Lab Sheet – 1

iv. a)

b)

c)

d)

e), f) and g)

h), i) "exit" command closes the terminal

```
$banner I Love Unix
  ###
   #
   #
   #
   #
   #
  ###

#
#         ####    #     #  ######
#        #   #  #  #    #  #  #
#        #     #  #     #  #####
#        #     #  #      #  #  #
#        #      #   #  #    #
######    ####      ##     ######

#      #
#      #  #    #     #    #     #
#      #  ##   #     #    #  #
#      #  # #  #     #      ##
#      #  #  # #     #      ##
#       #   #   ##    #     #  #
 #####    #     #     #    #    #
```

v. a)

```
pro@pro-VirtualBox:~$ cal 2020
                            2020
        January               February               March
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
          1  2  3  4                     1    1  2  3  4  5  6  7
 5  6  7  8  9 10 11    2  3  4  5  6  7  8    8  9 10 11 12 13 14
12 13 14 15 16 17 18    9 10 11 12 13 14 15   15 16 17 18 19 20 21
19 20 21 22 23 24 25   16 17 18 19 20 21 22   22 23 24 25 26 27 28
26 27 28 29 30 31      23 24 25 26 27 28 29   29 30 31


         April                  May                    June
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
          1  2  3  4                  1  2       1  2  3  4  5  6
 5  6  7  8  9 10 11    3  4  5  6  7  8  9    7  8  9 10 11 12 13
12 13 14 15 16 17 18   10 11 12 13 14 15 16   14 15 16 17 18 19 20
19 20 21 22 23 24 25   17 18 19 20 21 22 23   21 22 23 24 25 26 27
26 27 28 29 30         24 25 26 27 28 29 30   28 29 30
                       31
```

```
              July                     August                  September
     Su Mo Tu We Th Fr Sa     Su Mo Tu We Th Fr Sa     Su Mo Tu We Th Fr Sa
               1  2  3  4                        1               1  2  3  4  5
      5  6  7  8  9 10 11      2  3  4  5  6  7  8      6  7  8  9 10 11 12
     12 13 14 15 16 17 18      9 10 11 12 13 14 15     13 14 15 16 17 18 19
     19 20 21 22 23 24 25     16 17 18 19 20 21 22     20 21 22 23 24 25 26
     26 27 28 29 30 31        23 24 25 26 27 28 29     27 28 29 30
                              30 31

             October                  November                 December
     Su Mo Tu We Th Fr Sa     Su Mo Tu We Th Fr Sa     Su Mo Tu We Th Fr Sa
                     1  2  3   1  2  3  4  5  6  7               1  2  3  4  5
      4  5  6  7  8  9 10      8  9 10 11 12 13 14      6  7  8  9 10 11 12
     11 12 13 14 15 16 17     15 16 17 18 19 20 21     13 14 15 16 17 18 19
     18 19 20 21 22 23 24     22 23 24 25 26 27 28     20 21 22 23 24 25 26
     25 26 27 28 29 30 31     29 30                    27 28 29 30 31

     pro@pro-VirtualBox:~$
```

b)

```
pro@pro-VirtualBox:~$ cal 1 2022
      January 2022
Su Mo Tu We Th Fr Sa
                   1
 2  3  4  5  6  7  8
 9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
pro@pro-VirtualBox:~$
```

c)

```
pro@pro-VirtualBox:~$ ls /usr
bin     include  lib32  libexec  local  share
games   lib      lib64  libx32   sbin   src
pro@pro-VirtualBox:~$
```

d)

```
pro@pro-VirtualBox:~$ cd Video
bash: cd: Video: No such file or directory
pro@pro-VirtualBox:~$ cd Videos
pro@pro-VirtualBox:~/Videos$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/lo
cal/games:/snap/bin:/snap/bin
pro@pro-VirtualBox:~/Videos$
```

e)

```
pro@pro-VirtualBox:~/Videos$ cd /usr
pro@pro-VirtualBox:/usr$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/lo
cal/games:/snap/bin:/snap/bin
pro@pro-VirtualBox:/usr$
```

f)

Lab Sheet – 2

i.

ii.

