2023 超大型積體電路電腦輔助設計概論

2023 Introduction to VLSI CAD

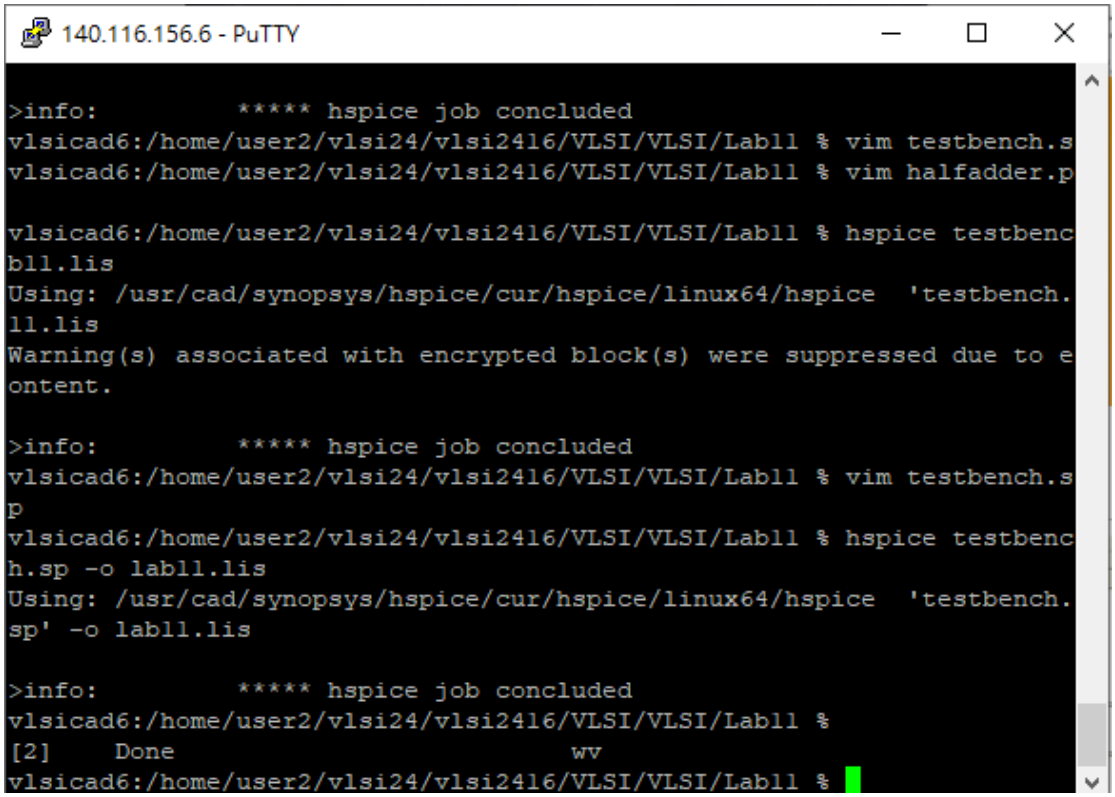
Lab 11

學號：E14102305　　姓名：簡笠恩

※作業要求的圖請使用**電腦截圖程式**截取，請勿用手機拍照的方式繳交

※Report 檔請以 pdf 的格式繳交

- HA
  - Presim
    - 請截取 terminal 顯示 job concluded 的圖



    - 請截取 WaveView 中的波形

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- Post-sim
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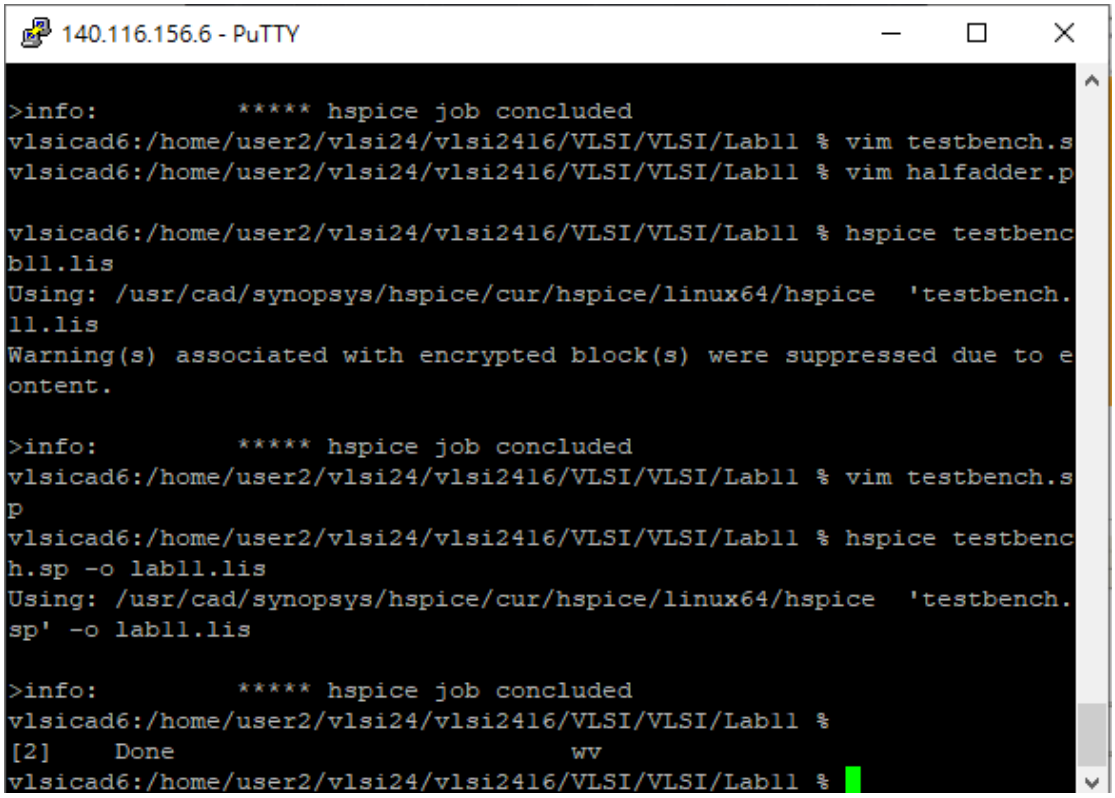
  - 

