

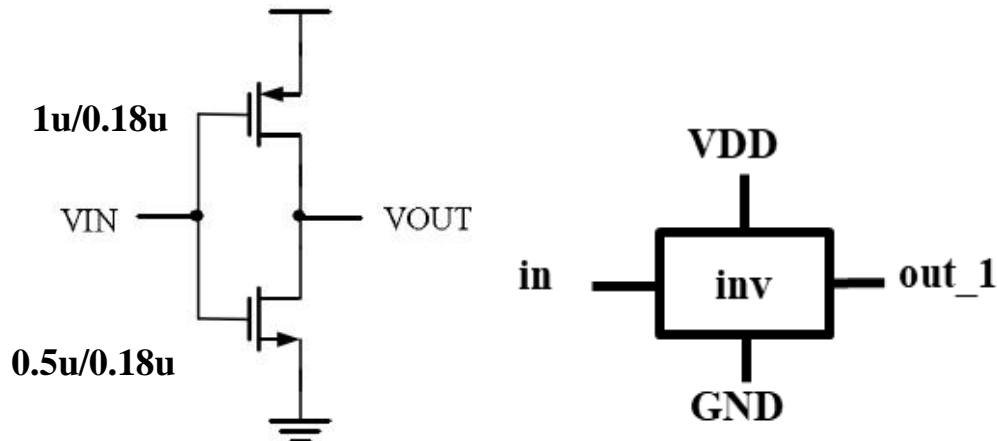
LAB8 Homework

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檔案名稱為 **Lab8_學號.pdf**，若檔名格式錯誤或非.pdf 檔會扣分！！

1-1. 設計一個 inverter，電晶體長寬比如下



1-2. 請截取 terminal 顯示 job concluded 的圖

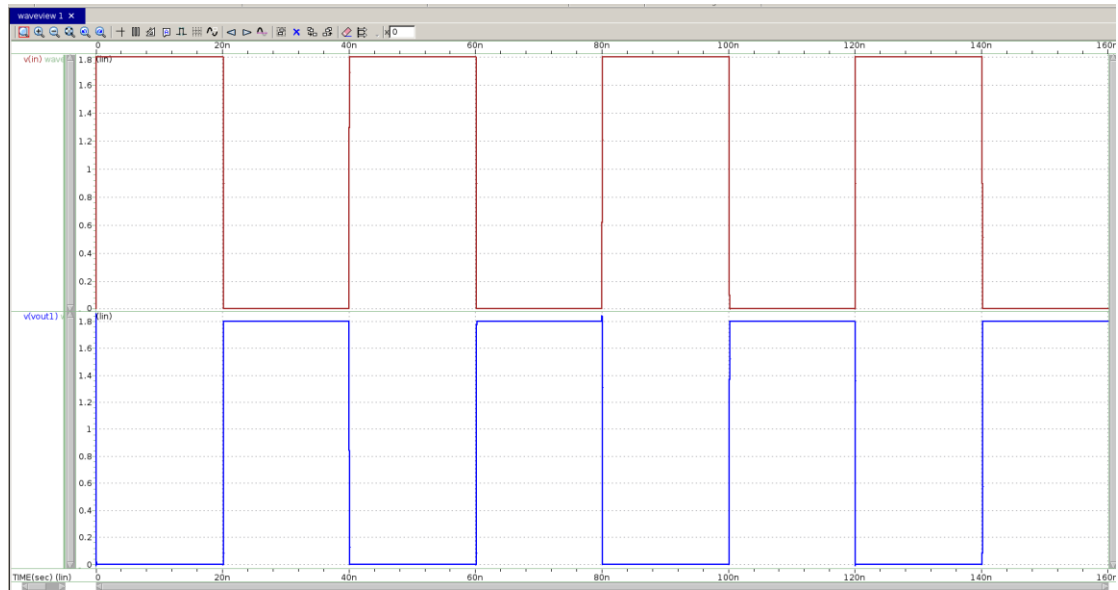
```
140.116.156.6 - PuTTY
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o aaa
.lis

>info:          ***** hspice job concluded
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim circuit.spi
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim testbench.sp
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim circuit.spi
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % hspice testbench.sp -o aaa
.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o aaa
.lis

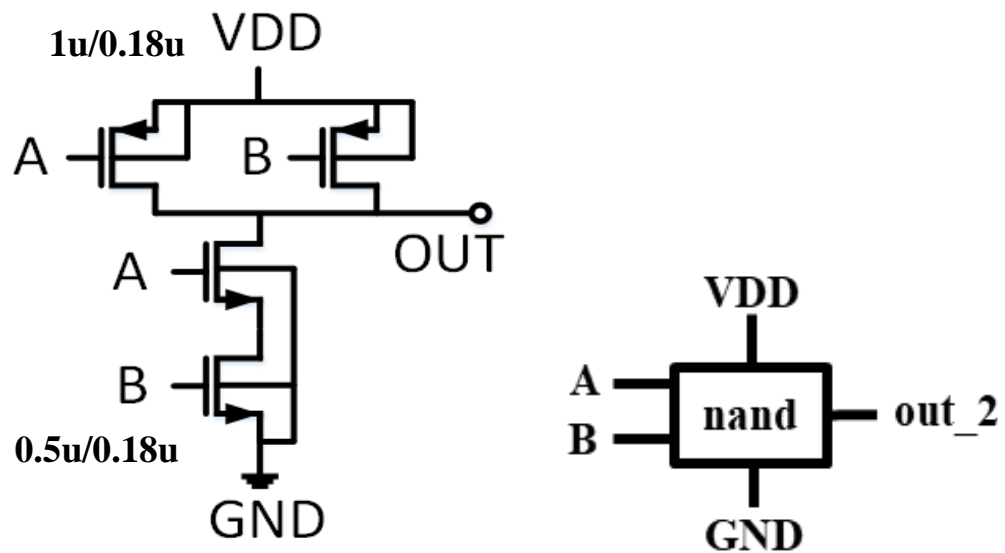
>info:          ***** hspice job concluded
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim circuit.spi
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim testbench.sp
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim circuit.spi
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % hspice testbench.sp -o aaa
.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o aaa
.lis

>info:          ***** hspice job concluded
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim circuit.spi
```

