10920 CS 512200 VLSI Design for Manufacturability

Final Project

109062630 鄭傑予

How to compile and execute:

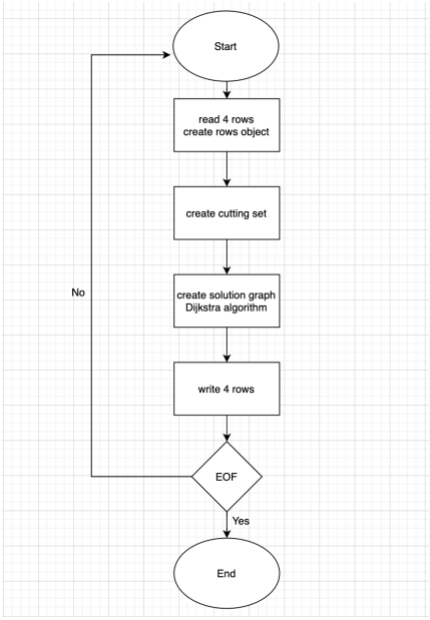
```
--How to Compile
    In this directory, enter the following command:
    $ make
    It will generate the executable file "Hybrid_Lithography" in "Project/bin/".

    If you want to remove it and all .o files, please enter the following command:
    $ make clean

--How to Run
    In this directory, enter the following command:
    Usage: ../bin/<exe> dis <out file>  <out file>
    e.g.:
    $ ../bin/Hybrid_Lithography 0.064 ../testcase/M0.out ../output/M0_0064.out
```

Algorithm flow and explanation:

Flow chart:



Explanation:
由於一開始沒有想到要平行，所以我是一個一個 row 作處理，並且在 enumerate solution 上面是用暴力解，造成後來即使用四核心平行，效能比起 sequential 執行並沒有明顯改善。
但在 ebeam 數量方面，我實做上課教的 TPL 演算法，並用 Dijkstra 找最短路徑，所以如果程式跑完得到的會是 optimal 的 coloring solution。

	M0.out	aes.out
0.064	0	0
0.128	4981	3096