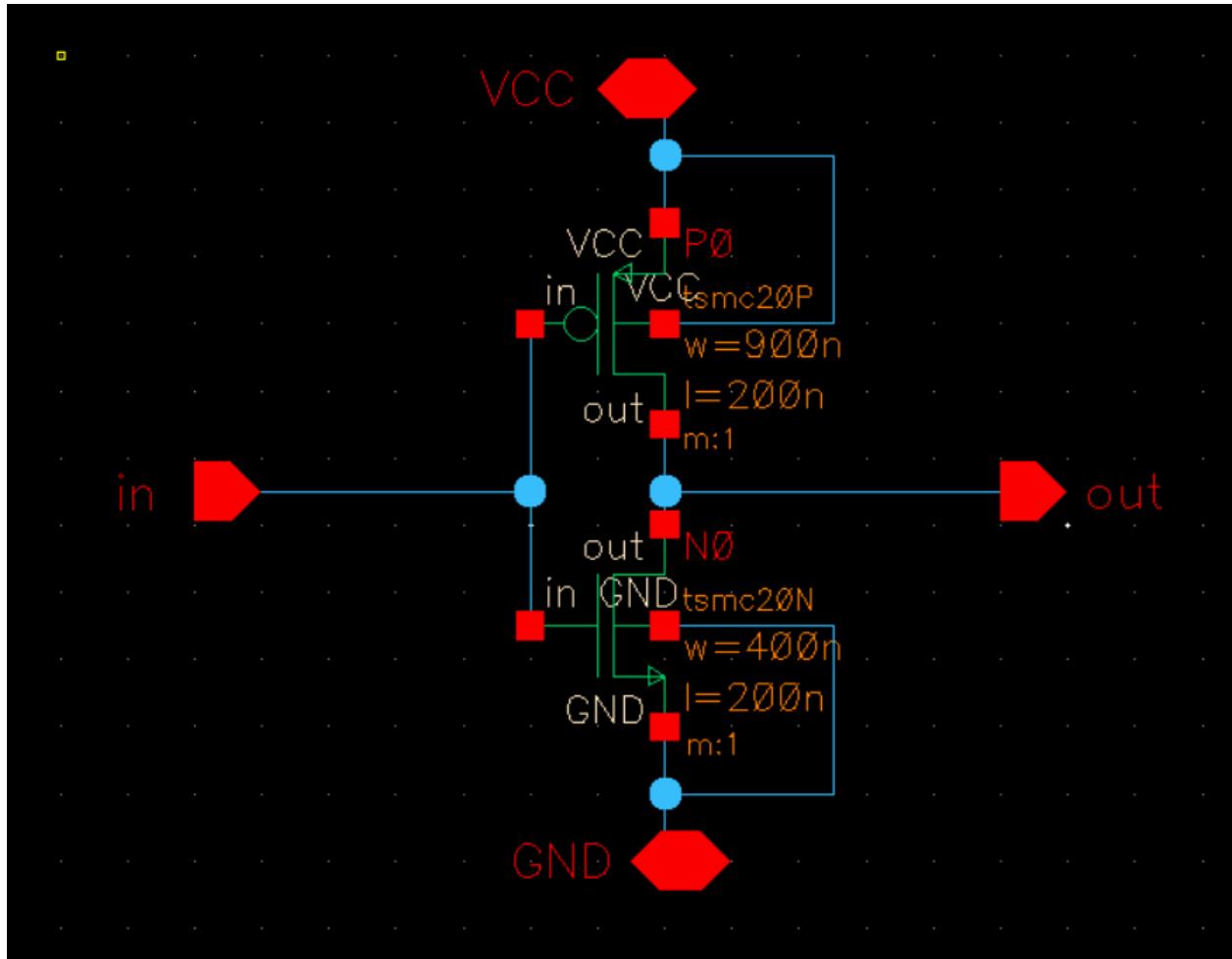
ECEN 454 - Lab 2 Report

Luke Lopez

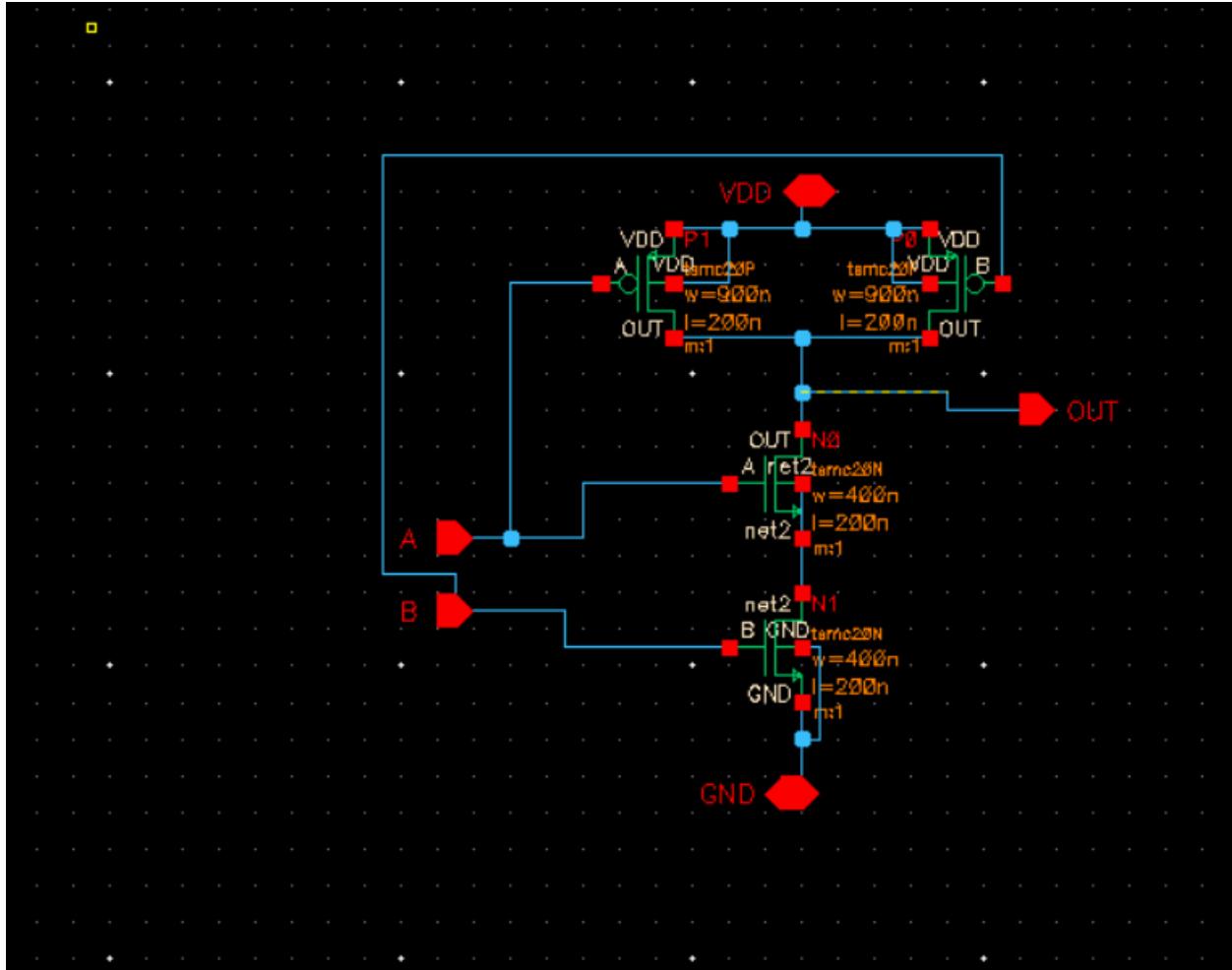
09/21/2025

# Schematics

## Inverter

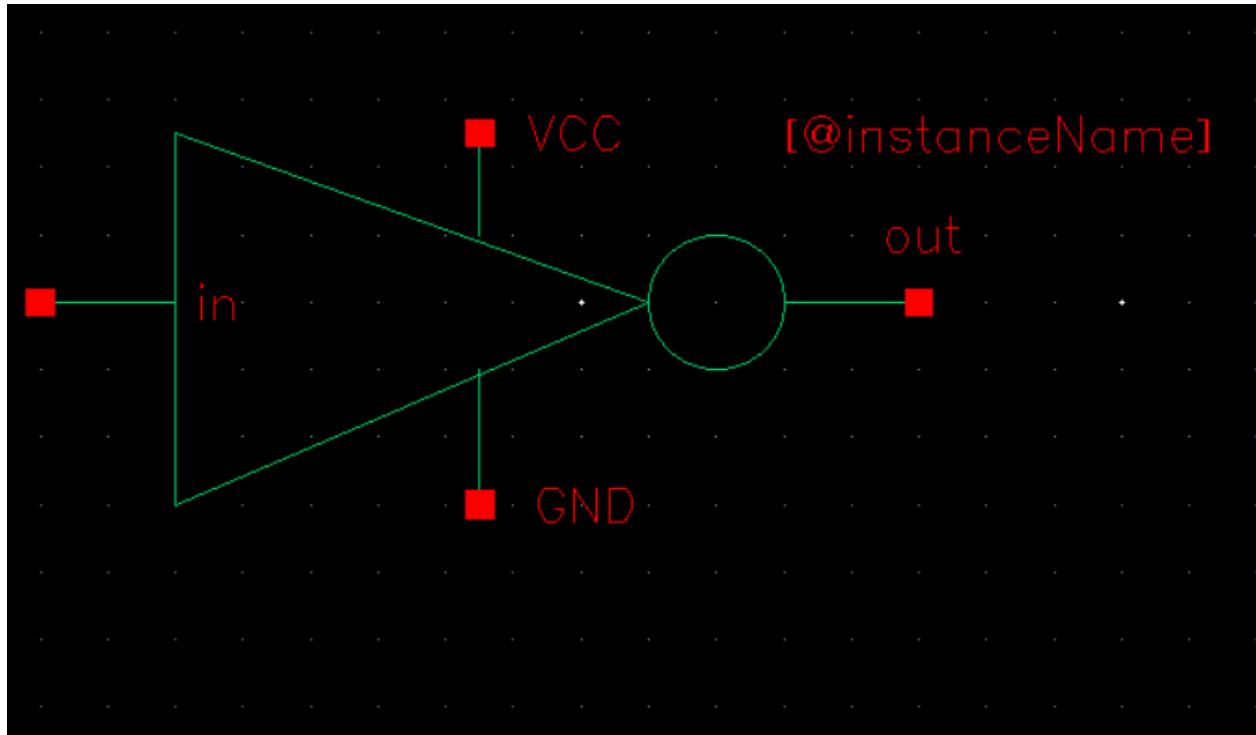


## NAND2

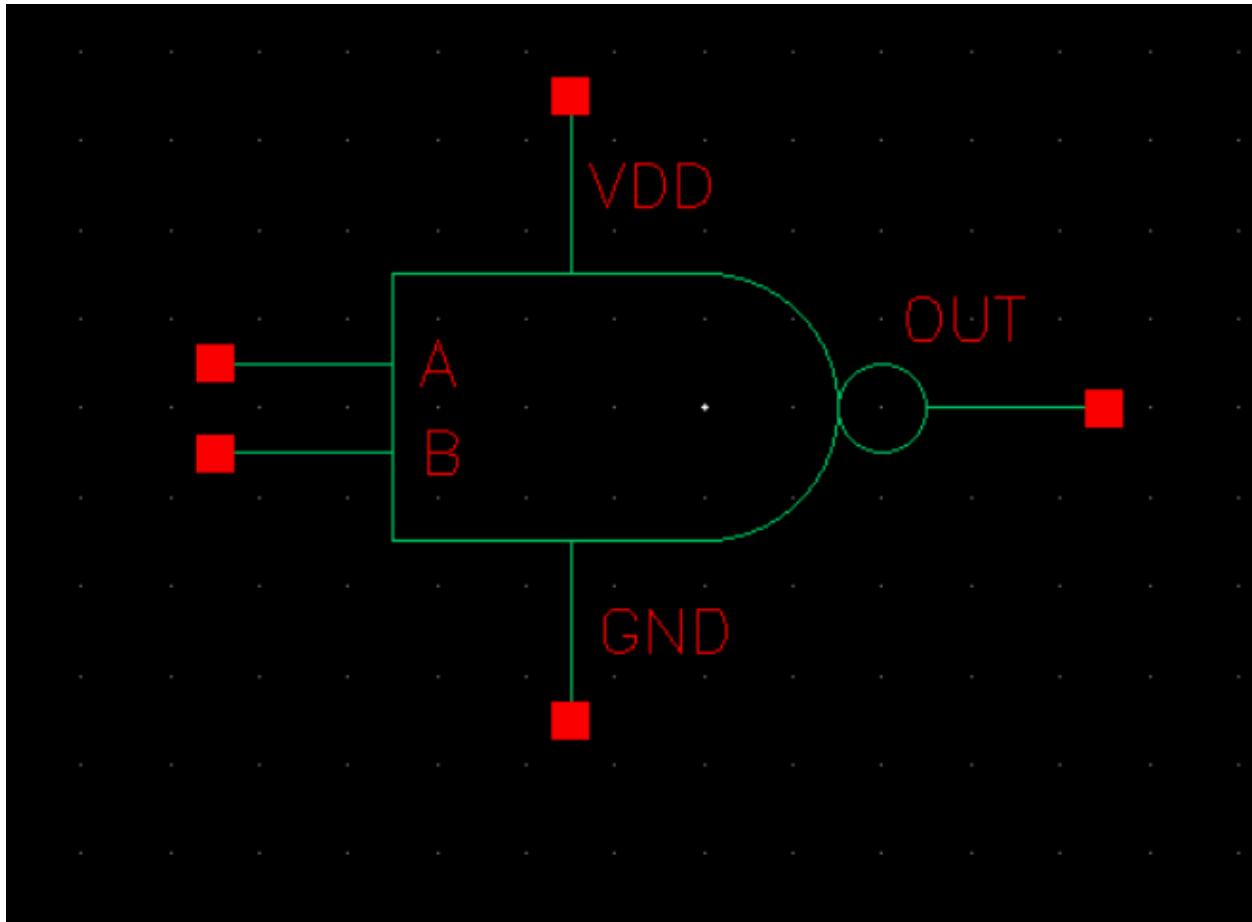


# Symbol

Inverter

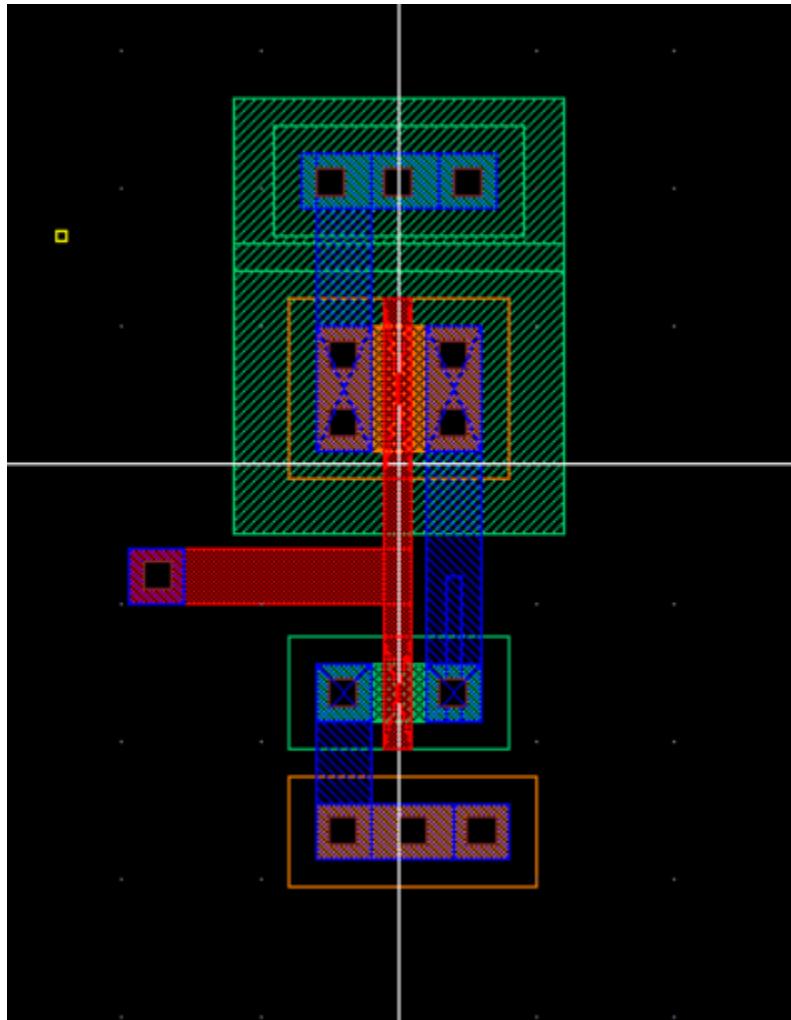


## NAND2

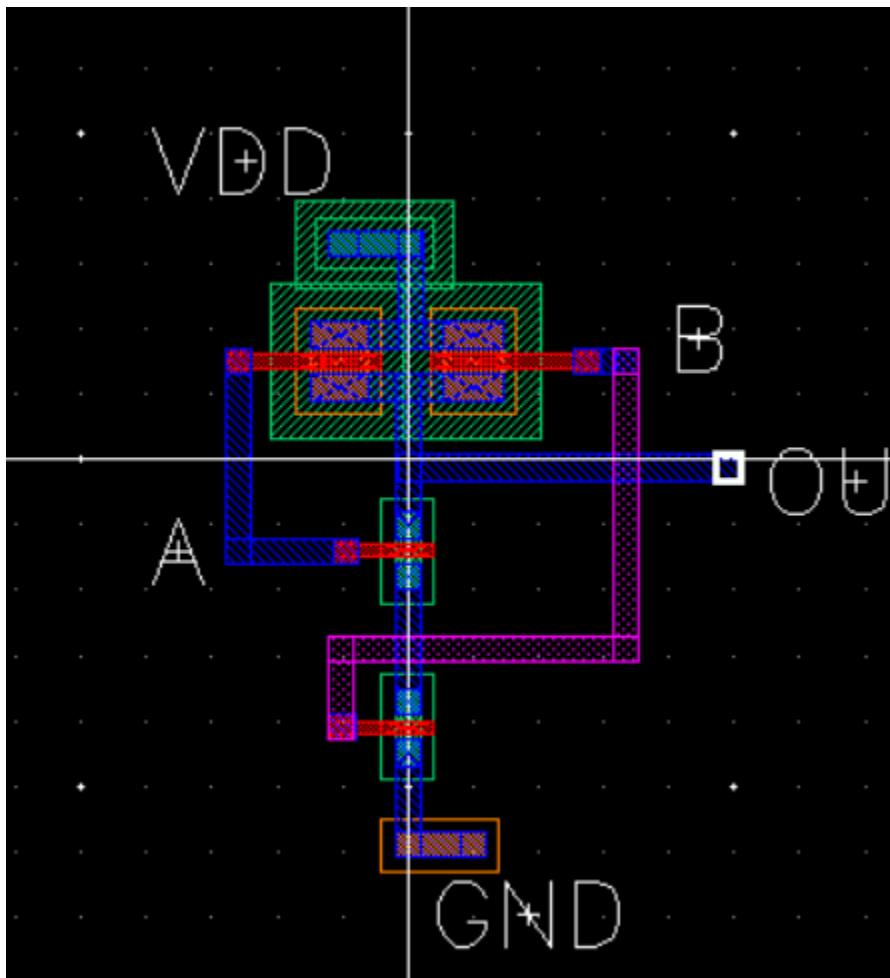


# Layout

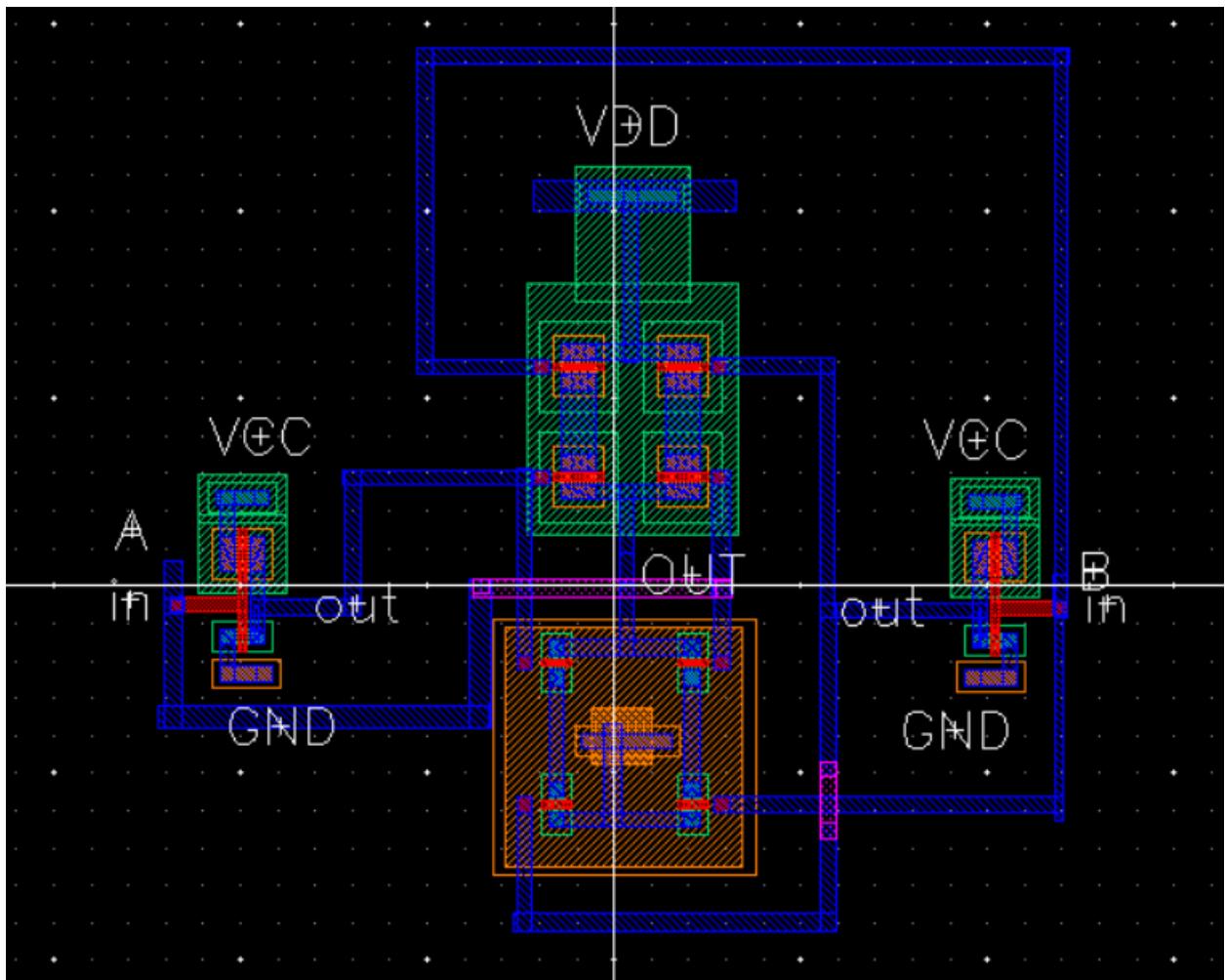
inverter



NAND2

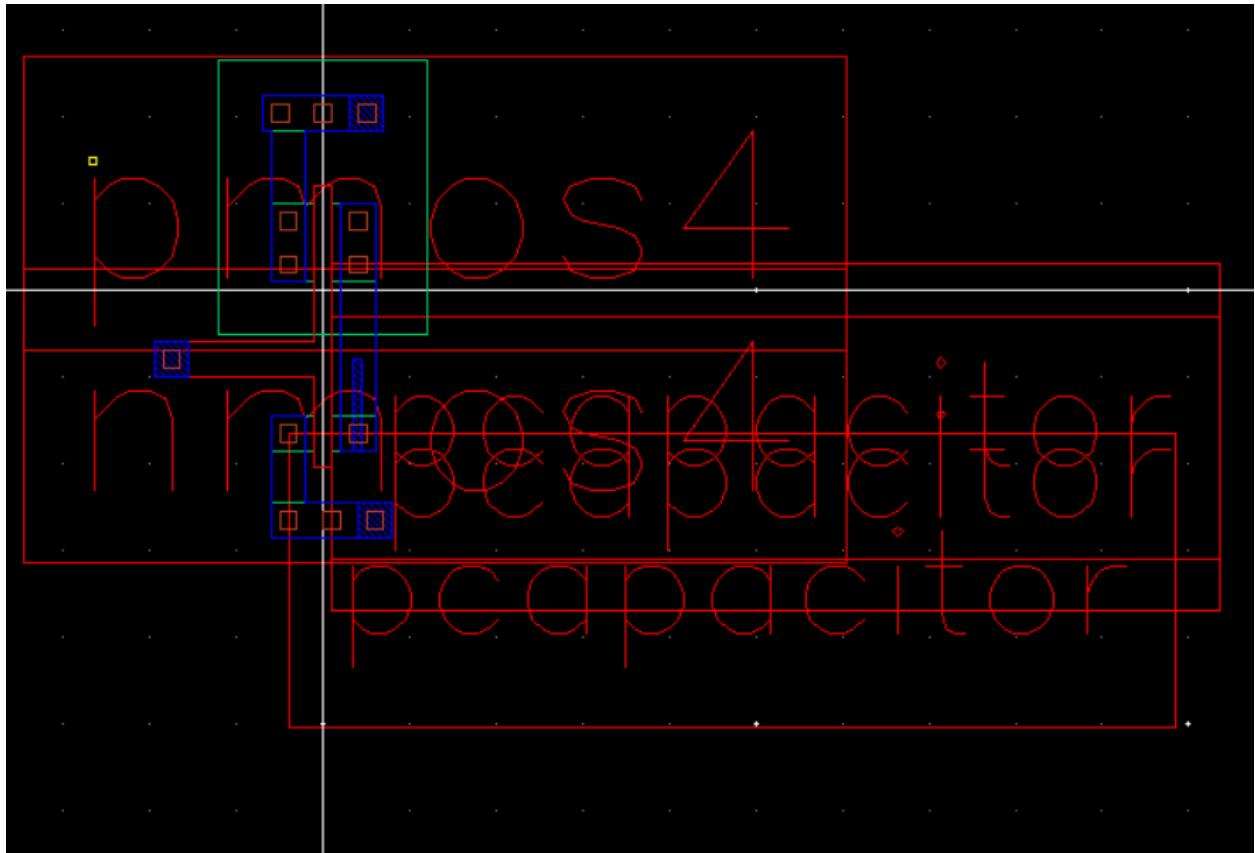


