

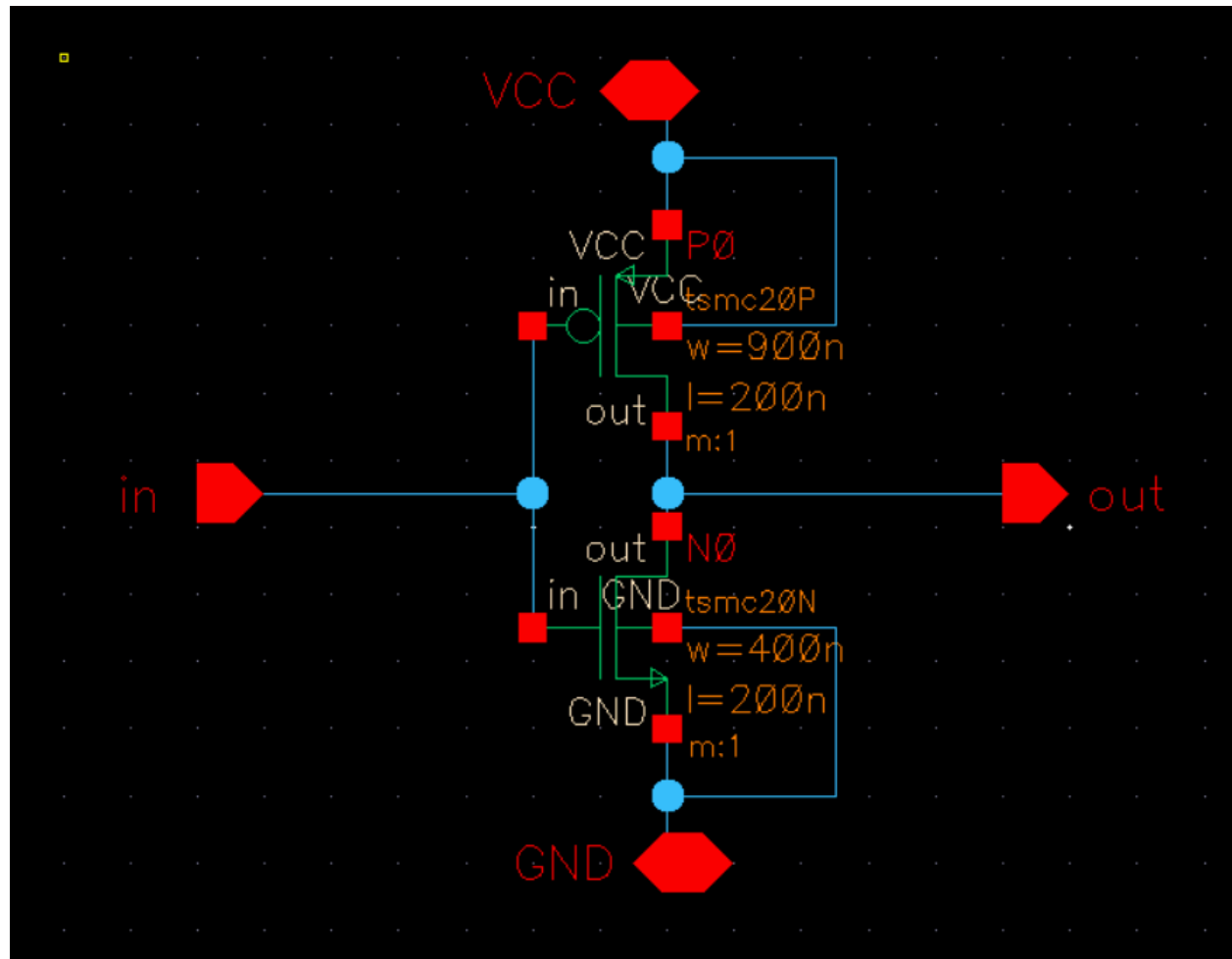
ECEN 454 - Lab 2 Report

Luke Lopez