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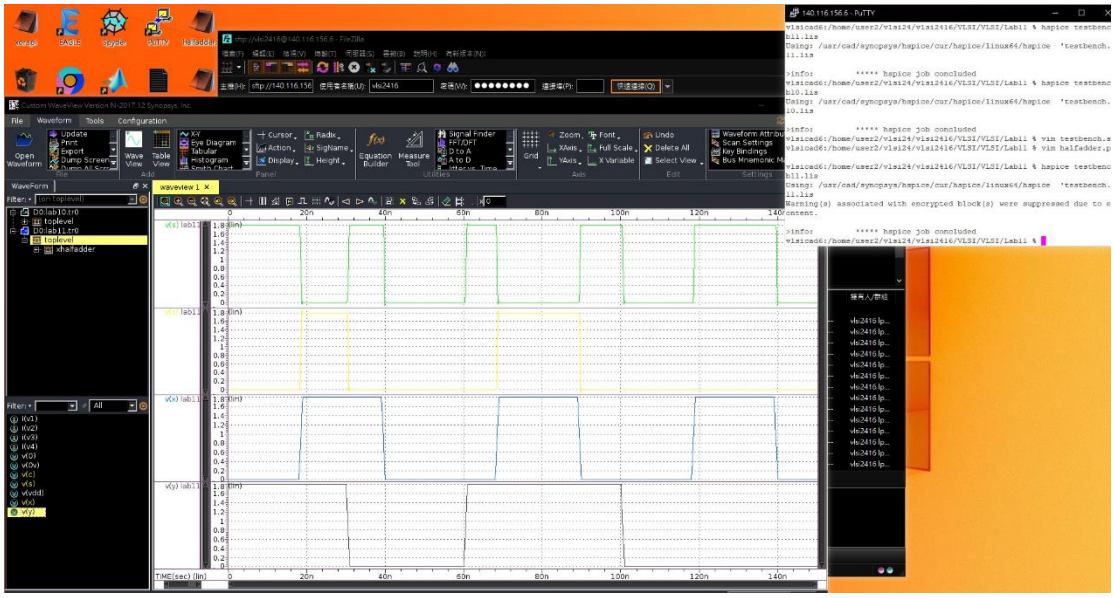
- 
- DRC/LVS 結果