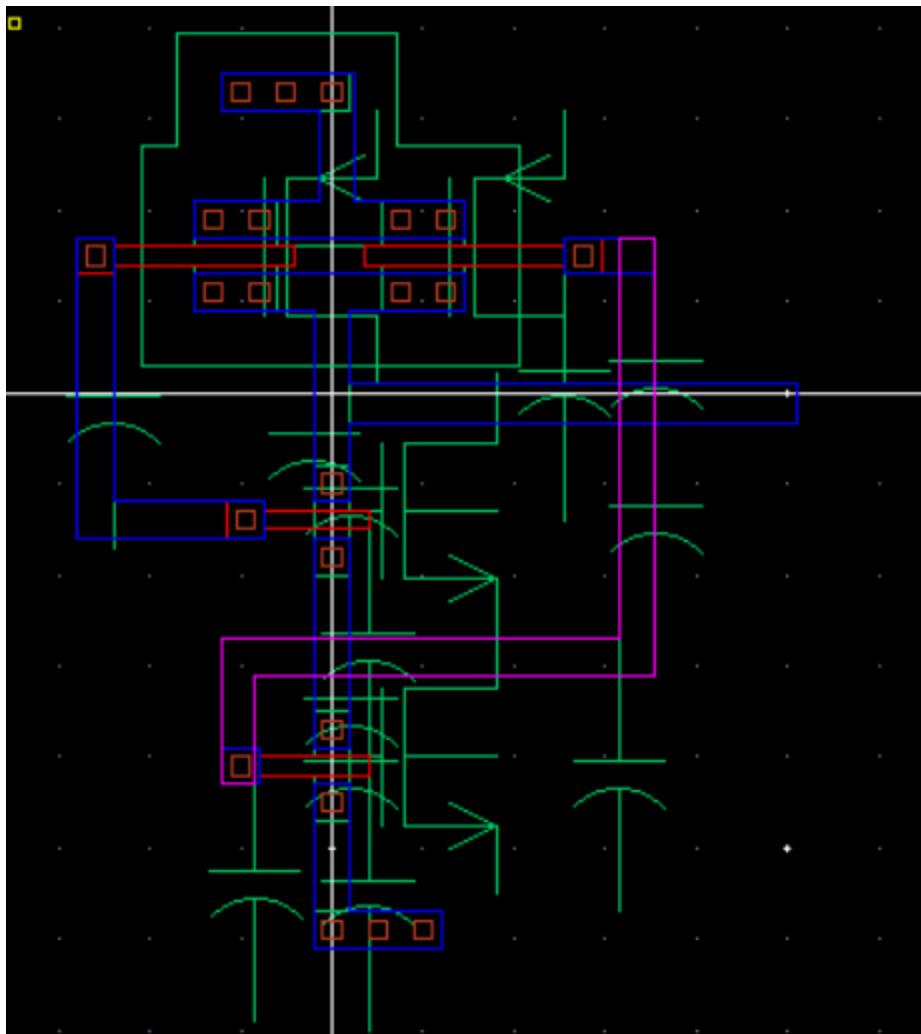
XOR2



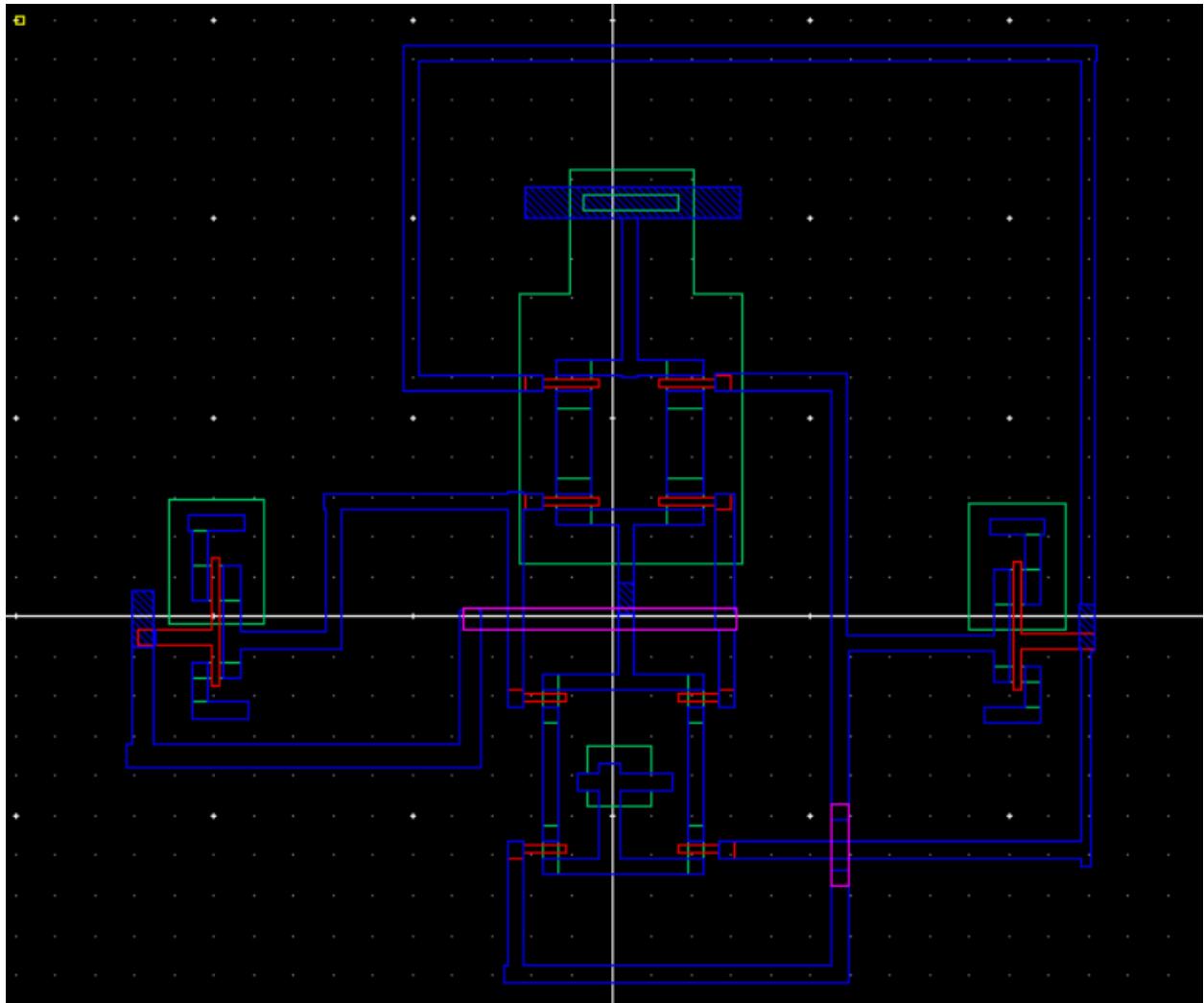
# Extracted

## Inverter





XOR



# LVS Verification

## Inverter

```
@(#) $CDS: LVS version 6.1.8-64b 09/03/2024 18:56 (sjfhw316) $  
  
Command line: /opt/coe/cadence/IC618/tools.lnx86/dfII/bin/64bit/LVS -dir /home/ugrads/s/s  
Like matching is enabled.  
Net swapping is enabled.  
Using terminal names as correspondence points.  
Compiling Diva LVS rules...  
  
