Homework 1

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1. Briefly explain how do you prevent zombie processes in Task #9 of Part B.

- 將背景執行的process存在一個table，並且把同一組執行（同一行pipe）的指令的group id 設為同一個，當某一個程式執行完時，會有SIGCHLD送給parent ，parent就要去檢查所有在process table裡面的WNOHANG是否有尚未收回的process，並把它移除

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2. Briefly explain what did you do to ensure the signals were sent to the correct processes? For instance, when there is a process running in foreground, the `Control-C` keyboard combination should not terminate the shell.

- 用tcsetpgrp將控制權交給child process，這樣所有的input都會導給child因此shell並不會吃到Control-C

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3. If you are asked to implement I/O redirection (i.e. token `<` and `>`) in *mysh*, how will you design for it? Briefly summarize what you need to do. You don't need to provide the source code.

- 先檢查該檔案是否能夠open，如果能open，就把pipe指向open的I/O

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4. You may heard about several IPC mechanisms including pipe, FIFO, message queue and shared memory. Which mechanism is mainly used in Android framework? If the answer is not listed above, briefly explain the concept of the mechanism you answers.

- Android 的 IPC 架構是用 Bind，將每一個service（不分system或是user define）用 binder driver連結，而bind本身也是個service，專門用來讓別人找service，例如 process A 想使用到 process B的資料，process A就會去找bind問process B的東西在哪裡
