

1)

a) Top – jelenleg futó processzeket valós időben mutatja.

```
top - 12:39:40 up 8 days, 0 min, 3 users, load average: 0.00, 0.00, 0.00
tasks: 120 total, 1 running, 77 sleeping, 0 stopped, 1 zombie
cpus(s): 0.1 us, 0.2 sy, 0.0 ni, 99.6 id, 0.1 wa, 0.0 hi, 0.0 si, 0.0 st
Mem Mem : 949448 total, 427024 free, 122212 used, 400212 buff/cache
Mem Swap: 102396 total, 102396 free, 0 used, 759580 avail Mem

  PID USER      PR  NI  VIRT  RES  SHR  S  %CPU  %MEM     time+  COMMAND
21333 pts     20   0   6372  2908  2412  S   1.3   0.3   0:00.26  top
502  root      20   0 207916 53908 30764  S   0.3   5.7   4:53.96  Xorg
21653 root      20   0   0      0      0  I   0.3   0.0   0:00.03  kworker/u8:0
1  root      20   0 28056  5988  4860  S   0.0   0.6   0:10.38  systemd
2  root      20   0   0      0      0  S   0.0   0.0   0:00.43  kthreadd
4  root      0 -20   0      0      0  I   0.0   0.0   0:00.00  kworker/0:0H
6  root      0 -20   0      0      0  I   0.0   0.0   0:00.00  mm_percpu_wq
7  root      20   0   0      0      0  S   0.0   0.0   0:14.97  ksoftirqd/0
8  root      20   0   0      0      0  I   0.0   0.0   1:01.13  rcu_sched
9  root      20   0   0      0      0  I   0.0   0.0   0:00.00  rcu_bh
10 root      rt   0   0      0      0  S   0.0   0.0   0:00.08  migration/0
11 root      20   0   0      0      0  S   0.0   0.0   0:00.00  cpuhp/0
12 root      20   0   0      0      0  S   0.0   0.0   0:00.00  cpuhp/1
13 root      rt   0   0      0      0  S   0.0   0.0   0:00.07  migration/1
14 root      20   0   0      0      0  S   0.0   0.0   0:00.09  ksoftirqd/1
16 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  kworker/1:0H
17 root      20   0   0      0      0  S   0.0   0.0   0:00.00  cpuhp/2
18 root      rt   0   0      0      0  S   0.0   0.0   0:00.08  migration/2
19 root      20   0   0      0      0  S   0.0   0.0   0:00.13  ksoftirqd/2
21 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  kworker/2:0H
22 root      20   0   0      0      0  S   0.0   0.0   0:00.00  cpuhp/3
23 root      rt   0   0      0      0  S   0.0   0.0   0:00.05  migration/3
24 root      20   0   0      0      0  S   0.0   0.0   0:00.03  ksoftirqd/3
26 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  kworker/3:0H
27 root      20   0   0      0      0  S   0.0   0.0   0:00.00  kdevtmpfs
28 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  netns
33 root      20   0   0      0      0  S   0.0   0.0   0:00.95  khungtaskd
34 root      20   0   0      0      0  S   0.0   0.0   0:00.00  oom_reaper
35 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  writeback
36 root      20   0   0      0      0  S   0.0   0.0   0:00.00  kcompactd0
37 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  crypto
38 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  kblockd
39 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  watchdogd
40 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  rpsaid
41 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  xprtiod
44 root      20   0   0      0      0  S   0.0   0.0   0:00.00  kswapd0
45 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  nfsiod
55 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  kthrotld
56 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  iscsi_ah
57 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  dhcpcd
58 root      0 -20   0      0      0  I   0.0   0.0   0:00.00  DWC Notificatio
59 root      1 -19  0      0      0  S   0.0   0.0   0:00.00  vchiq-slot/0
60 root      1 -19  0      0      0  S   0.0   0.0   0:00.00  vchiq-recy/0
```

b) Rendszermemóriáról mutat információt

```
pi@raspberrypi:~$ vmstat -a
procs-----memory-----swap-----io-----system-----cpu-----
r b swpd free inact active si so bi bo in cs us sy id wa st
0 0 0 427108 182444 295228 0 0 0 0 0 14 12 0 0 100 0 0
pi@raspberrypi:~$
```

c) Megmutatja ki van bejelentkezve és éppen mit csinál.

```
pi@raspberrypi:~$ w
12:42:55 up 8 days, 3 min, 3 users, load average: 0.00, 0.00, 0.00
USER      TTY      FROM          LOGIN@  IDLE   CPU    WHAT
pi        tty7     :0            17Feb21 8days 4:54  13.26s /usr/bin/lxsession -s LXDE-pi -e LXDE
pi        tty1     -            17Feb21 8days 0:27s  0.21s -bash
pi        pts/0    192.168.0.7   12:39   1.00s  0.22s  0.03s w pi
pi@raspberrypi:~$
```

d) Megmutatja az OS nevét?

```
pi@raspberrypi:~$ uname
Linux
```

e) Jelenleg futó processzeket mutatja be.

```
pi@raspberrypi:~$ ps
  PID TTY          TIME CMD
21798 pts/0        00:00:00 bash
21923 pts/0        00:00:00 ps
pi@raspberrypi:~$
```

f) Szabad memóriaterületet mutatja.

```
pi@raspberrypi:~$ free
              total        used        free       shared    buff/cache   available
Mem:           949448       121760       427404        13584        400284       760020
Swap:          102396           0       102396
pi@raspberrypi:~$
```

g) Raspberry Pi nem ismeri fel.

```
pi@raspberrypi:~$ iostat
-bash: iostat: command not found
pi@raspberrypi:~$
```

h) Sar – command not found.

i) Mpstat – command not found, egy processzor van a gépben.

j) Pmap – egy process memóriahasználatát jelzi. pmap [options] [PID]