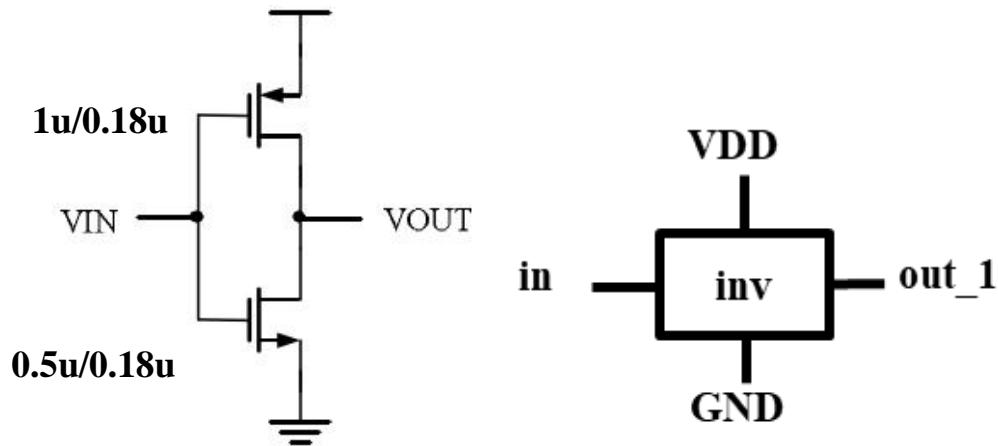


LAB8 Homework

1-1. 設計一個 **inverter**，電晶體長寬比如下

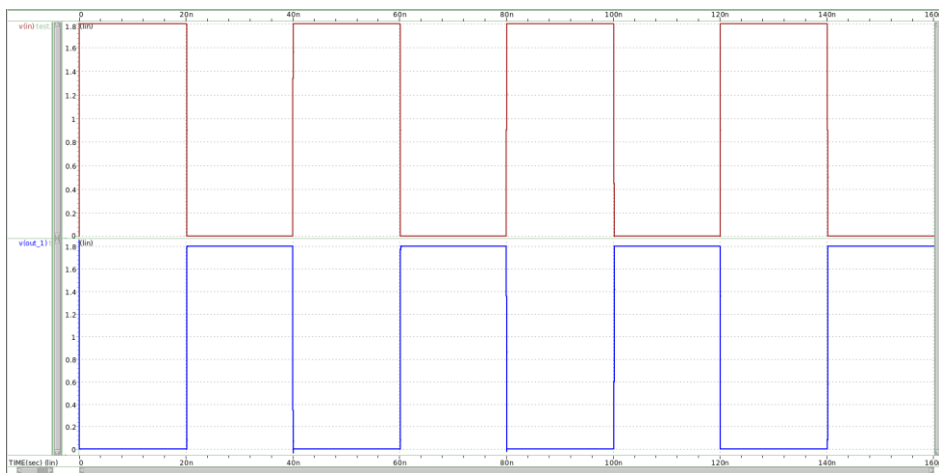


1-2. 請截取 **terminal** 顯示 **job concluded** 的圖

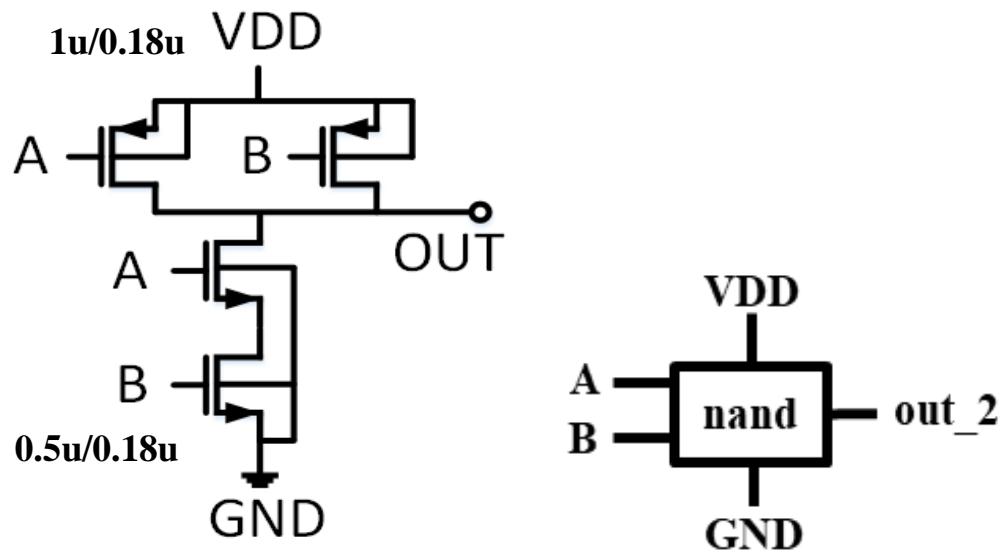
```
vlsicad9:/home/user2/vlsi22/vlsi22114 % hspice testbench.sp -o test.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o test.lis

>info:          ***** hspice job concluded
vlsicad9:/home/user2/vlsi22/vlsi22114 % wv &
[1] 15379
```

