

Lab 1 – Description of Testing

In order to determine the validity of the program, the ps command was used. This command lists running processes in the linux environment. The following arguments were passed alongside the ps command to format the output to match that of the program:

ps -Ao pid,fname,stat,uid,gid

Where,

-A lists all running processes.

-o specifies a user defined output and is followed by the order of the process information

Figure 1 (refer to Appendix) shows the expected output while Figure 2 (refer to Appendix) depicts the output of the program. These figures were obtained by using the script command. The output from the program matches the expected output with the exception of the running processes (lab1 / ps). This is justified as the expected output runs the ps process while the program runs the lab1 process. Therefore, the program works as expected.

Appendix

```
Script started on Fri 27 Sep 2019 07:45:59 PM EDT
student@ELEC377-Student:~/E377-Wed-49/lab1$ ps -Ao pid,fname,stat,uid,gid
  PID COMMAND  STAT  UID  GID
    1  init      S      0    0
    2 keventd   S      0    0
    3 ksoftirq SN      0    0
    4 kswapd    S      0    0
    5 bdflush   S      0    0
    6 kupdated  S      0    0
   10 mdrecove  S<      0    0
   11 kjournal  S      0    0
   59 syslogd  Ss     0    0
   62 klogd     Ss     0    0
  167 dhcpcd    Ss     0    0
 1545 khubd     S      0    0
 1568 inetd     Ss     0    0
 1575 crond     S      0    0
 1578 sendmail  Ss     0   25
 1581 sendmail  Ss    25   25
 1585 bash      Ss   1000  100
 1586 agetty    Ss+    0    0
 1587 agetty    Ss+    0    0
 1588 agetty    Ss+    0    0
 1589 agetty    Ss+    0    0
 1590 agetty    Ss+    0    0
 1816 script   S+   1000  100
 1817 script   R+   1000  100
 1818 bash      Rs   1000  100
 1819 ps        R+   1000  100
```

Figure 1 - Expected output from the ps command

```
student@ELEC377-Student:~/E377-Wed-49/lab1$ ps ./lab1
PID      Name          Status          User          Group
-----
1         init          S (sleeping)    0             0
2         keventd       S (sleeping)    0             0
3         ksoftirqd_CPU0 S (sleeping)    0             0
4         kswapd        S (sleeping)    0             0
5         bdflush       S (sleeping)    0             0
6         kupdated      S (sleeping)    0             0
10        mdrecoveryd   S (sleeping)    0             0
11        kjournald     S (sleeping)    0             0
59        syslogd       S (sleeping)    0             0
62        klogd         S (sleeping)    0             0
167       dhcpcd        S (sleeping)    0             0
1545      khubd         S (sleeping)    0             0
1568      inetd         S (sleeping)    0             0
1575      crond         S (sleeping)    0             0
1578      sendmail      S (sleeping)    0             25
1581      sendmail      S (sleeping)    25            25
1585      bash          S (sleeping)    1000          100
1586      agetty        S (sleeping)    0             0
1587      agetty        S (sleeping)    0             0
1588      agetty        S (sleeping)    0             0
1589      agetty        S (sleeping)    0             0
1590      agetty        S (sleeping)    0             0
1816      script        S (sleeping)    1000          100
1817      script        R (running)     1000          100
1818      bash          S (sleeping)    1000          100
1820      lab1          R (running)     1000          100

student@ELEC377-Student:~/E377-Wed-49/lab1$ exit
Script done on Fri 27 Sep 2019 07:46:30 PM EDT
```

Figure 2 - Output from the program