1-3. 請截取 WaveView 中 in 及 out_1 的波形



2-1. 設計一個 NAND，電晶體長寬比如下



2-2. 請截取 terminal 顯示 job concluded 的圖

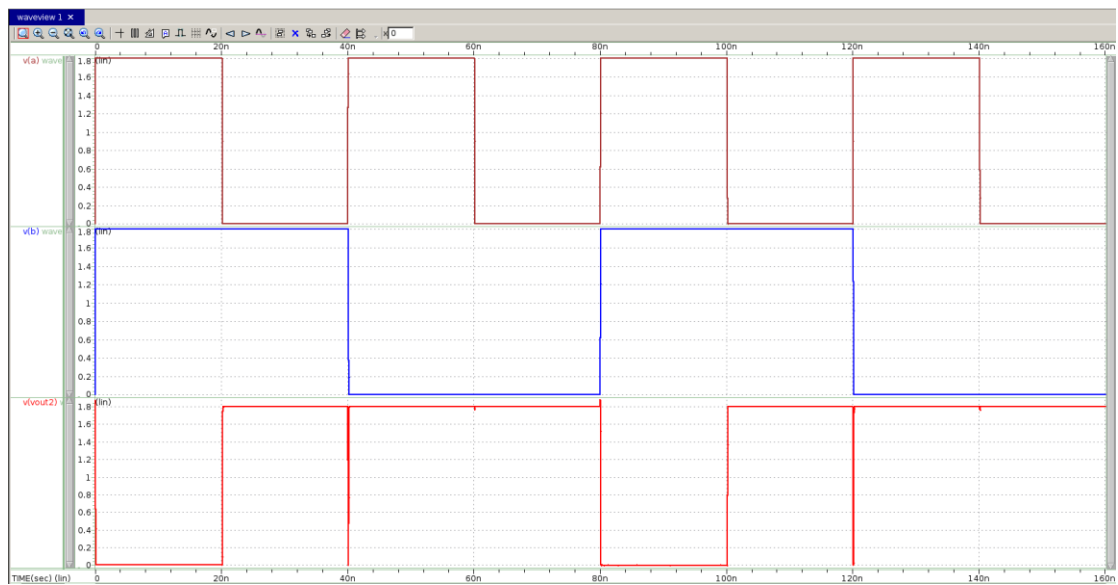
```

vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % vim testbench.sp
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % hspice testbench.sp -o wav
e.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o wav
e.lis

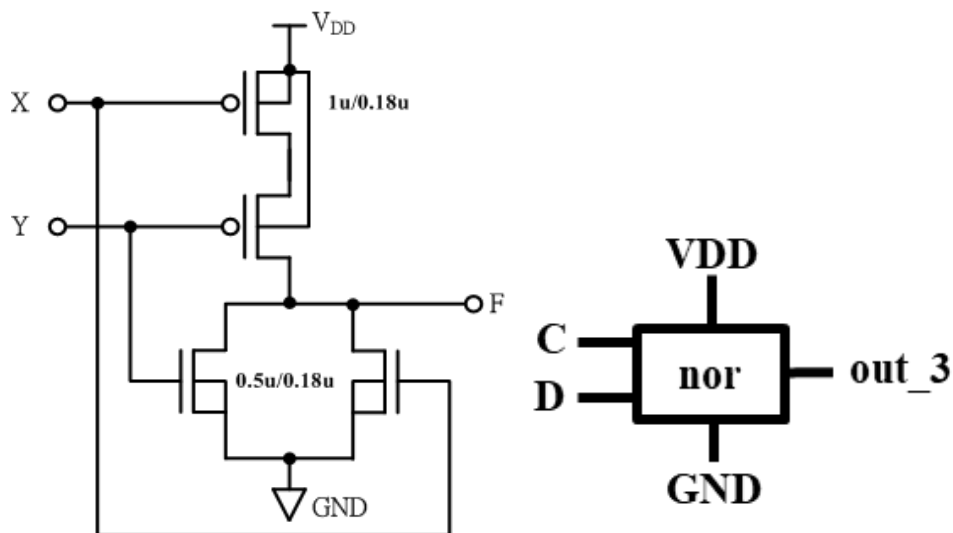
>info:          ***** hspice job concluded