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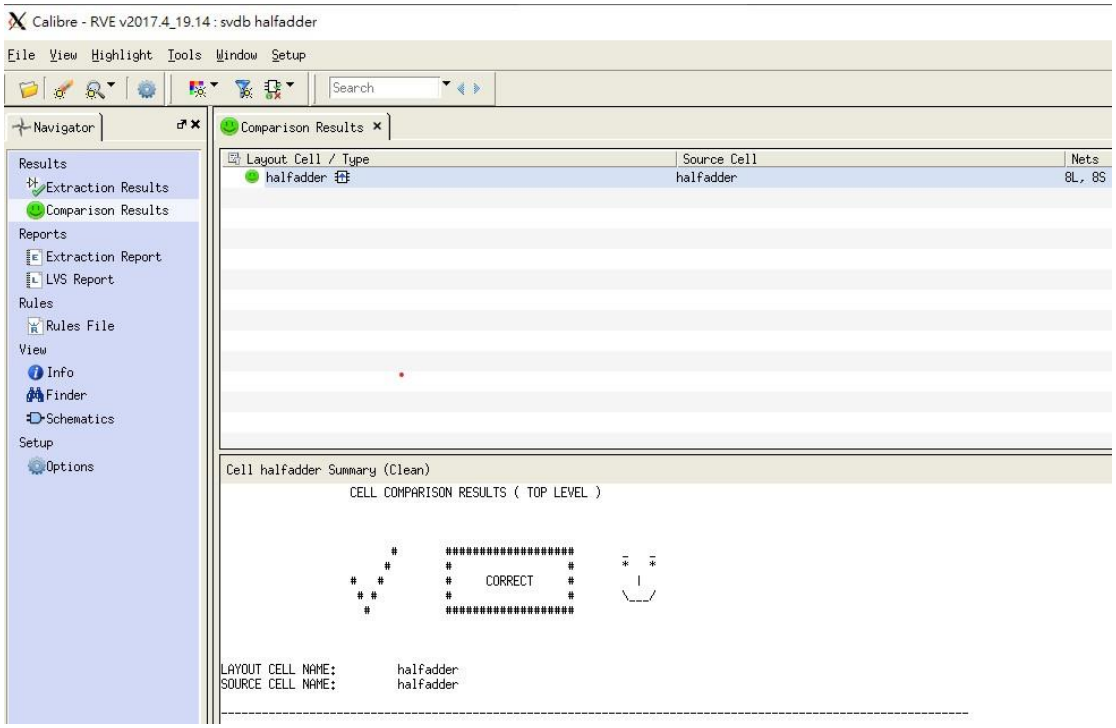
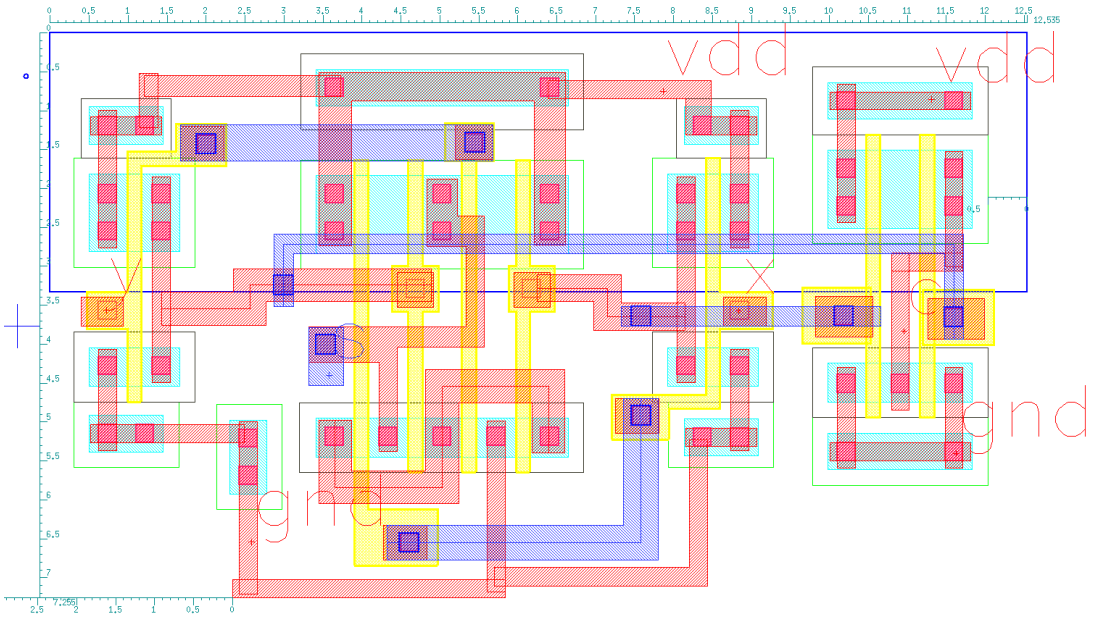
- 

