Shell Programming

ASSIGNMENT 7

SUBMITTED BY ---   SUBMITTED TO-

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bg – to send a process in background , fg – to run a stopped process in foreground

```
┌──(ashish500086363㊂kali)-[~/assignment7]
└─$ sleep 500
^Z
[1]+  Stopped                 sleep 500

┌──(ashish500086363㊂kali)-[~/assignment7]
└─$ bg
[1]+ sleep 500 &

┌──(ashish500086363㊂kali)-[~/assignment7]
└─$ fg
sleep 500
^X^Z
[1]+  Stopped                 sleep 500

┌──(ashish500086363㊂kali)-[~/assignment7]
└─$ █

┌──(ashish500086363㊂kali)-[~/assignment7]
└─$ jobs
[1]+  Stopped                 sleep 500
```

top – details on all active processes

```
top - 13:13:26 up  2:27,  3 users,  load average: 0.60, 0.55, 0.54
Tasks: 294 total,   1 running, 290 sleeping,   3 stopped,   0 zombie
%Cpu(s):  0.1 us,  0.0 sy,  0.0 ni, 99.9 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :   5995.8 total,   4020.2 free,   1227.3 used,    748.4 buff/cache
MiB Swap:    975.0 total,    975.0 free,      0.0 used.   4498.2 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   1007 root      20   0 1241068 106712  54348 S   3.3   1.7   0:13.75 Xorg
  22831 ashish5+  20   0 1268864  77732  60480 S   1.0   1.3   0:01.76 qterminal
  22761 ashish5+  20   0  291284  38156  29492 S   0.3   0.6   0:18.07 vmtoolsd
  22898 ashish5+  20   0  361972  44164  24840 S   0.3   0.7   0:00.30 blueman-tray
  24665 root      20   0       0      0      0 I   0.3   0.0   0:08.69 kworker/1:4-pm
  25285 root      20   0       0      0      0 I   0.3   0.0   0:00.09 kworker/3:1-events
      1 root      20   0  164156  10508   7844 S   0.0   0.2   0:03.19 systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.03 kthreadd
```

ps- give the status of processes running for a user

```
┌──(ashish500086363㉿kali)-[~/assignment7]
└─$ ps
    PID TTY          TIME CMD
  22911 pts/0    00:00:00 bash
  25354 pts/0    00:00:00 sleep
  25357 pts/0    00:00:00 top
  25359 pts/0    00:00:00 ps

┌──(ashish500086363㉿kali)-[~/assignment7]
└─$ ▮
```

ps Pid-give the status of particular process

```
┌──(ashish500086363㉿kali)-[~/assignment7]
└─$ ps 22911
    PID TTY      STAT   TIME COMMAND
  22911 pts/0    Ss     0:00 /bin/bash
```

pidof-give the process id of a processes

```
┌──(ashish500086363㉿kali)-[~/assignment7]
└─$ pidof bash
24963 23944 22911
```

kill pid- kills the process

```
┌──(ashish500086363㉿kali)-[~/assignment7]
└─$ kill -9 25354

┌──(ashish500086363㉿kali)-[~/assignment7]
└─$ ps
    PID TTY          TIME CMD
  22911 pts/0    00:00:00 bash
  25357 pts/0    00:00:00 top
  25370 pts/0    00:00:00 ps
[1]-  Killed                  sleep 500
```

nice-starts a process with given priority

```
┌──(ashish500086363@kali)-[~/assignment7]
└─$ nice -n 5 bash
┌──(ashish500086363@kali)-[~/assignment7]
└─$ top
top - 13:17:13 up  2:31,  3 users,  load average: 0.73, 0.58, 0.55
Tasks: 292 total,   1 running, 288 sleeping,   3 stopped,   0 zombie
%Cpu(s):  0.3 us,  0.0 sy,  0.0 ni, 99.6 id,  0.0 wa,  0.0 hi,  0.1 si,  0.0 st
MiB Mem :   5995.8 total,   4017.2 free,   1230.0 used,    748.6 buff/cache
MiB Swap:    975.0 total,    975.0 free,      0.0 used.   4495.4 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   1007 root      20   0 1241068 106712  54348 S   3.0   1.7   0:15.22 Xorg
  22831 ashish5+  20   0 1268864  77732  60480 S   1.0   1.3   0:02.37 qterminal
  22761 ashish5+  20   0  292312  39208  29492 S   0.7   0.6   0:18.57 vmtoolsd
     12 root      20   0       0      0      0 I   0.3   0.0   0:03.69 rcu_sched
    579 root      20   0  237716   9676   6520 S   0.3   0.2   0:17.80 vmtoolsd
  22679 ashish5+  20   0 1271632  81324  59048 S   0.3   1.3   0:01.97 xfwm4
  22725 ashish5+  20   0  434100 104868  47788 S   0.3   1.7   0:02.94 xfdesktop
  22754 ashish5+  20   0  510828  41044  33020 S   0.3   0.7   0:08.88 panel-17-pulsea
  23337 kali      20   0  510848  40116  32044 S   0.3   0.7   0:08.21 panel-17-pulsea
  24960 root      20   0       0      0      0 I   0.3   0.0   0:00.10 kworker/u64:0-flush-8:0
  25277 root      20   0       0      0      0 D   0.3   0.0   0:01.26 kworker/1:0+usb_hub_wq
  25284 root      20   0       0      0      0 I   0.3   0.0   0:00.27 kworker/2:0-events
  25391 ashish5+  25   5   10240   3980   3220 R   0.3   0.1   0:00.01 top
```

renice-changes priority of an already running process

```
┌──(ashish500086363@kali)-[~/assignment7]
└─$ renice 15 25357
25357 (process ID) old priority 0, new priority 15

┌──(ashish500086363@kali)-[~/assignment7]
└─$ 
```

df-gives free hard disk space on your system

```
┌──(ashish500086363@kali)-[~/assignment7]
└─$ df
Filesystem     1K-blocks     Used Available Use% Mounted on
udev             3033696        0   3033696   0% /dev
tmpfs             613976     1352    612624   1% /run
/dev/sda1       81000912 10463052  66377248  14% /
tmpfs            3069868        0   3069868   0% /dev/shm
tmpfs               5120        0      5120   0% /run/lock
tmpfs             613972       64    613908   1% /run/user/1001
tmpfs             613972       64    613908   1% /run/user/1000
tmpfs             613972       68    613904   1% /run/user/1002
```

free-give free ram on your system

```
┌──(ashish500086363@kali)-[~/assignment7]
└─$ free
               total        used        free      shared  buff/cache   available
Mem:         6139740     1260664     4112524       37640      766552     4602212
Swap:         998396           0      998396
```