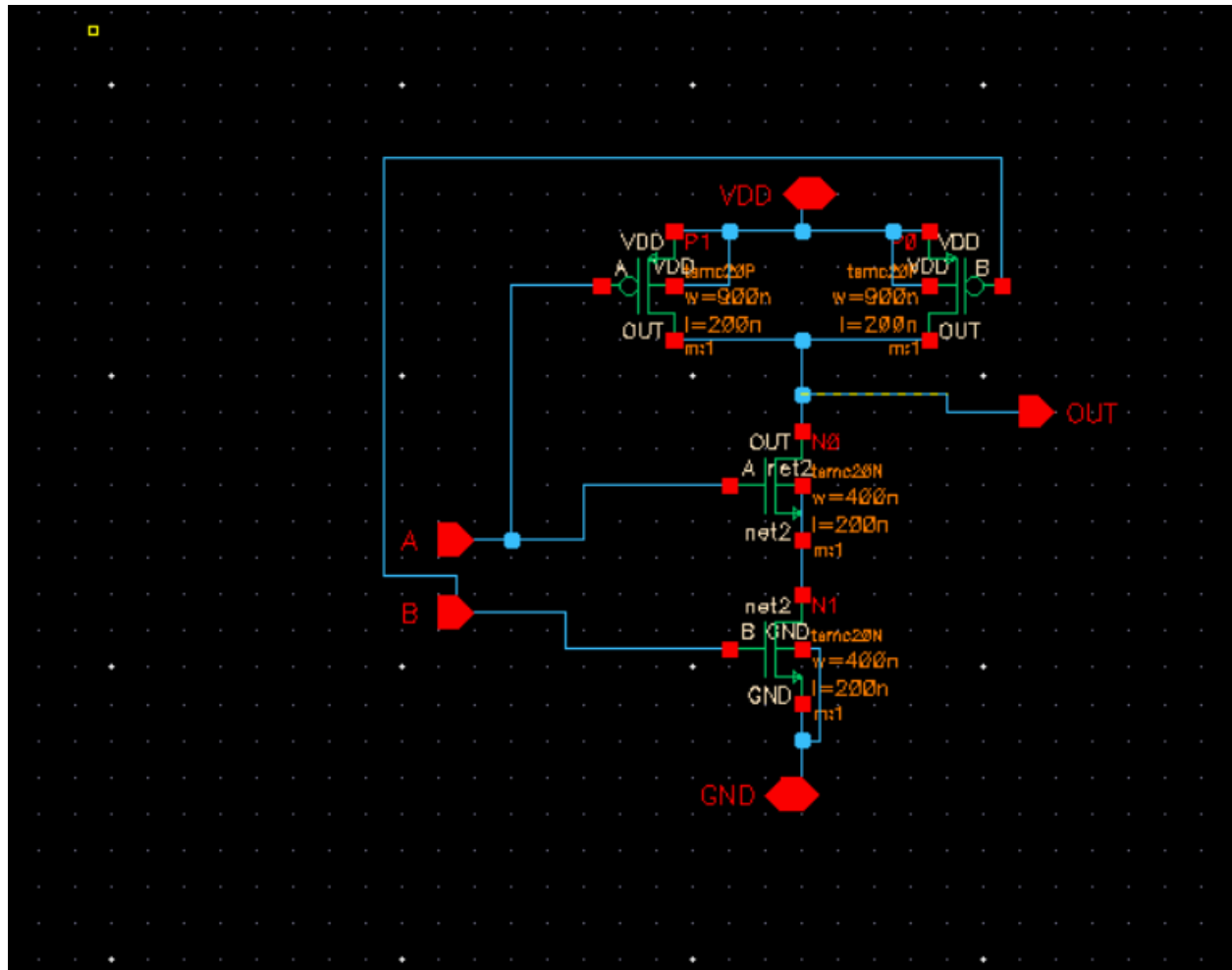
09/21/2025

Schematics

Inverter

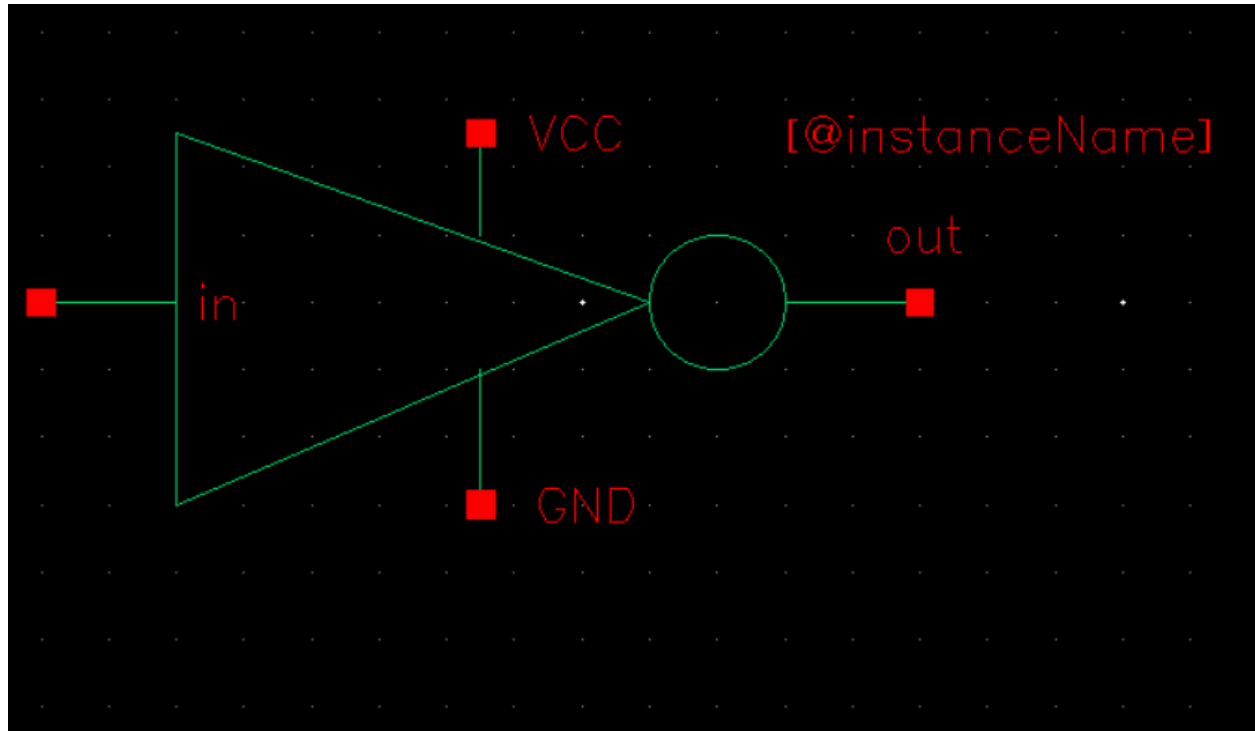


