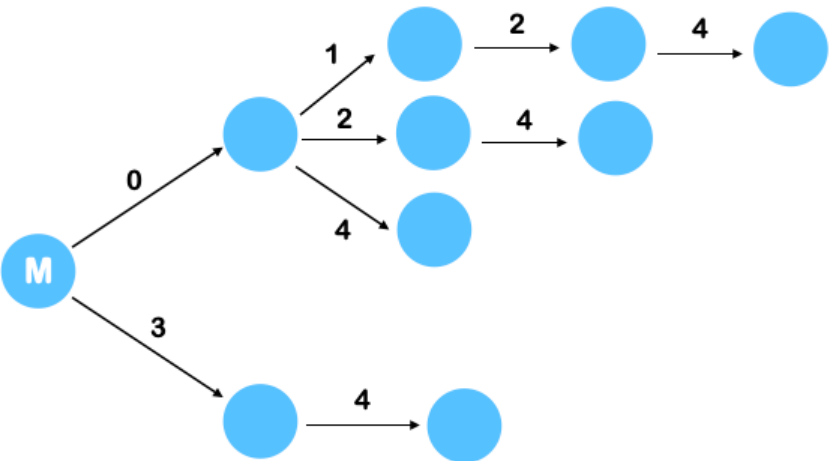


HW1 Report

Q1. hw1_1



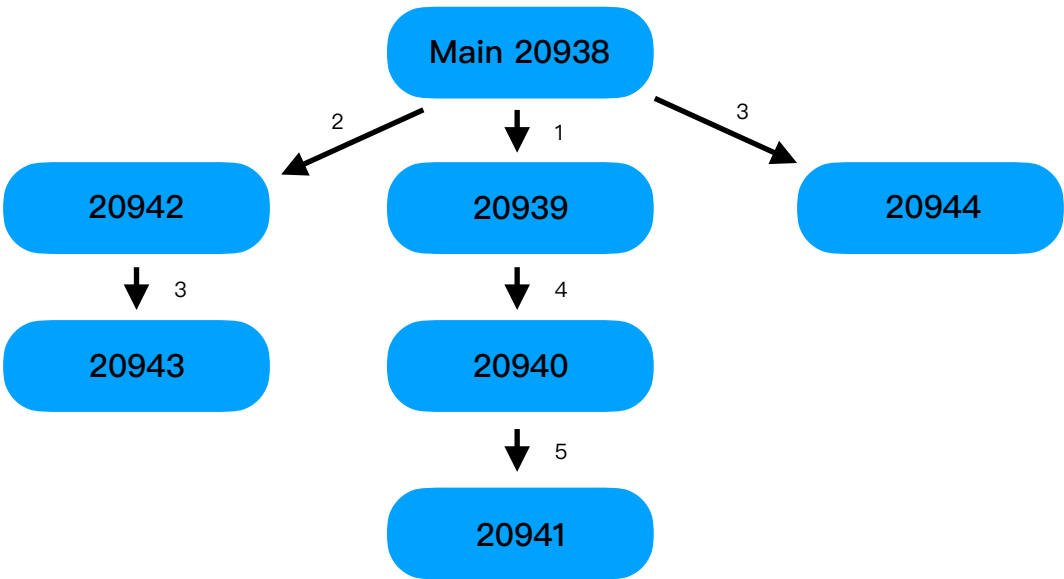
Q2. hw1_2

- Result (Screenshot)

```
./2.out
Main Process ID : 20938

Fork 1. I'm the child 20939, my parent is 20938.
Fork 4. I'm the child 20940, my parent is 20939.
Fork 5. I'm the child 20941, my parent is 20940.
Fork 2. I'm the child 20942, my parent is 20938.
Fork 3. I'm the child 20943, my parent is 20942.
Fork 3. I'm the child 20944, my parent is 20938.
```

- Tree Format



- Problems & Solutions

寫這題的過程中，常常會跑出來的結果與想像中不同，所以要一行一行去模擬 fork 的狀況，把 fork 的 process 像第一題那樣畫出來後，就可以比較清楚知道，然後在一層一層 fork 加上去，最後得到正確結果。

Q2. hw1_3

- Result (Screenshot)

```
→ HW1 git:(main) X ./shell
OSH>cat hi.txt
12345
OSH>ls
2.out      hi.txt      hw1_2.cpp  hw1_3.cpp  Makefile  OS_HW1.pdf shell
OSH>date
Thu Sep 30 14:19:31 CST 2021
OSH>ps
  PID TT  STAT   TIME COMMAND
20790  5   Is    0:00.32 -zsh (zsh)
21625  5   S+    0:00.01 ./shell
21637  5   R+    0:00.00 ps
  5318  6   Is+   0:00.44 -zsh (zsh)
  6366  7   Is+   0:00.13 -zsh (zsh)
OSH>ps -f
  PID TT  STAT   TIME COMMAND
20790  5   Is    0:00.32 -zsh (zsh)
21625  5   S+    0:00.01 ./shell
21638  5   R+    0:00.00 ps -f
  5318  6   Is+   0:00.44 -zsh (zsh)
  6366  7   Is+   0:00.13 -zsh (zsh)
OSH>exit
→ HW1 git:(main) X □
```