iii.

```
pro@pro-VirtualBox:~/Desktop$ w
 03:39:27 up  2:16,  1 user,  load average: 0.01, 0.05, 0.08
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
pro      tty2     tty2             01:24    2:16m  0.05s  0.05s /usr/libexec/g
pro@pro-VirtualBox:~/Desktop$ who >> mylisting.txt
pro@pro-VirtualBox:~/Desktop$ more mylisting.txt
lab4
mylisting.txt
test
pro      tty2             2022-06-10 01:24 (tty2)
pro@pro-VirtualBox:~/Desktop$
```

iv.

```
pro@pro-VirtualBox:~/Desktop$ cal 2021 >> mylisting.txt
pro@pro-VirtualBox:~/Desktop$ more mylisting.txt
lab4
mylisting.txt
test
pro      tty2             2022-06-10 01:24 (tty2)
                    2021
       January               February               March
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                1  2      1  2  3  4  5  6      1  2  3  4  5  6
 3  4  5  6  7  8  9   7  8  9 10 11 12 13   7  8  9 10 11 12 13
10 11 12 13 14 15 16  14 15 16 17 18 19 20  14 15 16 17 18 19 20
17 18 19 20 21 22 23  21 22 23 24 25 26 27  21 22 23 24 25 26 27
24 25 26 27 28 29 30  28                    28 29 30 31
31
```

```
        April                  May                   June
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
             1  2  3                  1         1  2  3  4  5
 4  5  6  7  8  9 10   2  3  4  5  6  7  8   6  7  8  9 10 11 12
11 12 13 14 15 16 17   9 10 11 12 13 14 15  13 14 15 16 17 18 19
18 19 20 21 22 23 24  16 17 18 19 20 21 22  20 21 22 23 24 25 26
25 26 27 28 29 30     23 24 25 26 27 28 29  27 28 29 30
                      30 31

        July                 August               September
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
             1  2  3   1  2  3  4  5  6  7            1  2  3  4
 4  5  6  7  8  9 10   8  9 10 11 12 13 14   5  6  7  8  9 10 11
11 12 13 14 15 16 17  15 16 17 18 19 20 21  12 13 14 15 16 17 18
18 19 20 21 22 23 24  22 23 24 25 26 27 28  19 20 21 22 23 24 25
25 26 27 28 29 30 31  29 30 31              26 27 28 29 30
```
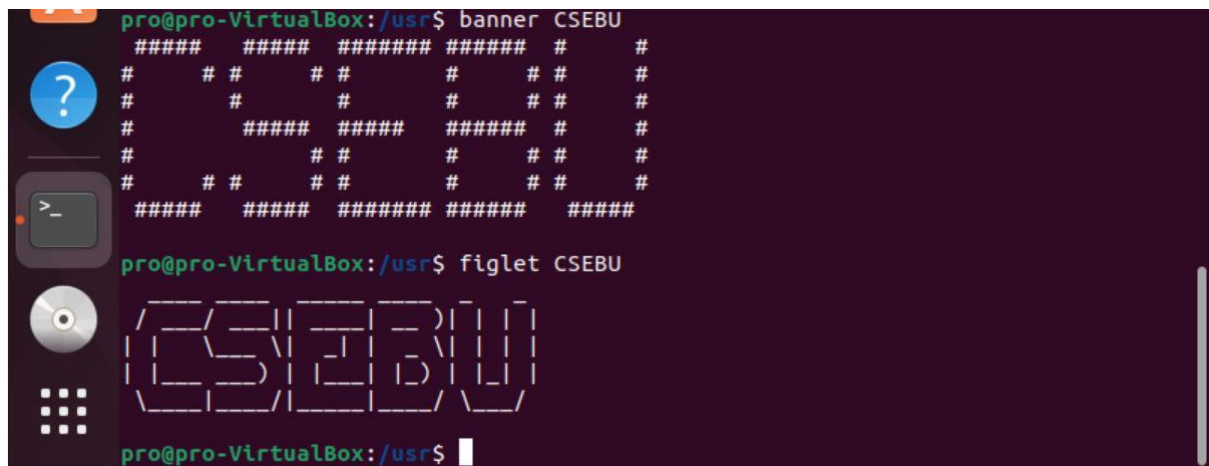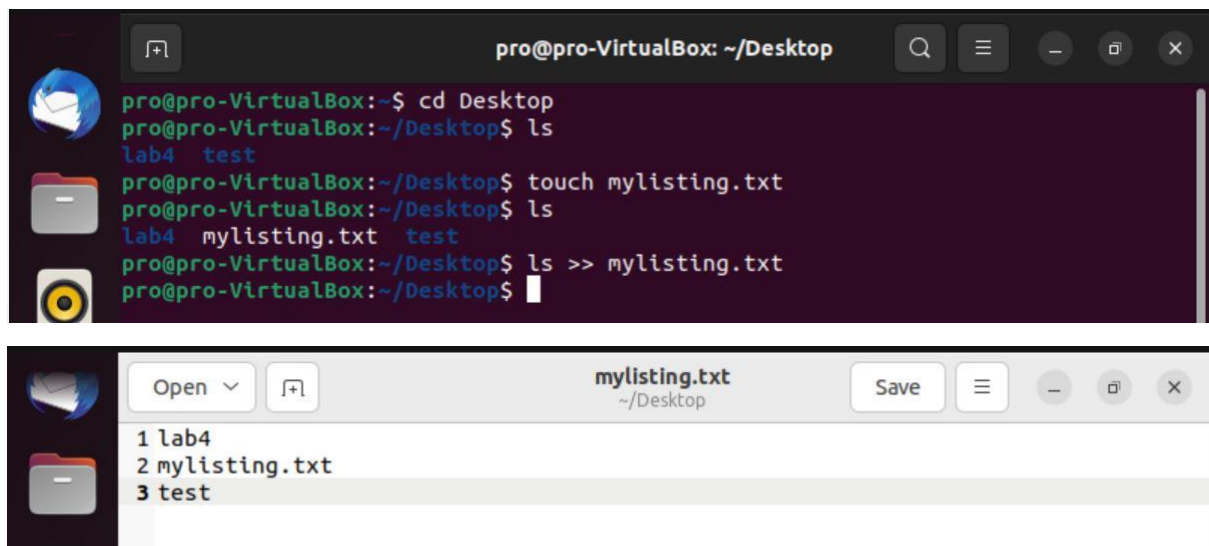
```
        October              November              December
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
             1  2      1  2  3  4  5  6            1  2  3  4
 3  4  5  6  7  8  9   7  8  9 10 11 12 13   5  6  7  8  9 10 11
10 11 12 13 14 15 16  14 15 16 17 18 19 20  12 13 14 15 16 17 18
17 18 19 20 21 22 23  21 22 23 24 25 26 27  19 20 21 22 23 24 25
24 25 26 27 28 29 30  28 29 30              26 27 28 29 30 31
31
pro@pro-VirtualBox:~/Desktop$
pro@pro-VirtualBox:~/Desktop$
pro@pro-VirtualBox:~/Desktop$
```
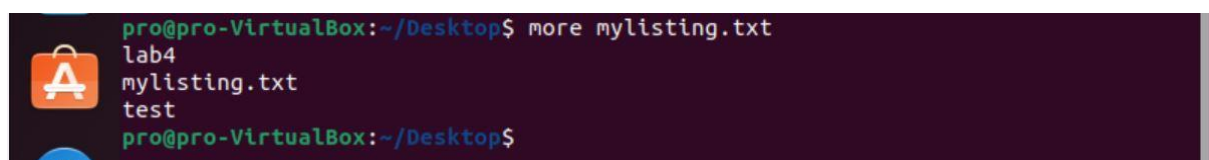
V.

```
pro@pro-VirtualBox:~/Desktop$ ps aux
USER         PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.6 102408 12968 ?        Ss   01:22   0:03 /sbin/init s
root           2  0.0  0.0      0     0 ?        S    01:22   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        I<   01:22   0:00 [rcu_gp]