NAND2

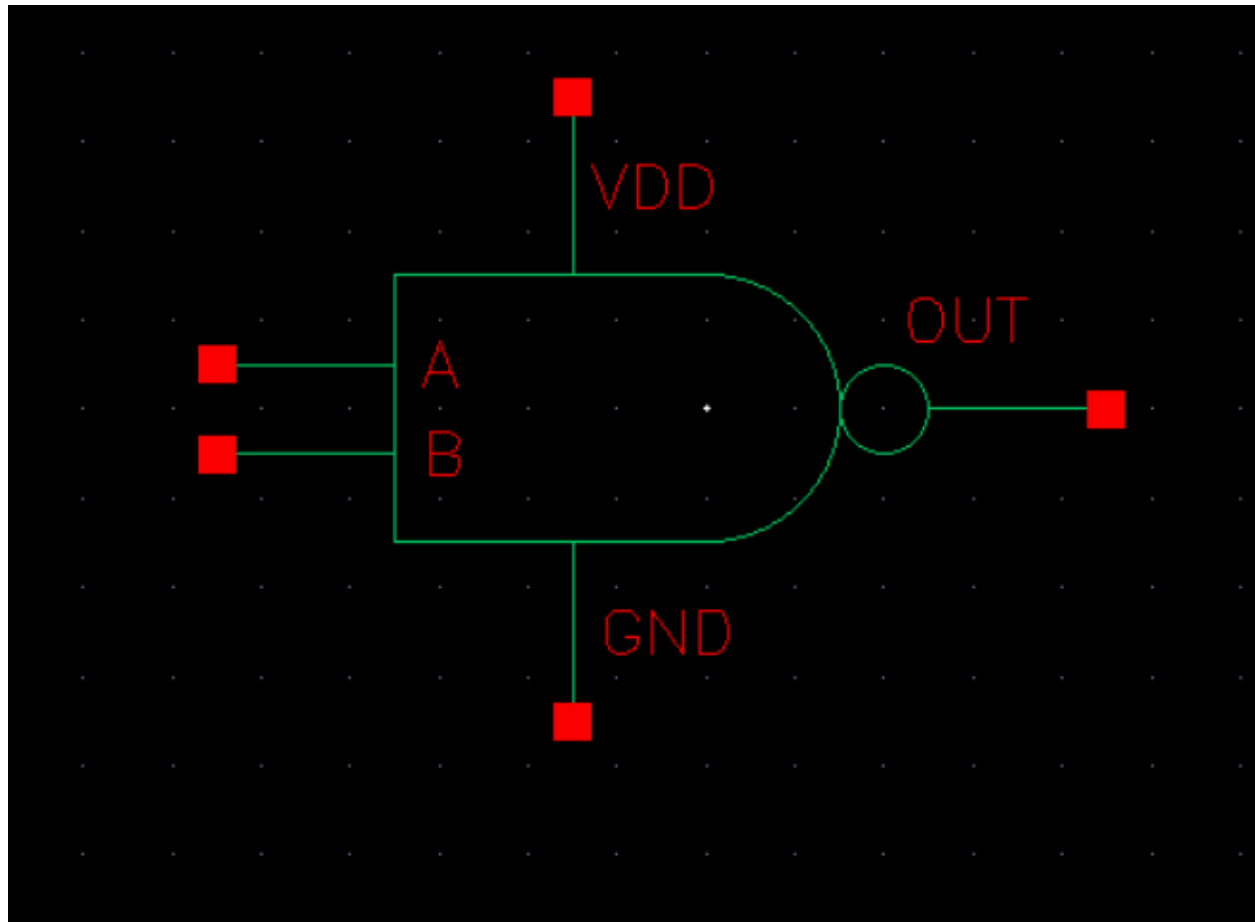


Symbol

Inverter

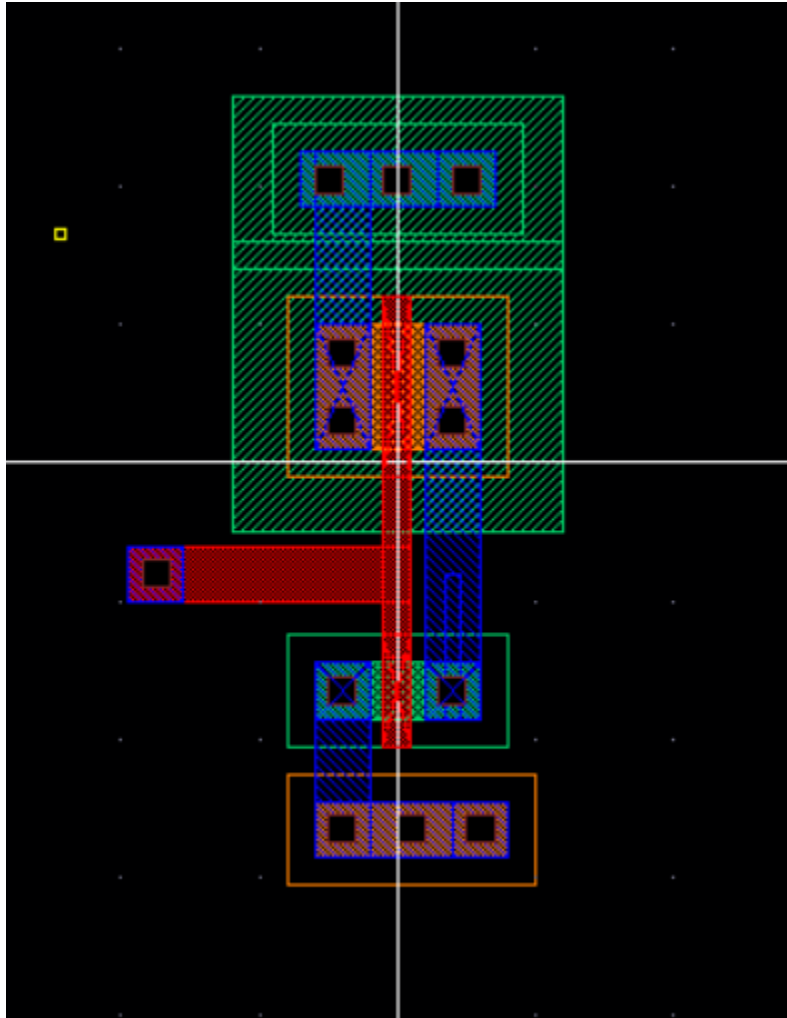