Net-list summary for /home/ugrads/s/skywalker499/454-ECEN/LVS/layout/netlist  
count  
  4          nets  
  4          terminals  
  1          pmos  
  1          nmos  
  
Net-list summary for /home/ugrads/s/skywalker499/454-ECEN/LVS/schematic/netlist  
count  
  4          nets  
  4          terminals  
  1          pmos  
  1          nmos  
  
Terminal correspondence points  
N1      N1      GND  
N0      N0      VCC  
N3      N3      in  
N2      N2      out  
  
Devices in the netlist but not in the rules:  
  pcapacitor  
Devices in the rules but not in the netlist:  
  cap nfet pfet nmos4 pmos4  
  
The net-lists match.  
  
          layout  schematic  
                  instances  
un-matched          0      0  
rewired            0      0  
size errors        0      0  
pruned             0      0  
active              2      2  
total               2      2
```

## NAND2

```
@(#) $CDS: LVS version 6.1.8-64b 09/03/2024 18:56 (sjfhw316) $  
Command line: /opt/coe/cadence/IC618/tools.lnx86/dfII/bin/64bit/LVS -dir /home/ugrads/s/  
Like matching is enabled.  
Net swapping is enabled.  
Using terminal names as correspondence points.  
Compiling Diva LVS rules...  
  
Net-list summary for /home/ugrads/s/skywalker499/454-ECEN/LVS/layout/netlist  
count  
  6          nets  
  5          terminals  
  2          pmos  
  2          nmos  
  
Net-list summary for /home/ugrads/s/skywalker499/454-ECEN/LVS/schematic/netlist  