root           4  0.0  0.0      0     0 ?        I<   01:22   0:00 [rcu_par_gp]
root           5  0.0  0.0      0     0 ?        I<   01:22   0:00 [netns]
root           7  0.0  0.0      0     0 ?        I<   01:22   0:00 [kworker/0:0
root          10  0.0  0.0      0     0 ?        I<   01:22   0:00 [mm_percpu_w
root          11  0.0  0.0      0     0 ?        S    01:22   0:00 [rcu_tasks_r
root          12  0.0  0.0      0     0 ?        S    01:22   0:00 [rcu_tasks_t
root          13  0.0  0.0      0     0 ?        S    01:22   0:00 [ksoftirqd/0
root          14  0.0  0.0      0     0 ?        I    01:22   0:03 [rcu_sched]
root          15  0.0  0.0      0     0 ?        S    01:22   0:00 [migration/0
root          16  0.0  0.0      0     0 ?        S    01:22   0:00 [idle_inject
root          17  0.0  0.0      0     0 ?        S    01:22   0:00 [cpuhp/0]
root          18  0.0  0.0      0     0 ?        S    01:22   0:00 [cpuhp/1]
root          19  0.0  0.0      0     0 ?        S    01:22   0:00 [idle_inject
root          20  0.0  0.0      0     0 ?        S    01:22   0:00 [migration/1
root          21  0.0  0.0      0     0 ?        S    01:22   0:00 [ksoftirqd/1
root          23  0.0  0.0      0     0 ?        I<   01:22   0:00 [kworker/1:0
root          24  0.0  0.0      0     0 ?        S    01:22   0:00 [kdevtmpfs]
root          25  0.0  0.0      0     0 ?        I<   01:22   0:00 [inet_frag_w
root          26  0.0  0.0      0     0 ?        S    01:22   0:00 [kauditd]
root          27  0.0  0.0      0     0 ?        S    01:22   0:00 [khungtaskd]
root          28  0.0  0.0      0     0 ?        S    01:22   0:00 [oom_reaper]
root          29  0.0  0.0      0     0 ?        I<   01:22   0:00 [writeback]
root          30  0.0  0.0      0     0 ?        S    01:22   0:00 [kcompactd0]
root          31  0.0  0.0      0     0 ?        SN   01:22   0:00 [ksmd]
root          32  0.0  0.0      0     0 ?        SN   01:22   0:00 [khugepaged]
root          79  0.0  0.0      0     0 ?        I<   01:22   0:00 [kintegrityd
root          80  0.0  0.0      0     0 ?        I<   01:22   0:00 [kblockd]
root          81  0.0  0.0      0     0 ?        I<   01:22   0:00 [blkcg_punt_
root          82  0.0  0.0      0     0 ?        I<   01:22   0:00 [tpm_dev_wq]
root          83  0.0  0.0      0     0 ?        I<   01:22   0:00 [ata_sff]
root          84  0.0  0.0      0     0 ?        I<   01:22   0:00 [md]
root          85  0.0  0.0      0     0 ?        I<   01:22   0:00 [edac-poller
root          86  0.0  0.0      0     0 ?        I<   01:22   0:00 [devfreq_wq]
root          87  0.0  0.0      0     0 ?        S    01:22   0:00 [watchdogd]
root          89  0.0  0.0      0     0 ?        I<   01:22   0:00 [kworker/0:1
```

```
root          91  0.0  0.0      0     0 ?        S    01:22   0:00 [kswapd0]
