OS course Fall 2018
Lab 1

1 Unix commands

1. Fire the terminal and run the `ps` command on the terminal without any arguments. What output do you see? Where is this program being run?

2. Fire up a program. Can you see it using `ps`?

3. Look at the manual for `ps` using `man ps`. Try out the command with all the flags and note the output in each case.

4. How can you get details of **all** the running processes?

5. Which order are the above processes sorted by? Can you sort them using same criteria but opposite order?

6. Can you sort them using some other criteria? i.e. by CPU usage?

7. Use `ps` to find unique users?

8. Find number of process per user.

9. Find process by PID

10. Find its parent

11. Find details of multiple processes using PID list

12. Use `-o` to output PID, PPID

13. Find total running time of all processes

14. Sort processes in decreasing order of running time

15. Use `watch` utility to perform real-time monitoring over ps
    `watch -n 1 'ps -eo pid,ppid,cmd,%mem,%cpu --sort=-%mem | head'`

16. Change the monitoring period of `watch`

2   Process API

In this part of the lab, we would be running the 8 programs in the homework section of Chapter 5 from the textbook.