count  
  6          nets  
  5          terminals  
  2          pmos  
  2          nmos  
  
Terminal correspondence points  
N4      N0      A  
N3      N1      B  
N1      N4      GND  
N2      N2      OUT  
N5      N3      VDD  
  
Devices in the netlist but not in the rules:  
  pcapacitor  
Devices in the rules but not in the netlist:  
  cap nfet pfet nmos4 pmos4  
  
The net-lists match.
```

	layout	schematic
	instances	instances
un-matched	0	0
rewired	0	0
size errors	0	0
pruned	n	n

## XOR2

```
@(#) $CDS: LVS version 6.1.8-64b 09/03/2024 18:56 (sjfhw316) $
```

```
Command line: /opt/coe/cadence/IC618/tools.lnx86/dfII/bin/64bit/LVS -dir /home/ugrads/s/
Like matching is enabled.
Net swapping is enabled.
Using terminal names as correspondence points.
Compiling Diva LVS rules...
```

```
Net-list summary for /home/ugrads/s/skywalker499/454-ECEN/LVS/layout/netlist
count
 6      nets
 5      terminals
 2      pmos
 2      nmos
```

```
Net-list summary for /home/ugrads/s/skywalker499/454-ECEN/LVS/schematic/netlist
count
 6      nets
 5      terminals
 2      pmos
 2      nmos
```

### Terminal correspondence points

N4	N0	A
N3	N1	B
N1	N4	GND
N2	N2	OUT
N5	N3	VDD

Devices in the netlist but not in the rules:

pcapacitor

Devices in the rules but not in the netlist:

cap nfet pfet nmos4 pmos4

The net-lists match.

	layout	schematic
	instances	instances
un-matched	0	0
rewired	0	0
size errors	0	0
pruned	0	0