root          92  0.0  0.0      0     0 ?        S    01:22   0:00 [ecryptfs-kt
root          94  0.0  0.0      0     0 ?        I<   01:22   0:00 [kthrotld]
root          95  0.0  0.0      0     0 ?        I<   01:22   0:00 [acpi_therma
root          97  0.0  0.0      0     0 ?        S    01:22   0:00 [scsi_eh_0]
root          98  0.0  0.0      0     0 ?        I<   01:22   0:00 [scsi_tmf_0]
root          99  0.0  0.0      0     0 ?        S    01:22   0:00 [scsi_eh_1]
root         100  0.0  0.0      0     0 ?        I<   01:22   0:00 [scsi_tmf_1]
root         102  0.0  0.0      0     0 ?        I<   01:22   0:00 [vfio-irqfd-
root         103  0.0  0.0      0     0 ?        I<   01:22   0:00 [mld]
root         104  0.0  0.0      0     0 ?        I<   01:22   0:00 [ipv6_addrco
root         115  0.0  0.0      0     0 ?        I<   01:22   0:00 [kstrp]
root         118  0.0  0.0      0     0 ?        I<   01:22   0:00 [zswap-shrin
root         119  0.0  0.0      0     0 ?        I<   01:22   0:00 [kworker/u5:
root         124  0.0  0.0      0     0 ?        I<   01:22   0:00 [charger_man
root         148  0.0  0.0      0     0 ?        I<   01:22   0:00 [kworker/1:1
root         164  0.0  0.0      0     0 ?        S    01:22   0:00 [scsi_eh_2]
root         165  0.0  0.0      0     0 ?        I<   01:22   0:00 [scsi_tmf_2]
root         189  0.0  0.0      0     0 ?        S    01:22   0:00 [jbd2/sda3-8
root         190  0.0  0.0      0     0 ?        I<   01:22   0:00 [ext4-rsv-co
root         230  0.0  1.4  56484 27360 ?        S<s  01:22   0:01 /lib/systemd
root         257  0.0  0.0      0     0 ?        I<   01:23   0:00 [ipmi-msghan
root         277  0.0  0.3  27492  6900 ?        Ss   01:23   0:00 /lib/systemd
root         309  0.0  0.0      0     0 ?        I<   01:23   0:00 [cryptd]
root         375  0.0  0.0      0     0 ?        I<   01:23   0:00 [ttm_swap]
root         376  0.0  0.0      0     0 ?        S    01:23   0:00 [irq/18-vmwg
root         377  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc0
root         378  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc1
root         379  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc2
root         380  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc3
root         381  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc4
root         382  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc5
root         383  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc6
root         384  0.0  0.0      0     0 ?        S    01:23   0:00 [card0-crtc7
systemd+     566  0.2  0.3  14776  6116 ?        Ss   01:23   0:18 /lib/systemd
systemd+     567  0.0  0.7  25348 13824 ?        Ss   01:23   0:00 /lib/systemd
systemd+     568  0.0  0.3  89324  6560 ?        Ssl  01:23   0:00 /lib/systemd
root         605  0.0  0.3 248552  7412 ?        Ssl  01:23   0:00 /usr/libexec
