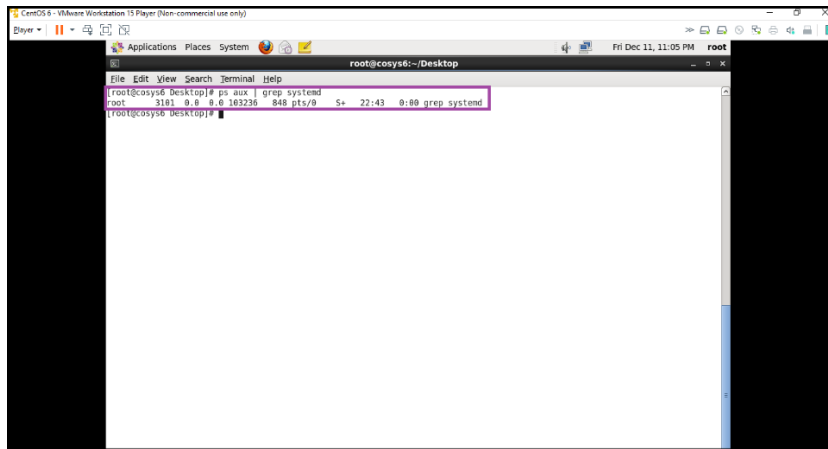


Question 1

1. Use ps to search for the “systemd” process by name.
2. Find out your terminal name. Using your terminal name, use ps to find all processes associated With your terminal.
3. Check and note the process id of your shell (from the output of the above command). Also, note the parent process id of your shell.
4. Start 3 instances of “sleep 123” as background processes.
5. Check and note the process ids of all sleep processes.
6. Display only those three sleep processes in top. Then quit top.

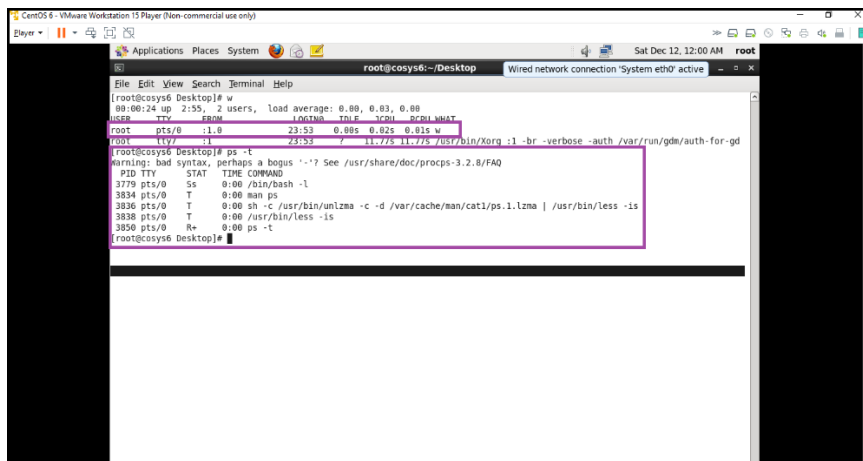
Step 1: Use ps to search for the “systemd” process by name.

Screenshot 1:



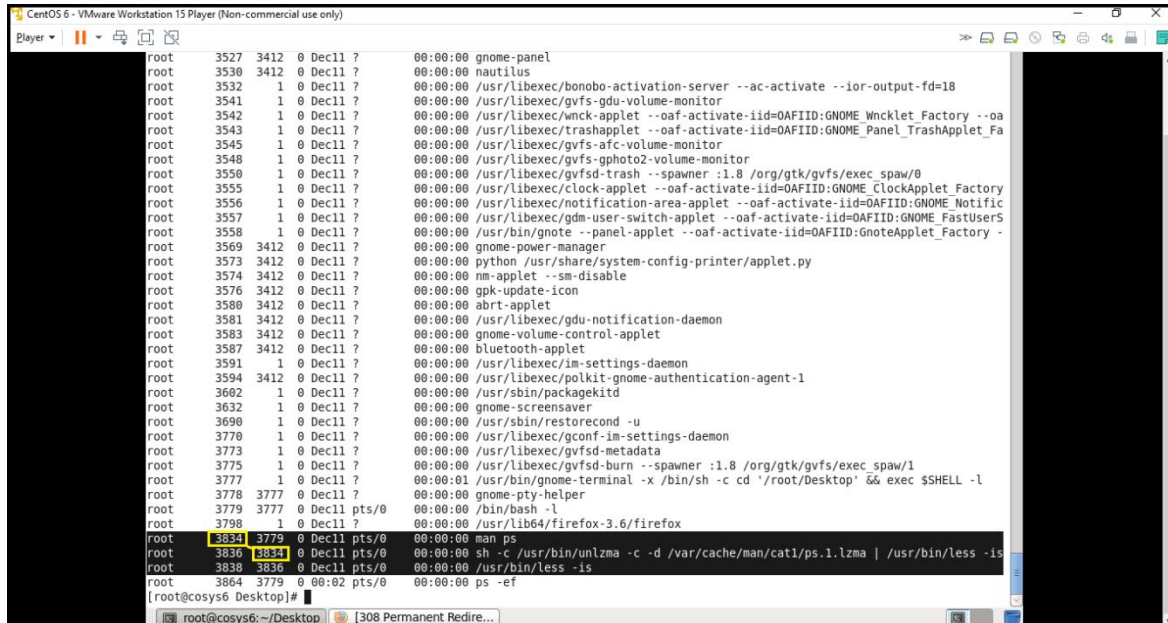
Step 2: Find out your terminal name. Using your terminal name, use ps to find all processes associated with your terminal.

Screenshot 1:



Step 3: Check and note the process id of your shell (from the output of the above command). Also, note the parent process id of your shell.