- Layout 截圖(顯示長寬)
- 

  AREA:90.941
- 嘗試簡單說明 Presim 與 Post-sim 結果比較
-
- Presim 和 possim 基本上會一樣，會差的只可能會是延遲或電壓，主要看自己的 layout 如何規劃!

-
- DFF
  - Presim
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    -
```
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % vim testcench.sp
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % vim testbench.sp
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % vim DFF.pex.netlist
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % vim testbench.sp
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % hspice testbench.sp -
o lab11.lis
Using: /usr/cad/synopsys/hspice/cur/hspice/linux64/hspice  'testbench.sp' -o lab
11.lis
Warning(s) associated with encrypted block(s) were suppressed due to encrypted c
ontent.

>info:          ***** hspice job concluded
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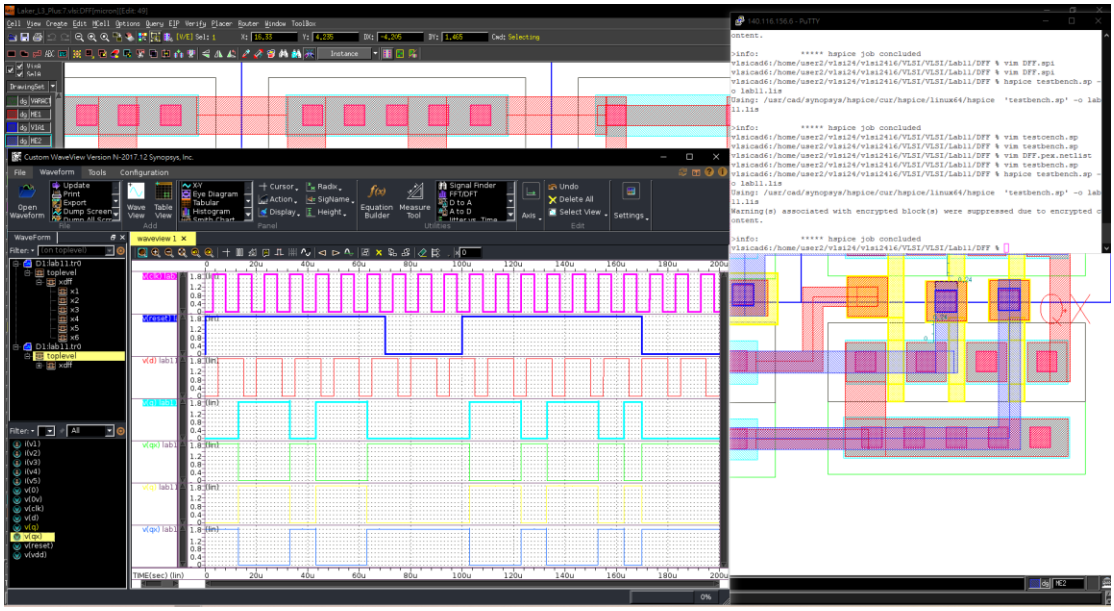
    - 請截取 WaveView 中的波形
    - 
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vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % vim DFF.pex.netlist
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % vim testbench.sp
vlsicad6:/home/user2/vlsi24/vlsi2416/VLSI/VLSI/Lab11/DFF % hspice testbench.sp -
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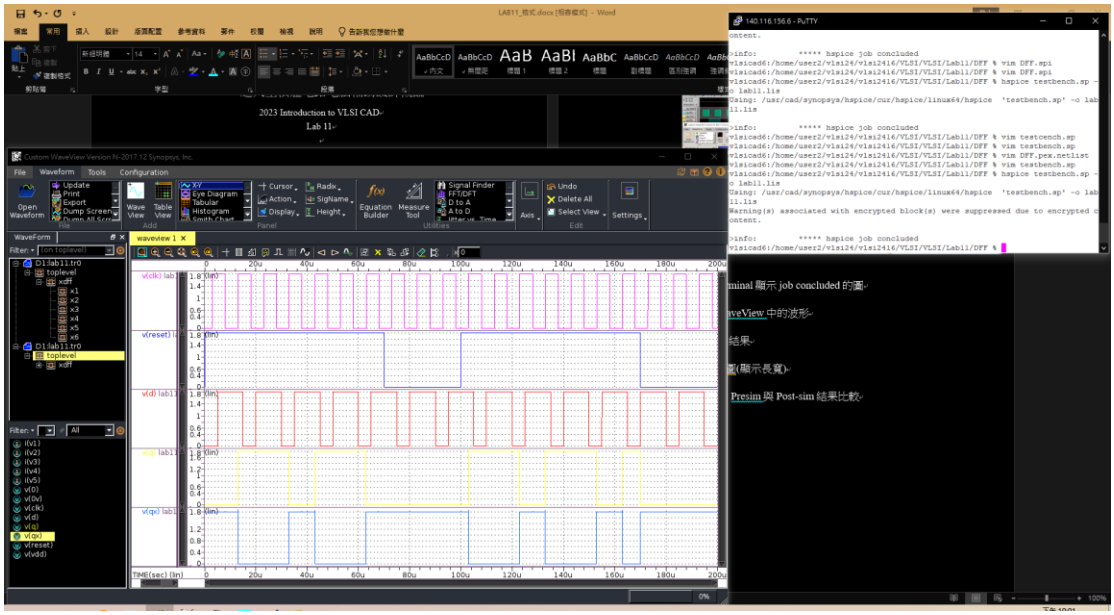

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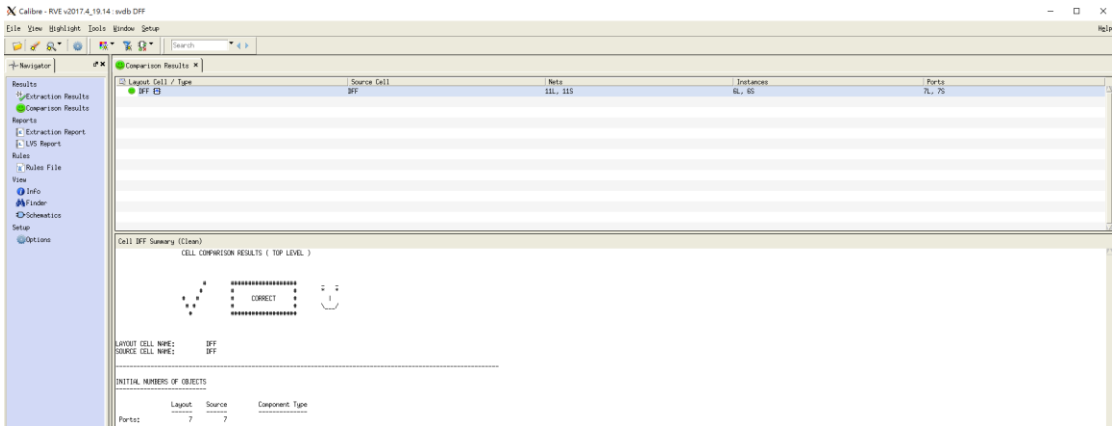

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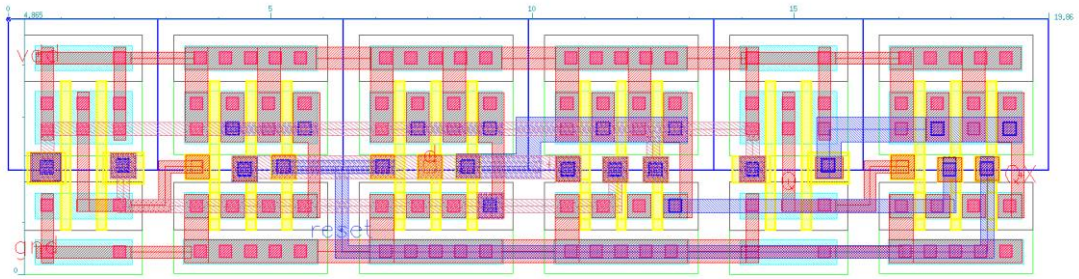

AREA:96.619

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- 心得討論
- 這次我們實作了 halfadder 和 DFF 真的是一個特別的經驗，因為我們數位的最後兩個 lab 有用到 ram 裡面就有運用到 DFF，可以說更了解 DFF 的內部，在經過我的努力完成了這次 lab，水水水!