NAND2

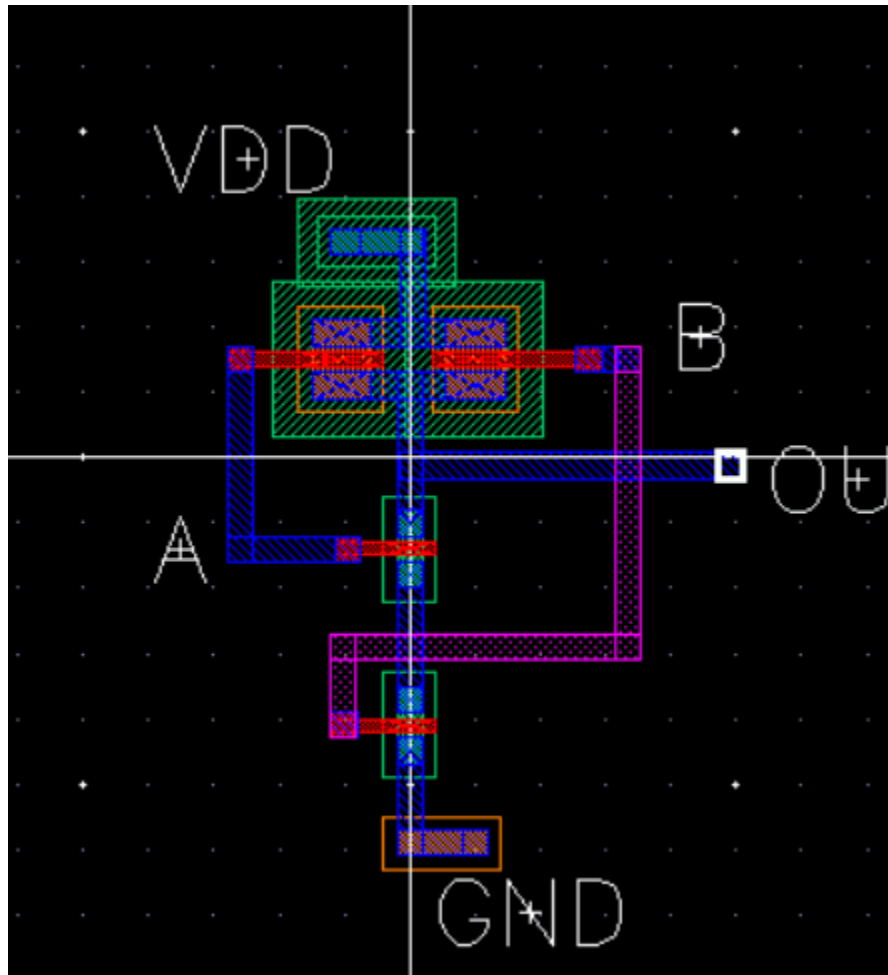


Layout

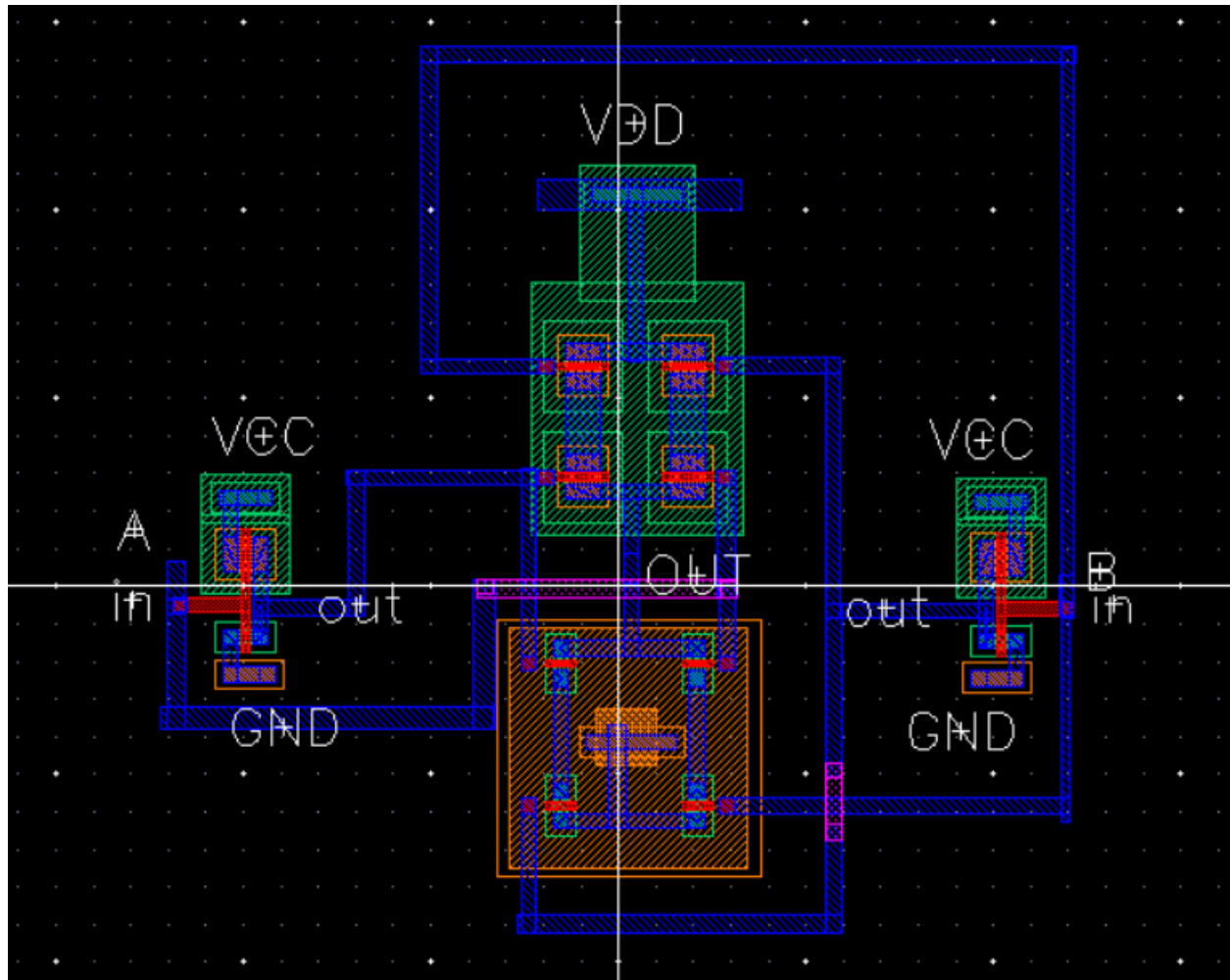