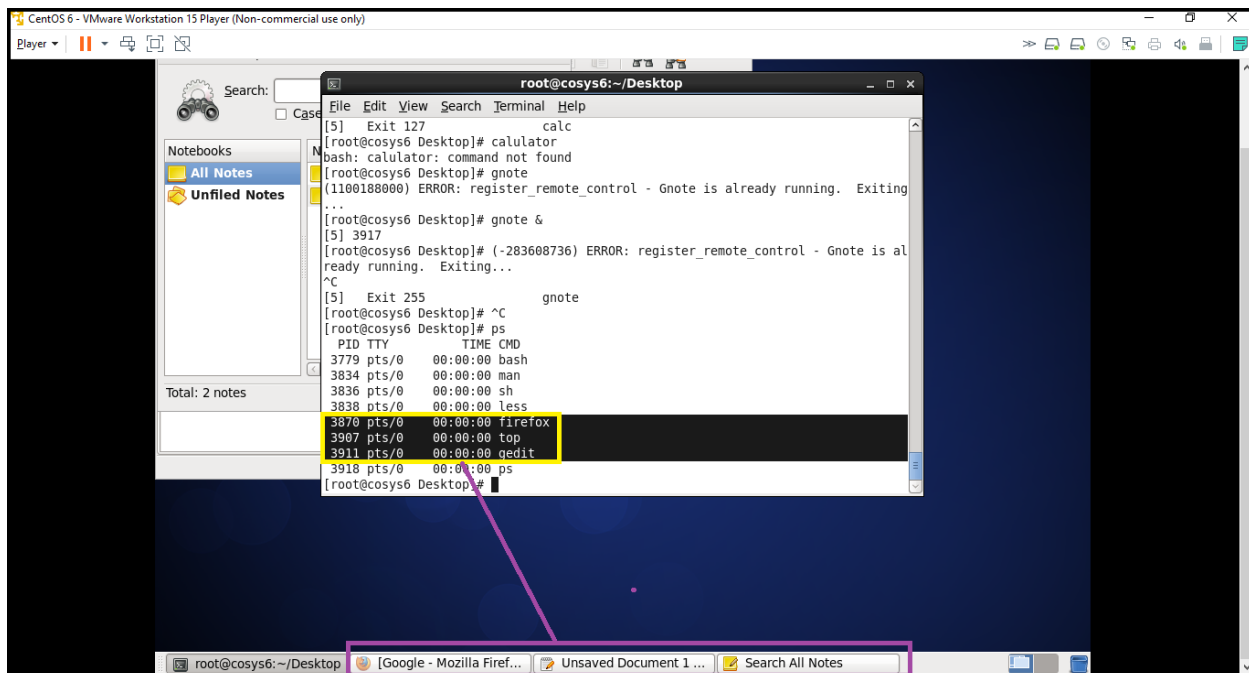
Screenshot 1:



```
root 3527 3412 0 Dec11 ? 00:00:00 gnome-panel
root 3530 3412 0 Dec11 ? 00:00:00 nautilus
root 3532 1 0 Dec11 ? 00:00:00 /usr/libexec/bonobo-activation-server --ac-activate --ior-output-fd=18
root 3541 1 0 Dec11 ? 00:00:00 /usr/libexec/gvfs-gdu-volume-monitor
root 3542 1 0 Dec11 ? 00:00:00 /usr/libexec/wnck-applet --oaf-activate-iid=DAFIIID:GNOME_Wncklet_Factory --oa
root 3543 1 0 Dec11 ? 00:00:00 /usr/libexec/trashapplet --oaf-activate-iid=DAFIIID:GNOME_Panel_TrashApplet_Fa
root 3545 1 0 Dec11 ? 00:00:00 /usr/libexec/gvfs-afc-volume-monitor
root 3548 1 0 Dec11 ? 00:00:00 /usr/libexec/gvfs-gphoto2-volume-monitor
root 3550 1 0 Dec11 ? 00:00:00 /usr/libexec/gvfsd-trash --spawner :1.8 /org/gtk/gvfs/exec_spaw/0
root 3555 1 0 Dec11 ? 00:00:00 /usr/libexec/clock-applet --oaf-activate-iid=DAFIIID:GNOME_ClockApplet_Factory
root 3556 1 0 Dec11 ? 00:00:00 /usr/libexec/notification-area-applet --oaf-activate-iid=DAFIIID:GNOME_Notific
root 3557 1 0 Dec11 ? 00:00:00 /usr/libexec/gdm-user-switch-applet --oaf-activate-iid=DAFIIID:GNOME_FastUserS
root 3558 1 0 Dec11 ? 00:00:00 /usr/bin/gnote --panel-applet --oaf-activate-iid=DAFIIID:GnoteApplet_Factory -
root 3569 3412 0 Dec11 ? 00:00:00 gnome-power-manager
root 3573 3412 0 Dec11 ? 00:00:00 python /usr/share/system-config-printer/applet.py
root 3574 3412 0 Dec11 ? 00:00:00 nm-applet --sm-disable
root 3576 3412 0 Dec11 ? 00:00:00 gpk-update-icon
root 3580 3412 0 Dec11 ? 00:00:00 abrt-applet
root 3581 3412 0 Dec11 ? 00:00:00 /usr/libexec/gdu-notification-daemon
root 3583 3412 0 Dec11 ? 00:00:00 gnome-volume-control-applet
root 3587 3412 0 Dec11 ? 00:00:00 bluetooth-applet
root 3591 1 0 Dec11 ? 00:00:00 /usr/libexec/im-settings-daemon
root 3594 3412 0 Dec11 ? 00:00:00 /usr/libexec/polkit-gnome-authentication-agent-1
root 3602 1 0 Dec11 ? 00:00:00 /usr/sbin/packagekitd
root 3632 1 0 Dec11 ? 00:00:00 gnome-screensaver
root 3690 1 0 Dec11 ? 00:00:00 /usr/sbin/restorecond -u
root 3770 1 0 Dec11 ? 00:00:00 /usr/libexec/gconf-im-settings-daemon
root 3773 1 0 Dec11 ? 00:00:00 /usr/libexec/gvfsd-metadata
root 3775 1 0 Dec11 ? 00:00:00 /usr/libexec/gvfsd-burn --spawner :1.8 /org/gtk/gvfs/exec_spaw/1
root 3777 1 0 Dec11 ? 00:00:01 /usr/bin/gnome-terminal -x /bin/sh -c cd '/root/Desktop' && exec $SHELL -l
root 3778 3777 0 Dec11 ? 00:00:00 gnome-pty-helper
root 3779 3777 0 Dec11 pts/0 00:00:00 /bin/bash -l
root 3798 1 0 Dec11 ? 00:00:00 /usr/lib64/firefox-3.6/firefox
root 3834 3779 0 Dec11 pts/0 00:00:00 man ps
root 3836 3834 0 Dec11 pts/0 00:00:00 sh -c /usr/bin/unlzma -c -d /var/cache/man/cat1/ps.1.lzma | /usr/bin/less -is
root 3838 3836 0 Dec11 pts/0 00:00:00 /usr/bin/less -is
root 3864 3779 0 00:02 pts/0 00:00:00 ps -ef
[root@cosys6 Desktop]#
```

Step 4: Start 3 instances of “sleep 123” as background processes.

