

6) a. top

```
top - 01:52:20 up 1:20, 1 user, load average: 2.58, 2.43, 2.37
Tasks: 284 total, 1 running, 282 sleeping, 0 stopped, 1 zombie
%Cpu(s): 11.0 us, 4.0 sy, 0.0 ni, 84.0 id, 0.0 wa, 0.0 hi, 1.0 si, 0.0 st
MiB Mem : 15792.6 total, 3080.2 free, 8278.8 used, 5910.5 buff/cache
MiB Swap: 4096.0 total, 4088.0 free, 8.0 used, 7513.8 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1501	tetroner	20	0	1132.4g	724784	188524	S	100.0	4.5	69:06.94	Discord
746	root	20	0	25.0g	173072	107680	S	8.3	1.1	10:19.10	Xorg
832	tetroner	9	-11	116972	24012	8648	S	8.3	0.1	1:09.99	pipewire
1758	tetroner	20	0	32.9g	252668	121224	S	8.3	1.6	10:33.73	brave
11346	tetroner	20	0	12304	5836	3660	R	8.3	0.0	0:00.02	top
1	root	20	0	22788	13472	10120	S	0.0	0.1	0:01.73	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pool_workqueue_release
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-rcu_g
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-rcu_p
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-slub_
7	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-netns
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
12	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-mm_pe
14	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_kthread
15	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
16	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
17	root	20	0	0	0	0	S	0.0	0.0	0:00.06	ksoftirqd/0
18	root	-2	0	0	0	0	I	0.0	0.0	0:01.36	rcu_preempt
19	root	-2	0	0	0	0	S	0.0	0.0	0:00.00	rcub/0
20	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/0

b. ps

```
~ 1:52:58
$ ps
  PID TTY          TIME CMD
 11261 pts/1    00:00:00 zsh
 11541 pts/1    00:00:00 ps

~ 1:53:02
$ ps -l
 F S   UID        PID  PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
 0 S  1000    11261   11249  0  80   0 -  2738 sigsus pts/1    00:00:00 zsh
 4 R  1000    11554   11261  0  80   0 -  2830 -          pts/1    00:00:00 ps

~ 1:53:04
$ ps -f
UID        PID  PPID  C STIME TTY          TIME CMD
tetroner   11261 11249  0 01:51 pts/1    00:00:00 /bin/zsh
tetroner   11568 11261  0 01:53 pts/1    00:00:00 ps -f

~ 1:53:06
$
```

c. kill

```
~ 1:55:12
$ pidof spotify
3085 3053 3048 3023 3006 3005 2992

~ 1:55:16
$ kill 2992

~ 1:55:23
$ pkill spotify

~ 1:56:07
$ |
```

d. nice

```
MiB Mem : 15792.6 total, 3011.1 free, 8235.3 used, 6036.8 buff/cache
MiB Swap: 4096.0 total, 4088.0 free, 8.0 used, 7557.3 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1501	tetroner	20	0	1132.4g	743940	188532	S	79.3	4.6	74:50.23	Discord
12951	tetroner	39	19	50.1g	306708	107072	S	13.7	1.9	0:05.81	spotify
12866	tetroner	39	19	3869816	331956	155968	S	5.3	2.1	0:01.92	spotify
746	root	20	0	25.0g	174364	107692	S	4.3	1.1	10:48.96	Xorg
835	tetroner	9	-11	132328	43588	8232	S	1.3	0.3	2:05.46	pipewire-pulse
832	tetroner	9	-11	116888	24008	8644	S	1.0	0.1	1:13.88	pipewire
938	tetroner	20	0	2439972	197200	112644	S	0.7	1.2	8:29.55	kwin_x11
3735	tetroner	20	0	1133.5g	499944	146332	S	0.7	3.1	11:07.65	brave
935	tetroner	20	0	760992	89276	65040	S	0.3	0.6	0:01.50	ksmserver
977	tetroner	20	0	5241488	592200	191524	S	0.3	3.7	3:58.12	plasmashell
1692	tetroner	20	0	32.8g	539152	215968	S	0.3	3.3	7:30.29	brave
2284	tetroner	20	0	256.7g	211088	176936	S	0.3	1.3	0:01.91	baloorunner
2293	tetroner	20	0	257.4g	155588	100276	S	0.3	1.0	0:21.22	dolphin
11989	tetroner	20	0	853768	195724	126120	S	0.3	1.2	0:01.40	kitty
12934	tetroner	39	19	1025912	126152	92532	S	0.3	0.8	0:00.44	spotify
1	root	20	0	22788	13472	10120	S	0.0	0.1	0:01.76	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pool_workqueue_release

```
~ 1:58:27
$ |
```