root         606  0.0  0.0   2812  1128 ?        Ss   01:23   0:00 /usr/sbin/ac
avahi        609  0.0  0.1   7628  3348 ?        Ss   01:23   0:00 avahi-daemon
```

```
root        606  0.0  0.0   2812   1128 ?        Ss   01:23   0:00 /usr/sbin/ac
avahi       609  0.0  0.1   7628   3348 ?        Ss   01:23   0:00 avahi-daemon
root        610  0.0  0.1  18148   2832 ?        Ss   01:23   0:00 /usr/sbin/cr
message+    611  0.0  0.3  11040   6292 ?        Ss   01:23   0:01 @dbus-daemon
root        612  0.0  0.9 490968  19008 ?        Ssl  01:23   0:01 /usr/sbin/Ne
root        618  0.0  0.2  82696   3964 ?        Ssl  01:23   0:00 /usr/sbin/ir
root        619  0.0  1.0  48632  20316 ?        Ss   01:23   0:00 /usr/bin/pyt
root        620  0.0  0.5 251684  10988 ?        Ssl  01:23   0:02 /usr/libexec
root        621  0.0  0.3 248704   7012 ?        Ssl  01:23   0:00 /usr/libexec
syslog      622  0.0  0.2 222400   5224 ?        Ssl  01:23   0:00 /usr/sbin/rs
root        636  0.1  1.9 948228  38636 ?        Ssl  01:23   0:14 /usr/lib/sna
root        637  0.0  0.3 245024   6552 ?        Ssl  01:23   0:00 /usr/libexec
root        638  0.0  0.4  23648   8008 ?        Ss   01:23   0:00 /lib/systemd
root        639  0.0  0.6 393048  13256 ?        Ssl  01:23   0:00 /usr/libexec
root        640  0.0  0.2  16492   5760 ?        Ss   01:23   0:00 /sbin/wpa_su
avahi       650  0.0  0.0   7440    328 ?        S    01:23   0:00 avahi-daemon
root        729  0.0  0.6 243280  11860 ?        Ssl  01:23   0:00 /usr/sbin/Mo
root        739  0.0  0.7  81656  13792 ?        Ss   01:23   0:00 /usr/sbin/cu
root        742  0.0  1.1 126780  23004 ?        Ssl  01:23   0:00 /usr/bin/pyt
root        760  0.0  0.4 249992   8796 ?        Ssl  01:23   0:00 /usr/sbin/gd
kernoops    799  0.0  0.0  13080    368 ?        Ss   01:23   0:00 /usr/sbin/ke
kernoops    801  0.0  0.0  13080    456 ?        Ss   01:23   0:00 /usr/sbin/ke
root        818  0.0  0.5 172608  11164 ?        Ssl  01:23   0:00 /usr/sbin/cu
rtkit       872  0.0  0.0 154000   1608 ?        SNsl 01:23   0:00 /usr/libexec
root       1153  0.0  0.4 250968   8420 ?        Ssl  01:24   0:00 /usr/libexec
root       1195  0.0  0.9 306828  19064 ?        Ssl  01:24   0:00 /usr/libexec
colord     1369  0.0  0.6 253932  11740 ?        Ssl  01:24   0:00 /usr/libexec
root       1393  0.0  0.5 326820  10748 ?        Sl   01:24   0:00 gdm-session-
pro        1406  0.0  0.5  17904  10508 ?        Ss   01:24   0:01 /lib/systemd
pro        1408  0.0  0.1 104344   2700 ?        S    01:24   0:00 (sd-pam)
pro        1414  0.0  0.2  48220   4696 ?        S<sl 01:24   0:00 /usr/bin/pip
pro        1415  0.0  0.2  32108   4168 ?        Ssl  01:24   0:00 /usr/bin/pip
pro        1416  0.0  1.2 1243876 25204 ?        S<sl 01:24   0:00 /usr/bin/pul
pro        1417  0.0  1.3 308092  26532 ?        Ssl  01:24   0:02 /snap/snapd-