Screenshot 1:



```
root@cosys6 Desktop# ps
PID TTY TIME CMD
3779 pts/0 00:00:00 bash
3834 pts/0 00:00:00 man
3836 pts/0 00:00:00 sh
3838 pts/0 00:00:00 less
3870 pts/0 00:00:00 firefox
3907 pts/0 00:00:00 top
3911 pts/0 00:00:00 qedit
3918 pts/0 00:00:00 ps
root@cosys6 Desktop#
```

Step 5: Check and note the process ids of all sleep processes.

Screenshot 1:

PID	USER	PR	NI	VRT	RES	SHR	S	CPU	MEM	TIME+	COMMAND
1747	root	20	0	258m	38m	8076	S	1.8	3.1	0:49.79	xorg
1	root	20	0	19336	1500	1212	S	0.0	0.1	0:01.47	init
2	root	20	0	0	0	0	S	0.0	0.0	0:00.01	ktlread
3	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
4	root	20	0	0	0	0	S	0.0	0.0	0:00.00	ksoftirqd/0
5	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
6	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	watchdog/0
7	root	20	0	0	0	0	S	0.0	0.0	0:00.10	events/0
8	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuset
9	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khelper
10	root	20	0	0	0	0	S	0.0	0.0	0:00.00	metns
11	root	20	0	0	0	0	S	0.0	0.0	0:00.00	async/mgr
12	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pm
13	root	20	0	0	0	0	S	0.0	0.0	0:00.00	sync_supers
14	root	20	0	0	0	0	S	0.0	0.0	0:00.00	sdsc-default
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kintegrityd/0
16	root	20	0	0	0	0	S	0.0	0.0	0:00.19	kblockd/0
17	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kacpid
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kacpi_notify
19	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kacpi_hotplug
20	root	20	0	0	0	0	S	0.0	0.0	0:07.34	ata/0
21	root	20	0	0	0	0	S	0.0	0.0	0:00.00	ata_aux
22	root	20	0	0	0	0	S	0.0	0.0	0:00.00	ksuspend_usb
23	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khubd
24	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kseried
25	root	20	0	0	0	0	S	0.0	0.0	0:00.00	md/0
26	root	20	0	0	0	0	S	0.0	0.0	0:00.00	md_misc/0
27	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khumtaskd
28	root	20	0	0	0	0	S	0.0	0.0	0:00.03	kswapd0
29	root	25	5	0	0	0	S	0.0	0.0	0:00.00	kcmd
30	root	39	19	0	0	0	S	0.0	0.0	0:00.47	khspeaged
31	root	20	0	0	0	0	S	0.0	0.0	0:00.00	aio/0
32	root	20	0	0	0	0	S	0.0	0.0	0:00.00	crypto/0
37	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kticketd/0
38	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pciehpd
40	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kpsmouse
41	root	20	0	0	0	0	S	0.0	0.0	0:00.00	usbhid_resumer
71	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kstraped
277	root	20	0	0	0	0	S	0.0	0.0	0:00.00	mpt_poll_0
278	root	20	0	0	0	0	S	0.0	0.0	0:00.00	mpt/0
279	root	20	0	0	0	0	S	0.0	0.0	0:00.00	scsi_0h_0
280	root	20	0	0	0	0	S	0.0	0.0	0:00.00	scsi_0h_1
287	root	20	0	0	0	0	S	0.0	0.0	0:00.23	scsi_0h_2
303	root	20	0	0	0	0	S	0.0	0.0	0:00.71	jb2/sda1-8
306	root	20	0	0	0	0	S	0.0	0.0	0:00.00	ext4-dio-unwrit