```

2-3. 請截取 WaveView 中 A、B 及 out_2 的波形



3-1. 設計一個 NOR，電晶體長寬比如下



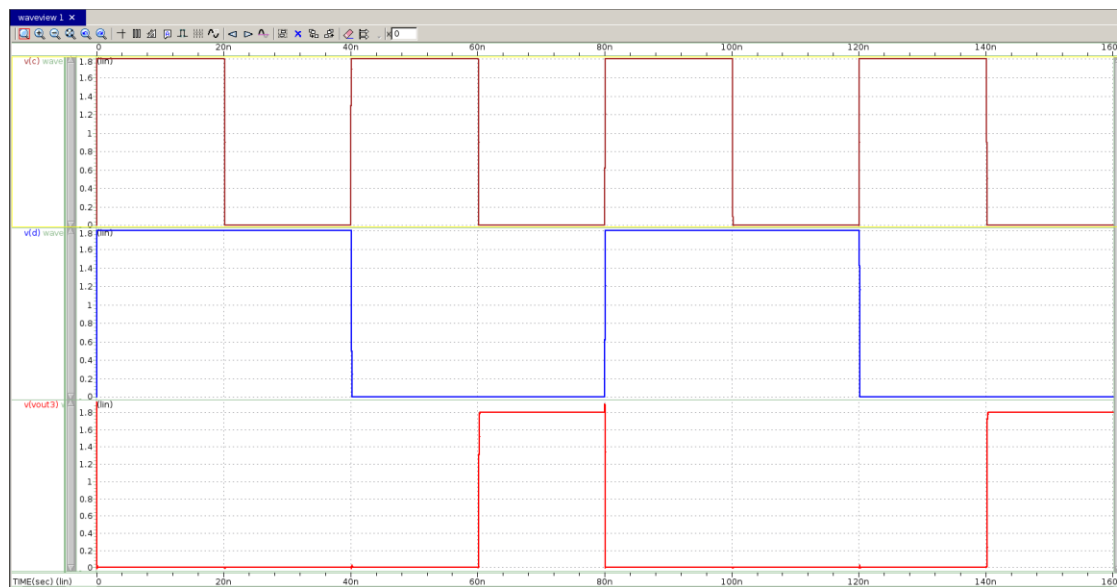
3-2. 請截取 terminal 顯示 job concluded 的圖

```

vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab8 % hspice testbench.sp -o wav
e.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o wav
e.lis
>info:          ***** hspice job concluded

```

3-3. 請截取 WaveView 中 C、D 及 out_3 的波形



4. 結論/建議 (可寫可不寫，不影響作業評分，僅做為下次上課方式的參考)