inverter



NAND2

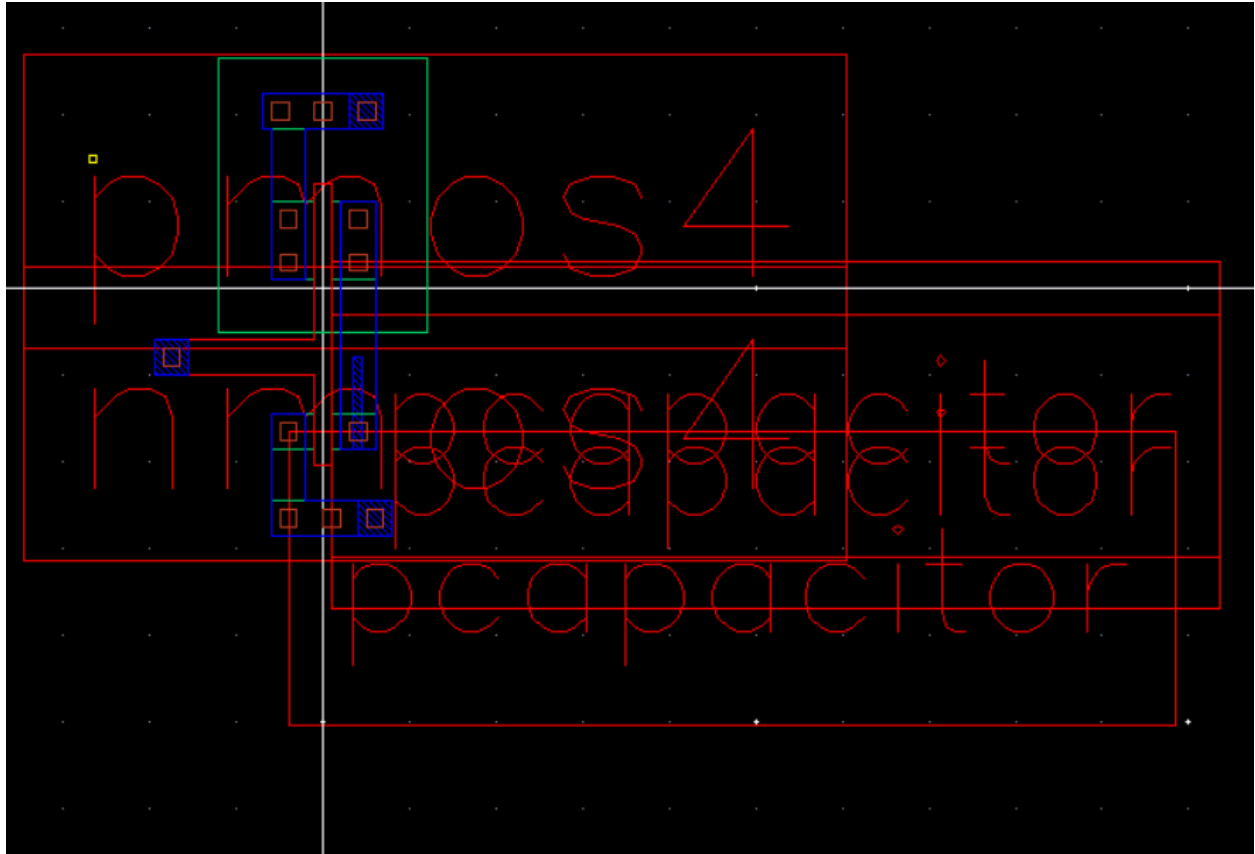


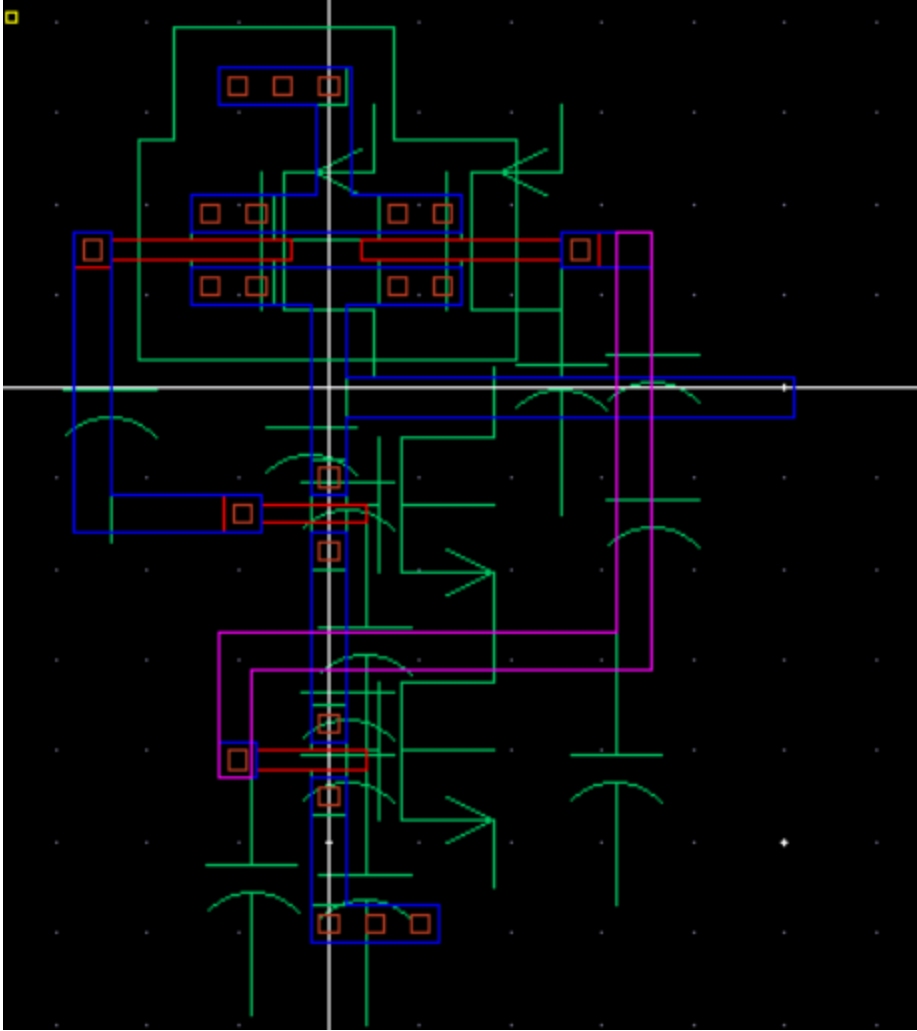