469	root	16	-4	11336	1448	328	S	0.0	0.1	0:00.10	udev
600	root	20	0	0	0	0	S	0.0	0.0	0:00.01	mmectl
886	root	20	0	0	0	0	S	0.0	0.0	0:00.00	jb2/sda1-0
887	root	20	0	0	0	0	S	0.0	0.0	0:00.00	ext4-dio-unwrit
904	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kavdtd
1246	root	16	-4	27616	864	640	S	0.0	0.1	0:00.01	auditd
1271	root	20	0	2426	3380	976	S	0.0	0.3	0:00.06	rsyslogd
1313	rpc	20	0	10552	672	636	S	0.0	0.1	0:00.22	rpcbind
1328	dbus	20	0	98008	2080	952	S	0.0	0.2	0:00.78	dbus-daemon
1339	root	20	0	89940	4152	3392	S	0.0	0.4	0:00.09	NetworkManager
1342	root	20	0	55820	2324	1872	S	0.0	0.2	0:00.02	modem-manager
1355	root	20	0	39328	680	300	S	0.0	0.1	0:00.00	upm-suplicant
1357	avahi	20	0	27652	1552	1328	S	0.0	0.2	0:00.07	avahi-daemon
1358	avahi	20	0	27652	172	196	S	0.0	0.0	0:00.00	avahi-daemon
1375	rcuser	20	0	23124	1192	916	S	0.0	0.1	0:00.00	rpc-stated
1412	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rpciod/0
1419	root	20	0	29440	560	340	S	0.0	0.1	0:00.00	rpc-idmapd
1429	root	20	0	1846	3316	2516	S	0.0	0.3	0:00.02	cpid
1454	root	20	0	4068	652	540	S	0.0	0.1	0:00.00	acpid
1463	hal-daemo	20	0	26284	5020	3984	S	0.0	0.5	0:00.18	hal
1464	root	20	0	10180	1160	960	S	0.0	0.1	0:00.01	hald-runner
1505	root	20	0	20216	1084	924	S	0.0	0.1	0:00.00	hald-addon-inpu
1512	hal-daemo	20	0	17796	1024	880	S	0.0	0.1	0:00.00	hald-addon-acpi
1531	root	20	0	3766	1764	1292	S	0.0	0.2	0:00.02	autocount
1555	root	20	0	63944	1880	460	S	0.0	0.1	0:00.00	sshd
1563	ntp	20	0	30124	1608	1172	S	0.0	0.2	0:00.11	ntpd
1644	root	20	0	78544	3172	2304	S	0.0	0.3	0:00.02	master
1651	postfix	20	0	78624	3152	2392	S	0.0	0.3	0:00.01	pickup
1652	postfix	20	0	78692	3204	2436	S	0.0	0.3	0:00.01	mgr
1655	root	20	0	2560	4016	3372	S	0.0	0.5	0:00.15	abrid
1663	root	20	0	1148	1356	764	S	0.0	0.1	0:00.00	crond
1674	root	20	0	21412	460	296	S	0.0	0.0	0:00.00	atd
1688	root	20	0	1108	2092	1800	S	0.0	0.2	0:00.00	gdm-binary
1700	root	20	0	4052	528	460	S	0.0	0.1	0:00.00	mingetty
1703	root	20	0	4052	528	460	S	0.0	0.1	0:00.00	mingetty
1707	root	20	0	4052	532	460	S	0.0	0.1	0:00.00	mingetty
1710	root	20	0	4052	528	460	S	0.0	0.1	0:00.00	mingetty
1718	root	20	0	4052	532	460	S	0.0	0.1	0:00.00	mingetty
1719	root	18	-2	12520	2088	572	S	0.0	0.3	0:00.03	udev
1745	root	20	0	1446	3316	2552	S	0.0	0.3	0:00.03	gdm-single-slav
1762	root	20	0	5616	5252	2028	S	0.0	0.5	0:00.16	console-kit-dae
1832	gdm	20	0	20620	660	416	S	0.0	0.1	0:00.00	dbus-launch
1838	root	20	0	45096	2512	1952	S	0.0	0.2	0:00.00	devkit-power-da
1887	root	20	0	49920	4012	2836	S	0.0	0.4	0:00.11	polkitd
1892	rtkit	21	1	1646	1196	1004	S	0.0	0.1	0:00.02	rtkit-daemon
1898	root	20	0	1726	2000	2272	S	0.0	0.3	0:00.13	gdm-session-war
1911	root	20	0	1466	5544	2872	S	0.0	0.5	0:00.02	gnome-keyring-d
1920	root	20	0	2846	108	8612	S	0.0	1.1	0:00.25	gnome-session
1929	root	20	0	20620	652	408	S	0.0	0.1	0:00.00	dbus-launch