e . renice

```
~ 1:58:27
$ pidof spotify
12951 12934 12929 12905 12887 12886 12866

~ 1:58:48
$ renice 7 12866
renice: failed to set priority for 12866 (process ID): Permission denied

~ 1:59:14
$ sudo renice 7 12866
[sudo] password for tetroner:
12866 (process ID) old priority 19, new priority 7

~ 1:59:22
$ |
```

```
MiB Mem : 15792.6 total, 2933.2 free, 8313.7 used, 5997.1 buff/cache
MiB Swap: 4096.0 total, 4088.0 free, 8.0 used, 7478.9 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1501	tetroner	20	0	1132.4g	744800	188336	S	88.7	4.6	76:05.44	Discord
13089	tetroner	20	0	1133.4g	174736	86812	S	8.3	1.1	0:00.69	brave
746	root	20	0	25.0g	174328	107656	S	6.0	1.1	10:55.45	Xorg
938	tetroner	20	0	2439972	197240	112644	S	2.3	1.2	8:34.30	kwin_x11
835	tetroner	9	-11	132328	43588	8232	S	2.0	0.3	2:06.93	pipewire-pulse
11989	tetroner	20	0	855816	195724	126120	S	1.7	1.2	0:01.98	kitty
832	tetroner	9	-11	116888	24008	8644	S	1.3	0.1	1:14.81	pipewire
1692	tetroner	20	0	32.8g	542620	215928	S	0.7	3.4	7:31.94	brave
2121	tetroner	20	0	1131.3g	228492	127052	S	0.3	1.4	0:08.77	brave
2171	tetroner	20	0	1150.0g	282452	130528	S	0.3	1.7	0:10.40	brave
12866	tetroner	27	7	3868728	332724	156608	S	0.3	2.1	0:02.18	spotify
13160	tetroner	20	0	12296	6048	3872	R	0.3	0.0	0:00.05	top
1	root	20	0	22788	13472	10120	S	0.0	0.1	0:01.77	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pool_workqueue_release
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-rcu_g
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-rcu_p
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-slub_

```
~ 1:59:48
$ |
```

f. jobs / g. fg / h. bg / i. sleep

```
~ 2:00:46
$ sleep 10 &
[1] 13325

~ 2:00:49
$ jobs
[1] + running    sleep 10

~ 2:00:50
$
[1] + 13325 done    sleep 10

~ 2:00:59
$ sleep 10
^Z
[1] + 13364 suspended sleep 10

~ 2:01:04
$ bg
[1] + 13364 continued sleep 10

~ 2:01:05
$
[1] + 13364 done    sleep 10
```

```
~ 2:01:05
$
[1] + 13364 done    sleep 10

~ 2:01:13
$ sleep 10 &
[1] 13422

~ 2:01:30
$ fg
[1] + 13422 running    sleep 10

~ 2:01:40
$ |
```

j. pstree

```
~ 2:01:56
$ pstree
systemd--NetworkManager--3*[{NetworkManager}]
      |--accounts-daemon--3*[{accounts-daemon}]
      |--avahi-daemon--avahi-daemon
      |--containerd--11*[{containerd}]
      |--cupsd
      |--dbus-broker-lau--dbus-broker
      |--dnsmasq--dnsmasq
      |--dockerd--13*[{dockerd}]
      |--firewalld--{firewalld}
      |--kwalletd5--4*[{kwalletd5}]
      |--passimd--3*[{passimd}]
      |--polkitd--3*[{polkitd}]
      |--python3
      |--rtkit-daemon--2*[{rtkit-daemon}]
      |--sddm--Xorg--7*[{Xorg}]
          |--sddm-helper--startplasma-x11--{startplasma-x11}
          |--{sddm}
      |--systemd--(sd-pam)
          |--DiscoverNotifie--9*[{DiscoverNotifie}]
          |--agent--3*[{agent}]
          |--at-spi-bus-laun--dbus-broker-lau--dbus-broker
```

7)

```
~ 2:02:51
$ cat > test.txt
hello
world
^C

~ 2:03:08
$ cat test.txt
hello
world

~ 2:03:16
$ cat < test.txt
hello
world

~ 2:03:35
$ tata 2> error.txt

~ 2:03:43
$ cat < error.txt
zsh: command not found: tata
```

```
$ cat >> test.txt
hello
^C
```

```
~ 🕒 2:04:07
$ cat test.txt
hello
world
hello
```

```
~ 🕒 2:04:11
$ cat << test.txt
heredoc> ehk
heredoc>
```

```
~ 🕒 2:04:29
$ cat test.txt
hello
world
hello
```

```
~ 🕒 2:04:33
$ |
```