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

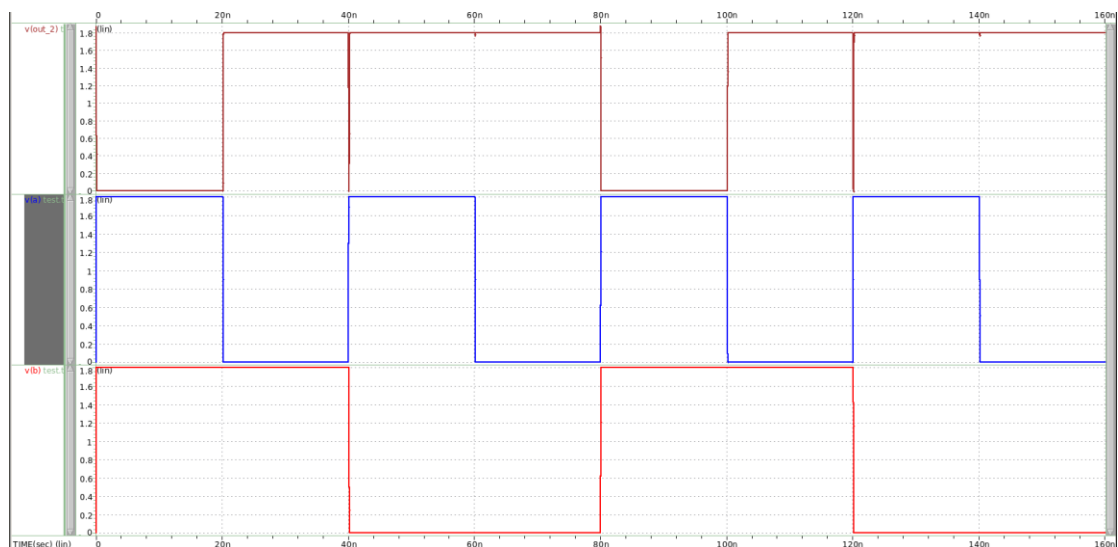


2-2. 請截取 terminal 顯示 job concluded 的圖

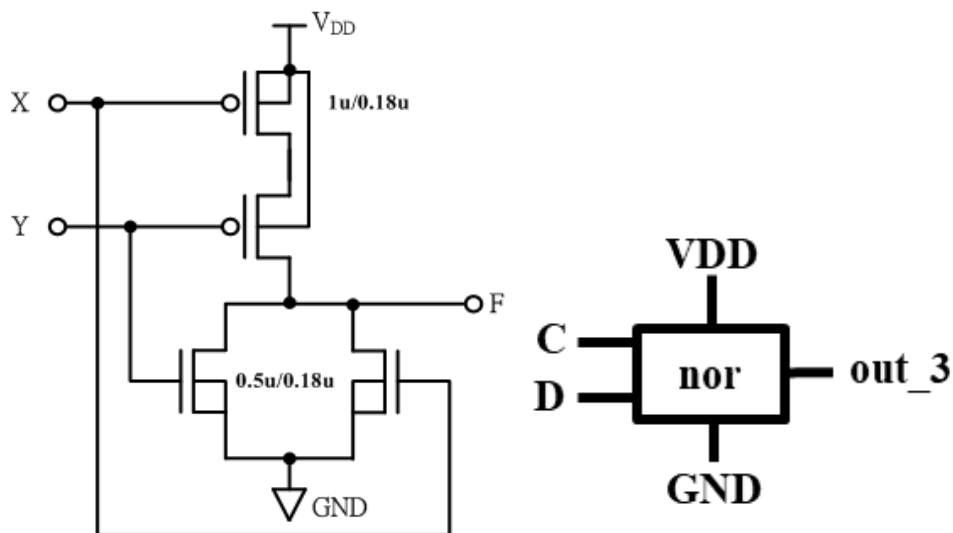
```
vlsicad9:/home/user2/vlsi22/vlsi22114 % hspice testbench.sp -o test.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o test.lis

>info:          ***** hspice job concluded
vlsicad9:/home/user2/vlsi22/vlsi22114 % wv &
[1] 15379
```

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

```

vlsicad9:/home/user2/vlsi22/vlsi22114 % hspice testbench.sp -o test.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice 'testbench.sp' -o test.lis

>info:          ***** hspice job concluded
vlsicad9:/home/user2/vlsi22/vlsi22114 % wv &
[1] 15379

```

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)