1930	root	20	0	32272	3748	800	S	0.0	0.4	0:00.23	dbus-daemon
2000	root	20	0	1306	5584	2100	S	0.0	0.5	0:00.26	gconfd-2
2005	root	20	0	4706	9608	7444	S	0.0	0.9	0:00.76	gnome-settings-
2015	root	20	0	1316	2040	1712	S	0.0	0.2	0:00.01	gvfsd
2023	root	20	0	3016	7164	5084	S	0.0	0.7	0:00.07	seahorse-daemon
2024	root	18	-2	11212	1560	556	S	0.0	0.2	0:00.00	udev
2026	root	20	0	4106	126	8076	S	0.0	1.3	0:00.03	metacity
2027	root	20	0	2656	4780	2032	S	0.0	0.5	0:00.00	gvfs-fuse-daemo
2031	root	20	0	3168	138	9752	S	0.0	1.3	0:00.74	gnome-panel
2043	root	20	0	5236	206	136	S	0.0	2.1	0:01.15	nautilus
2045	root	20	0	6806	3348	2356	S	0.0	0.3	0:00.06	bonobo-activati
2054	root	20	0	3036	9368	7148	S	0.0	0.9	0:00.03	trashapplet
2055	root	20	0	3166	116	1004	S	0.0	1.1	0:00.53	unack-applet
2057	root	20	0	1406	3036	2436	S	0.0	0.3	0:00.03	gvfs-gdu-volume
2059	root	20	0	40620	2664	2080	S	0.0	0.3	0:00.12	udisks-daemon
2063	root	20	0	1376	2660	2300	S	0.0	0.3	0:00.01	gvfsd-trash
2064	root	20	0	40336	680	340	S	0.0	0.1	0:00.42	udisks-daemon
2066	root	20	0	2266	2008	1660	S	0.0	0.2	0:00.06	gvfs-afc-volume
2069	root	20	0	1446	2110	1720	S	0.0	0.2	0:00.04	gvfs-gphoto2-vo
2078	root	20	0	3896	106	146	S	0.0	1.9	0:00.38	cmote
2079	root	20	0	3786	106	8432	S	0.0	1.1	0:00.10	gdm-user-switch
2080	root	20	0	4536	126	106	S	0.0	1.3	0:00.54	clock-applet
2081	root	20	0	2786	7012	6264	S	0.0	0.8	0:00.06	notification-ar
2141	root	20	0	2466	6952	5512	S	0.0	0.7	0:00.11	gnome-power-man
2145	root	20	0	3326	196	9792	S	0.0	2.0	0:00.39	python
2148	root	20	0	2946	116	8072	S	0.0	1.1	0:00.14	nm-applet
2151	root	9	-11	4256	4968	3608	S	0.0	0.5	0:02.68	pulseaudio
2152	root	20	0	3016	126	9684	S	0.0	1.2	0:00.25	gpg-update-icon
2155	root	20	0	2226	5064	4776	S	0.0	0.6	0:00.04	abort-applet
2156	root	20	0	2446	6484	5132	S	0.0	0.6	0:00.04	gdm-notificatio
2159	root	20	0	3496	106	8124	S	0.0	1.1	0:00.10	gnome-volume-co
2161	root	20	0	79608	2444	2020	S	0.0	0.2	0:00.00	gconf-helper
2163	root	20	0	2506	7968	5964	S	0.0	0.8	0:00.06	bluetooth-apple

Screenshot 1:

```
CentOS 6 - VMware Workstation 15 Player (Non-commercial use only)
Player
Applications Places System
root@cosys6:~/Desktop
File Edit View Search Terminal Help
top - 00:19:18 up 3:14, 2 users, load average: 0.00, 0.00, 0.00
Tasks: 148 total, 1 running, 143 sleeping, 4 stopped, 0 zombie
Cpu(s): 1.1%us, 0.5%sy, 0.0%ni, 98.0%id, 0.3%wa, 0.0%hi, 0.1%si, 0.0%st
Mem: 1021572k total, 951448k used, 70124k free, 51480k buffers
Swap: 2097144k total, 0k used, 2097144k free, 507720k cached

  PID USER      PR  NI  VIRT  RES  SHR  S  %CPU  %MEM    TIME+  COMMAND
    1 root        20   0 19336 1500 1212  S   0.0   0.1   0:01.55  init
    2 root        20   0     0     0     0  S   0.0   0.0   0:00.02  kthreadd
    3 root        RT   0     0     0     0  S   0.0   0.0   0:00.00  migration/0
[root@cosys6 Desktop]#
```