pro        1425  0.0  0.3  10272   5900 ?        Ss   01:24   0:01 /usr/bin/dbu
pro        1427  0.0  0.3 249288   7592 ?        Ssl  01:24   0:00 /usr/libexec
pro        1436  0.0  0.3 380884   6412 ?        Sl   01:24   0:00 /usr/libexec
pro        1454  0.0  0.3 545552   7004 ?        Ssl  01:24   0:00 /usr/libexec
pro        1457  0.0  0.3 249568   6952 ?        Sl   01:24   0:00 /usr/bin/gno
pro        1462  0.0  0.2 244800   5588 ?        Ssl  01:24   0:00 /usr/libexec
root       1468  0.0  0.0   2792    968 ?        Ss   01:24   0:00 fusermount3
```

```
root       1468  0.0  0.0   2792    968 ?        Ss   01:24   0:00 fusermount3
pro        1480  0.0  1.2 644216  23532 ?        SNsl 01:24   0:01 /usr/libexec
pro        1483  0.0  0.3 171036   6088 tty2     Ssl+ 01:24   0:00 /usr/libexec
pro        1486  0.0  0.7 231684  15276 tty2     Sl+  01:24   0:00 /usr/libexec
pro        1534  0.0  2.7 549556  54144 ?        Ssl  01:24   0:00 /usr/libexec
pro        1535  0.0  0.2 100556   5116 ?        Ssl  01:24   0:00 /usr/libexec
pro        1545  0.0  0.9 667180  17516 ?        Ssl  01:24   0:00 /usr/libexec
pro        1570  0.0  0.3 309612   7672 ?        Sl   01:24   0:00 /usr/libexec
pro        1571  2.6 17.3 4256612 337076 ?       Ssl  01:24   3:45 /usr/bin/gno
pro        1580  0.0  0.2   8560   4088 ?        S    01:24   0:00 /usr/bin/dbu
pro        1610  0.0  0.9 583056  19328 ?        Sl   01:24   0:00 /usr/libexec
pro        1612  0.0  0.4 398412   9620 ?        Ssl  01:25   0:00 /usr/libexec
pro        1617  0.0  0.3 246060   6412 ?        Ssl  01:25   0:00 /usr/libexec
pro        1621  0.0  0.3 245104   6340 ?        Ssl  01:25   0:00 /usr/libexec
pro        1625  0.0  0.3 245284   6252 ?        Ssl  01:25   0:00 /usr/libexec
pro        1629  0.0  1.2 569788  24876 ?        Sl   01:25   0:00 /usr/libexec
pro        1636  0.0  0.7 347044  13724 ?        Sl   01:25   0:00 /usr/libexec
pro        1642  0.0  0.4 323848   7952 ?        Ssl  01:25   0:00 /usr/libexec
pro        1658  0.0  1.2 1015232 24068 ?        Ssl  01:25   0:00 /usr/libexec
pro        1680  0.0  0.3 323512   7728 ?        Sl   01:25   0:00 /usr/libexec
pro        1693  0.0  1.3 2608160 25956 ?        Sl   01:25   0:00 /usr/bin/gjs
pro        1695  0.0  0.3 162676   7520 ?        Sl   01:25   0:00 /usr/libexec
pro        1742  0.0  0.0   2888    956 ?        Ss   01:25   0:00 sh -c /usr/b
pro        1743  0.0  0.3 319064   6492 ?        Ssl  01:25   0:00 /usr/libexec
pro        1746  0.0  1.2 607148  25020 ?        Ssl  01:25   0:00 /usr/libexec
pro        1748  0.0  0.6 323472  11736 ?        Sl   01:25   0:04 /usr/bin/ibu
pro        1749  0.0  0.8 384104  16196 ?        Ssl  01:25   0:00 /usr/libexec
pro        1750  0.0  0.3 320748   7396 ?        Ssl  01:25   0:00 /usr/libexec
pro        1756  0.0  1.0 348700  21040 ?        Ssl  01:25   0:00 /usr/libexec