XOR2



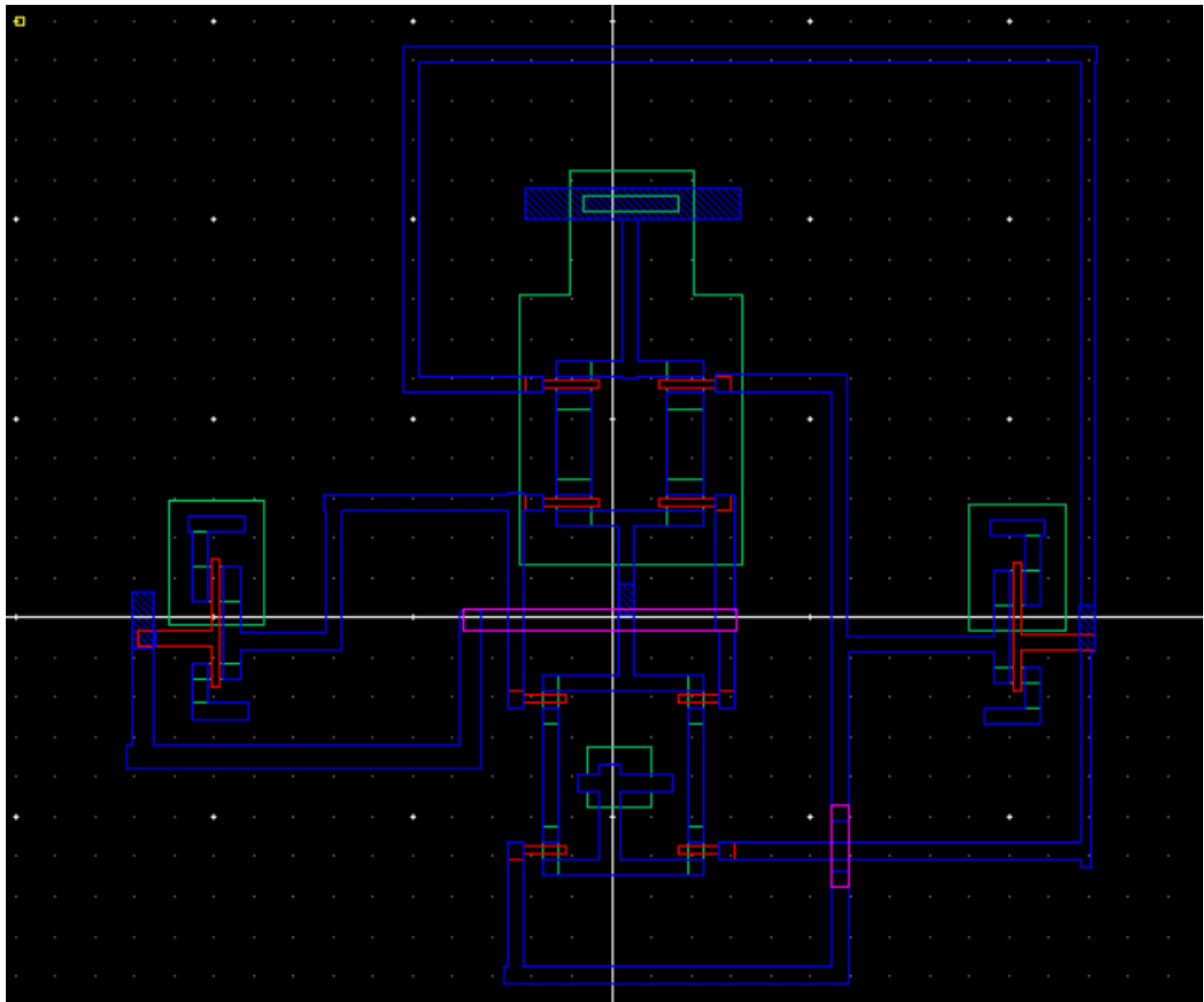
Extracted

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	
un-matched	0	0
rewired	0	0
size errors	0	0
pruned	0	0

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	
un-matched	0	0
rewired	0	0
size errors	0	0
runned	0	0