

B, feladat lap

- 1 Feladat:

o a, feladat:

Processz aktivitást mutató parancs, valós idejű módban készít jelentést a futó rendszerről.

File Edit View Search Terminal Help										
top - 13:46:09 up 1 min, 1 user, load average: 2.55, 0.89, 0.31										
Tasks: 152 total, 1 running, 151 sleeping, 0 stopped, 0 zombie										
%Cpu(s): 2.0 us, 1.0 sy, 0.0 ni, 97.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st										
MiB Mem : 8548.4 total, 7079.0 free, 566.3 used, 903.2 buff/cache										
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 7646.4 avail Mem										
PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+ COMMAND
1632	mint	20	0	3276520	190752	114696	S	1.7	2.2	0:06.18 cinnamon
998	root	20	0	286148	80752	48712	S	1.3	0.9	0:01.16 Xorg
1901	mint	20	0	466304	39816	30868	S	1.3	0.5	0:00.34 gnome-terminal-
1	root	20	0	101688	11576	8648	S	0.0	0.1	0:01.21 systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00 kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 rcu_par_gp
5	root	20	0	0	0	0	I	0.0	0.0	0:00.00 kworker/0:0-events
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 kworker/0:0H-kblockd
7	root	20	0	0	0	0	I	0.0	0.0	0:00.11 kworker/0:1-cgroup_destroy
8	root	20	0	0	0	0	I	0.0	0.0	0:00.01 kworker/u2:0-events_freezable_power_
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 mm_percpu_wq
10	root	20	0	0	0	0	S	0.0	0.0	0:00.27 ksoftirqd/0
11	root	20	0	0	0	0	I	0.0	0.0	0:00.27 rcu_sched
12	root	rt	0	0	0	0	S	0.0	0.0	0:00.00 migration/0
13	root	-51	0	0	0	0	S	0.0	0.0	0:00.00 idle_inject/0
14	root	20	0	0	0	0	S	0.0	0.0	0:00.00 cpuhp/0
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00 kdevtmpfs
16	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 netns
17	root	20	0	0	0	0	S	0.0	0.0	0:00.00 rcu_tasks_kthre
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00 kauditd
19	root	20	0	0	0	0	S	0.0	0.0	0:00.00 khungtaskd
20	root	20	0	0	0	0	S	0.0	0.0	0:00.00 oom_reaper
21	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 writeback
22	root	20	0	0	0	0	S	0.0	0.0	0:00.00 kcompactd0
23	root	25	5	0	0	0	S	0.0	0.0	0:00.00 ksmd
24	root	39	19	0	0	0	S	0.0	0.0	0:00.00 khugepaged
70	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 kintegrityd
71	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 kblockd
72	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 blkcg_punt_bio
73	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 tpm_dev_wq
74	root	0	-20	0	0	0	I	0.0	0.0	0:00.00 ata_sff

○ **b, feladat:**

Rendszer aktivitásról, a hardverről és a rendszerről nyújt információkat.

```
File Edit View Search Terminal Help
mint@mint:~$ vmstat
procs -----memory----- --swap-- -----io----- -system-- -----cpu-----
 r b swpd free buff cache si so bi bo in cs us sy id wa st
 1 0 0 7273036 158600 772588 0 0 2895 0 354 1662 24 11 65 0 0
mint@mint:~$
```

○ **c, feladat:**

Ki van bejelentkezve a rendszerbe, és éppen mit csinál.

```
File Edit View Search Terminal Help
mint@mint:~$ w
13:47:59 up 2 min, 1 user, load average: 0.50, 0.65, 0.29
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
mint tty7 :0 13:45 2:40 2.09s 0.40s cinnamon-session --session cinnamon
mint@mint:~$ w mint
13:48:08 up 3 min, 1 user, load average: 0.50, 0.65, 0.29
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
mint tty7 :0 13:45 2:49 2.13s 0.40s cinnamon-session --session cinnamon
mint@mint:~$ w xzy
13:48:17 up 3 min, 1 user, load average: 0.45, 0.63, 0.29
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
mint@mint:~$ who
mint tty7 2021-02-23 13:45 (:0)
mint@mint:~$ whoami
mint
mint@mint:~$
```

○ **d, feladat:**

Szerver futásának kezdő ideje.

```
File Edit View Search Terminal Help
mint@mint:~$ uname
Linux
mint@mint:~$
```

○ e, feladat:

Aktuális processzekről készít jelentést.

```
File Edit View Search Terminal Help
mint@mint: ~
1974 ? 00:00:00 applet.py
2012 pts/0 00:00:00 ps
mint@mint:~$ ps ax
  PID TTY          STAT       TIME COMMAND
    1 ?        Ss         0:01 /sbin/init splash
    2 ?        S           0:00 [kthreadd]
    3 ?        I<         0:00 [rcu_gp]
    4 ?        I<         0:00 [rcu_par_gp]
    5 ?        I           0:00 [kworker/0:0-events]
    6 ?        I<         0:00 [kworker/0:0H-kblockd]
    7 ?        I           0:00 [kworker/0:1-cgroup_destroy]
    8 ?        I           0:00 [kworker/u2:0-events_unbound]
    9 ?        I<         0:00 [mm_percpu_wq]
   10 ?        S           0:00 [ksoftirqd/0]
   11 ?        I           0:00 [rcu_sched]
   12 ?        S           0:00 [migration/0]
   13 ?        S           0:00 [idle_inject/0]
   14 ?        S           0:00 [cpuhp/0]
   15 ?        S           0:00 [kdevtmpfs]
   16 ?        I<         0:00 [netns]
   17 ?        S           0:00 [rcu_tasks_kthre]
   18 ?        S           0:00 [kauditd]
   19 ?        S           0:00 [khungtaskd]
   20 ?        S           0:00 [oom_reaper]
   21 ?        I<         0:00 [writeback]
   22 ?        S           0:00 [kcompactd0]
   23 ?        SN          0:00 [ksmd]
   24 ?        SN          0:00 [khugepaged]
   70 ?        I<         0:00 [kintegrityd]
   71 ?        I<         0:00 [kblockd]
   72 ?        I<         0:00 [blkcg_punt_bio]
   73 ?        I<         0:00 [tpm_dev_wq]
   74 ?        I<         0:00 [ata_sff]
   75 ?        I<         0:00 [md]
   76 ?        I<         0:00 [edac-poller]
   77 ?        I<         0:00 [devfreq_wq]
   78 ?        S           0:00 [watchdogd]
   79 ?        I           0:00 [kworker/u2:1-events_unbound]
   81 ?        S           0:00 [kswapd0]
   82 ?        S           0:00 [ecryptfs-kthrea]
```

○ f, feladat:

Fizikai memória és a swap által használt és szabad terület, ezek összege, pufferek, szabad pufferek száma.

```
File Edit View Search Terminal Help
mint@mint:~$ free
              total        used        free      shared  buff/cache   available
Mem:           8753592       549324       7272224        89732        932044       7860932
Swap:              0              0              0
mint@mint:~$
```

○ **g, feladat:**

CPU statisztika és a számítógép I/O eszközei, a hálózati fájlrendszerek és a partíciókat kijelzi.

```
oravecz@jerry:~$ iostat
Linux 4.1.6-grsec (jerry)          02/23/2021      _x86_64_          (6 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           0.09    0.00    0.08    0.00    0.00   99.82

Device:            tps    kB_read/s    kB_wrtn/s    kB_read    kB_wrtn
oravecz@jerry:~$
```

○ **h, feladat:**

Aktivitási adatok jelzése és összegyűjtése, mentés.

