

# NYCU OS HW1 report 2021

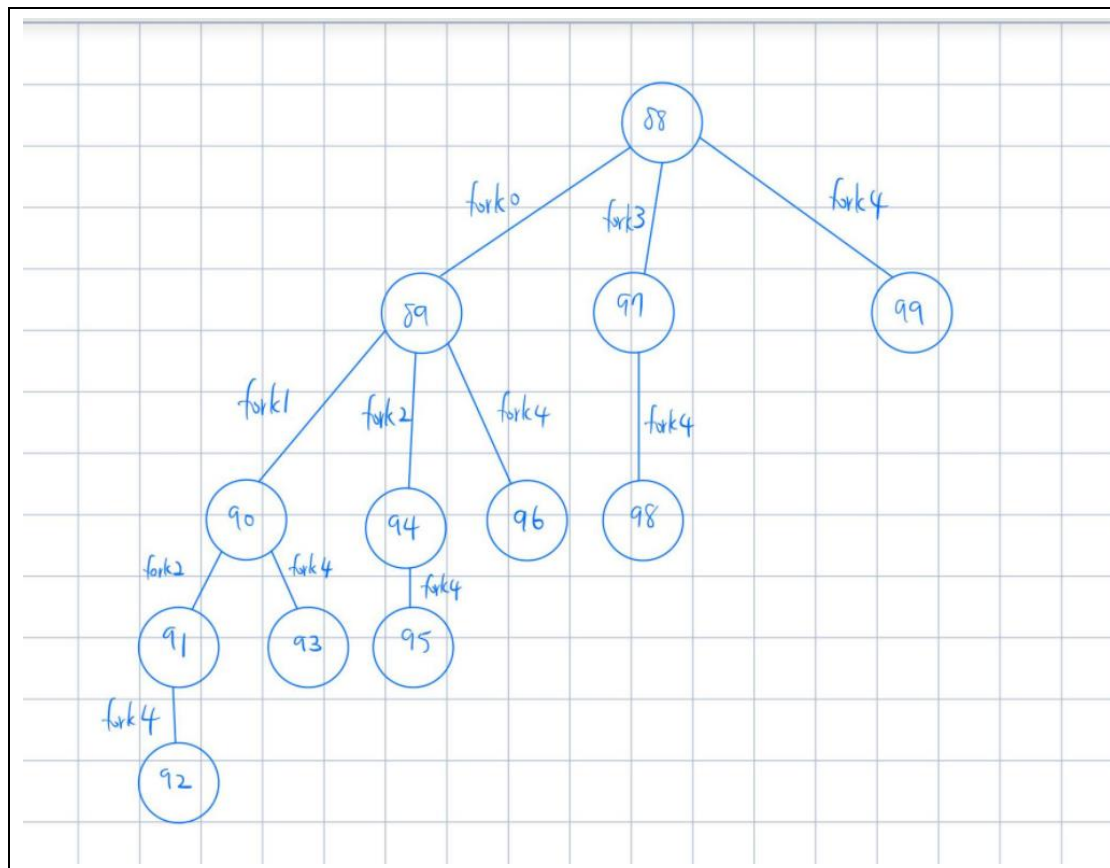
Name 楊子民

Student Id

0816147

## Q1. hw1\_1

Tree format(according to OS\_HW1.pdf/p.7):



## Q2. hw1\_2

Please put your result(screenshot).

Also, write down the problems you met and solutions.

### Result

```
[tmyang@linux3 HW1]$ gcc -o hw1_2.o hw1_2.c
[tmyang@linux3 HW1]$ ./hw1_2.o
Main Process ID : 831603

Fork 1. I'm the child 831604, my parent is 831603.
Fork 4. I'm the child 831605, my parent is 831604.
Fork 5. I'm the child 831606, my parent is 831605.
Fork 2. I'm the child 831607, my parent is 831603.
Fork 3. I'm the child 831608, my parent is 831607.
Fork 3. I'm the child 831609, my parent is 831603.
[tmyang@linux3 HW1]$
```

### Problems & solutions

常常會搞混這個 if 是哪個 process 會執行到。

所以後來在每個 if 後面都注解上這是哪個 fork 出來的 process 會執行到，協助分辨。

要記得把沒用的 process exit 掉，才不會讓他執行到非預期的 fork。

### Q3. hw1-3

Please put your result(screenshot).

```
[tmyang@linux3 HW1]$ g++ -o shell hw1_3.cpp
[tmyang@linux3 HW1]$ ./shell
osh>cat hi.txt
12345
osh>ls
hi.txt  hw1_1.c  hw1_2.c  hw1_2.o  hw1_3.c  hw1_3.cpp  OS_HW1.pdf  OS_HW1.zip  OS_report.docx  shell
osh>date
Wed Oct 13 17:25:53 CST 2021
osh>ps
  PID TTY          TIME CMD
 827451 pts/4        00:00:00 tcsh
 829729 pts/4        00:00:00 shell
 829749 pts/4        00:00:00 ps
osh>ps -f
  UID      PID      PPID  C  STIME TTY          TIME CMD
tmyang    827451    827450  0  17:20 pts/4        00:00:00 -tcsh
tmyang    829729    827451  0  17:25 pts/4        00:00:00 ./shell
tmyang    829752    829729  0  17:25 pts/4        00:00:00 ps -f
osh>ps -f
  UID      PID      PPID  C  STIME TTY          TIME CMD
tmyang    827451    827450  0  17:20 pts/4        00:00:00 -tcsh
tmyang    829729    827451  0  17:25 pts/4        00:00:00 ./shell
tmyang    829756    829729  0  17:25 pts/4        00:00:00 ps -f
osh>ps
  PID TTY          TIME CMD
 827451 pts/4        00:00:00 tcsh
 829729 pts/4        00:00:00 shell
 829763 pts/4        00:00:00 ps
osh>exit
[tmyang@linux3 HW1]$ ./
```