pro        1757  0.0  1.3 725276  25816 ?        Ssl  01:25   0:00 /usr/libexec
pro        1768  0.0  1.2 459044  24332 ?        Ssl  01:25   0:00 /usr/libexec
pro        1771  0.0  0.5 258496  11472 ?        Ssl  01:25   0:00 /usr/libexec
pro        1772  0.0  0.3 466500   6360 ?        Ssl  01:25   0:00 /usr/libexec
pro        1774  0.0  0.3 244932   6312 ?        Ssl  01:25   0:00 /usr/libexec
pro        1777  0.0  0.4 474576   8660 ?        Ssl  01:25   0:00 /usr/libexec
pro        1783  0.0  0.3 232260   6360 ?        Sl   01:25   0:00 /usr/libexec
pro        1786  0.0  0.4 394676   7852 ?        Ssl  01:25   0:00 /usr/libexec
pro        1792  0.0  0.4 327988   9244 ?        Ssl  01:25   0:00 /usr/libexec
pro        1794  0.0  2.7 744944  52956 ?        Sl   01:25   0:00 /usr/libexec
pro        1801  0.0  1.1 349276  21700 ?        Ssl  01:25   0:00 /usr/libexec
pro        1819  0.0  0.3 172128   7276 ?        Sl   01:25   0:00 /usr/libexec
```

```
pro     1819  0.0  0.3 172128   7276 ?        Sl   01:25   0:00 /usr/libexec
pro     1820  0.0  1.4 355908  28052 ?        Sl   01:25   0:02 /usr/libexec
pro     1851  0.0  0.7 351000  13664 ?        Sl   01:25   0:00 /usr/libexec
pro     1854  0.0  0.3 245908   7440 ?        Sl   01:25   0:00 /usr/libexec
pro     1877  0.0  1.4 849096  28864 ?        Ssl  01:25   0:00 /usr/libexec
pro     1896  0.0  0.3 172128   7408 ?        Sl   01:25   0:01 /usr/libexec
pro     1901  0.0  0.3 171708   6612 ?        Ssl  01:25   0:00 /usr/libexec
pro     1935  0.0  0.6 632420  12276 ?        Ssl  01:25   0:00 /usr/libexec
pro     1937  0.0  1.3 2608200 26564 ?        Sl   01:25   0:00 /usr/bin/gjs
pro     1973  0.0  1.4 737100  28764 ?        Ssl  01:25   0:00 /usr/libexec
pro     2046  0.0  0.3 156960   5964 ?        Ssl  01:25   0:00 /usr/libexec
pro     2047  0.0  1.2 754600  25100 ?        Ssl  01:25   0:00 /usr/libexec
pro     2082  0.0  1.2 352568  24912 ?        Ssl  01:25   0:00 /usr/libexec
pro     2224  0.0  1.5 502588  30940 ?        Sl   01:26   0:00 update-notif
pro     2550  0.0  2.4 884020  47972 ?        Sl   01:38   0:00 /usr/bin/gno
pro     2553  0.0  2.0 402000  39360 ?        SLl  01:38   0:00 /usr/bin/sea
root    3214  0.0  0.0      0      0 ?        I    02:37   0:00 [kworker/u4:
root    3857  0.0  0.0      0      0 ?        I    03:09   0:01 [kworker/0:1
root    3883  0.0  0.0      0      0 ?        I    03:17   0:00 [kworker/1:0
pro     3897  0.3  2.6 562080  51936 ?        Rsl  03:17   0:06 /usr/libexec
pro     3915  0.0  0.2  19788   4884 pts/0    Ss   03:17   0:00 bash
root    4192  0.0  0.0      0      0 ?        I    03:35   0:00 [kworker/1:1
root    4196  0.0  0.0      0      0 ?        I    03:38   0:00 [kworker/u4:
root    4201  0.0  0.0      0      0 ?        I    03:39   0:00 [kworker/0:0
pro     4224  0.1  3.0 2802088 58604 ?        Sl   03:39   0:00 gjs /usr/sha
root    4306  0.0  0.0      0      0 ?        I    03:48   0:00 [kworker/u4:
pro     4307  0.0  0.0  21324   1608 pts/0    R+   03:48   0:00 ps aux
pro@pro-VirtualBox:~/Desktop$
```

```
pro@pro-VirtualBox:~/Desktop$ ps aux >> mylisting.txt
pro@pro-VirtualBox:~/Desktop$ more mylisting.txt
lab4
mylisting.txt
test
pro       tty2         2022-06-10 01:24 (tty2)
                          2021
       January               February               March
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
                1  2       1  2  3  4  5  6          1  2  3  4  5  6
 3  4  5  6  7  8  9    7  8  9 10 11 12 13    7  8  9 10 11 12 13
10 11 12 13 14 15 16   14 15 16 17 18 19 20   14 15 16 17 18 19 20
17 18 19 20 21 22 23   21 22 23 24 25 26 27   21 22 23 24 25 26 27
24 25 26 27 28 29 30   28                     28 29 30 31
31

        April                  May                   June
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
             1  2  3                      1          1  2  3  4  5
 4  5  6  7  8  9 10    2  3  4  5  6  7  8    6  7  8  9 10 11 12
11 12 13 14 15 16 17    9 10 11 12 13 14 15   13 14 15 16 17 18 19
18 19 20 21 22 23 24   16 17 18 19 20 21 22   20 21 22 23 24 25 26
25 26 27 28 29 30      23 24 25 26 27 28 29   27 28 29 30
                       30 31

        July                 August                September
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
             1  2  3    1  2  3  4  5  6  7             1  2  3  4
 4  5  6  7  8  9 10    8  9 10 11 12 13 14    5  6  7  8  9 10 11
11 12 13 14 15 16 17   15 16 17 18 19 20 21   12 13 14 15 16 17 18
18 19 20 21 22 23 24   22 23 24 25 26 27 28   19 20 21 22 23 24 25
25 26 27 28 29 30 31   29 30 31               26 27 28 29 30
```

```
       October               November              December
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
                1  2       1  2  3  4  5  6             1  2  3  4
 3  4  5  6  7  8  9    7  8  9 10 11 12 13    5  6  7  8  9 10 11
10 11 12 13 14 15 16   14 15 16 17 18 19 20   12 13 14 15 16 17 18
17 18 19 20 21 22 23   21 22 23 24 25 26 27   19 20 21 22 23 24 25
24 25 26 27 28 29 30   28 29 30               26 27 28 29 30 31
31
USER       PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.6 102408 12968 ?        Ss   01:22   0:03 /sbin/init splash
root         2  0.0  0.0      0     0 ?        S    01:22   0:00 [kthreadd]
root         3  0.0  0.0      0     0 ?        I<   01:22   0:00 [rcu_gp]
root         4  0.0  0.0      0     0 ?        I<   01:22   0:00 [rcu_par_gp]
root         5  0.0  0.0      0     0 ?        I<   01:22   0:00 [netns]
--More--(13%)
```

vi.

```
pro@pro-VirtualBox:~/Desktop$ grep "csebu" mylisting.txt
pro@pro-VirtualBox:~/Desktop$ grep "mylisting.txt" mylisting.txt
mylisting.txt
pro@pro-VirtualBox:~/Desktop$ grep "December" mylisting.txt
        October               November              December
pro@pro-VirtualBox:~/Desktop$
```