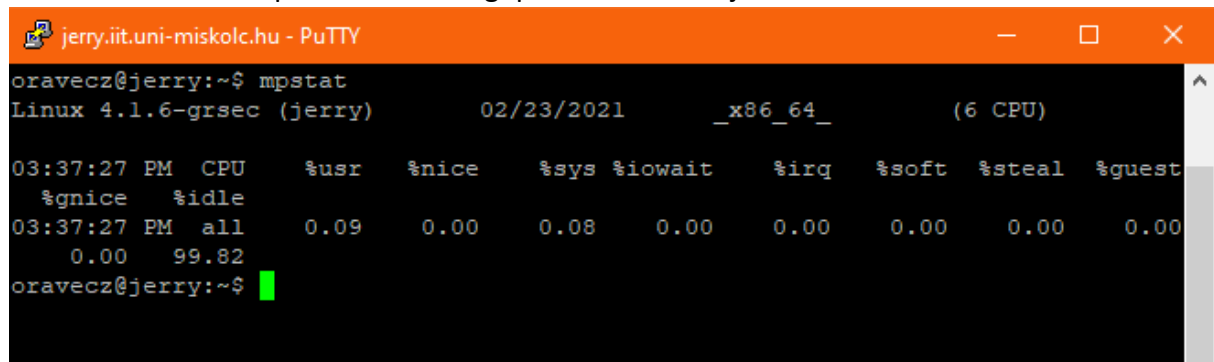
```
jerry.iit.uni-miskolc.hu - PuTTY

12:25:01 PM    all    0.12    0.00    0.10    0.00    0.14    99.63
12:35:01 PM    all    0.06    0.00    0.05    0.11    0.15    99.62
12:45:01 PM    all    0.05    0.00    0.05    0.00    0.15    99.74
12:55:01 PM    all    0.06    0.00    0.05    0.00    0.16    99.73
01:05:01 PM    all    0.07    0.00    0.06    0.01    0.14    99.73
01:15:01 PM    all    0.06    0.00    0.06    0.01    0.16    99.72
01:25:01 PM    all    0.06    0.00    0.05    0.01    0.15    99.73
01:35:01 PM    all    0.05    0.00    0.04    0.00    0.17    99.74
01:45:01 PM    all    0.05    0.00    0.04    0.00    0.14    99.77
01:55:01 PM    all    0.04    0.00    0.04    0.00    0.17    99.75
02:05:01 PM    all    0.05    0.00    0.05    0.00    0.15    99.76
02:15:02 PM    all    0.06    0.00    0.05    0.00    0.15    99.74
02:25:01 PM    all    0.07    0.00    0.06    0.04    0.16    99.66
02:35:01 PM    all    0.06    0.00    0.06    0.00    0.17    99.70

02:35:01 PM    CPU    %user   %nice   %system   %iowait   %steal   %idle
02:45:01 PM    all    0.07    0.00    0.06    0.01    0.15    99.71
02:55:01 PM    all    0.05    0.00    0.04    0.00    0.15    99.76
03:05:01 PM    all    0.08    0.00    0.08    0.01    0.18    99.66
03:15:01 PM    all    0.09    0.00    0.09    0.11    0.20    99.52
03:25:01 PM    all    0.08    0.00    0.08    0.02    0.19    99.64
03:35:01 PM    all    0.06    0.00    0.05    0.01    0.16    99.72
Average:      all    0.09    0.00    0.08    0.00    0.17    99.66
oravecz@jerry:~$
```

- i, feladat:

Több processzoros sz.gép esetén használják.



The screenshot shows a PuTTY terminal window with an orange title bar that reads "jerry.iit.uni-miskolc.hu - PuTTY". The terminal output is as follows:

```
oravecz@jerry:~$ mpstat
Linux 4.1.6-grsec (jerry)      02/23/2021      _x86_64_      (6 CPU)

03:37:27 PM  CPU      %usr   %nice    %sys %iowait    %irq   %soft  %steal  %guest
      %gnice   %idle
03:37:27 PM  all       0.09    0.00    0.08    0.00    0.00    0.00    0.00    0.00
              0.00   99.82
oravecz@jerry:~$
```

The output displays system statistics for a 6 CPU system. The first line shows the time 03:37:27 PM for the CPU. The second line shows the time 03:37:27 PM for all CPUs. The third line shows the time 03:37:27 PM for all CPUs. The fourth line shows the time 03:37:27 PM for all CPUs. The fifth line shows the time 03:37:27 PM for all CPUs. The sixth line shows the time 03:37:27 PM for all CPUs. The seventh line shows the time 03:37:27 PM for all CPUs. The eighth line shows the time 03:37:27 PM for all CPUs. The ninth line shows the time 03:37:27 PM for all CPUs. The tenth line shows the time 03:37:27 PM for all CPUs. The eleventh line shows the time 03:37:27 PM for all CPUs. The twelfth line shows the time 03:37:27 PM for all CPUs. The thirteenth line shows the time 03:37:27 PM for all CPUs. The fourteenth line shows the time 03:37:27 PM for all CPUs. The fifteenth line shows the time 03:37:27 PM for all CPUs. The sixteenth line shows the time 03:37:27 PM for all CPUs. The seventeenth line shows the time 03:37:27 PM for all CPUs. The eighteenth line shows the time 03:37:27 PM for all CPUs. The nineteenth line shows the time 03:37:27 PM for all CPUs. The twentieth line shows the time 03:37:27 PM for all CPUs. The twenty-first line shows the time 03:37:27 PM for all CPUs. The twenty-second line shows the time 03:37:27 PM for all CPUs. The twenty-third line shows the time 03:37:27 PM for all CPUs. The twenty-fourth line shows the time 03:37:27 PM for all CPUs. The twenty-fifth line shows the time 03:37:27 PM for all CPUs. The twenty-sixth line shows the time 03:37:27 PM for all CPUs. The twenty-seventh line shows the time 03:37:27 PM for all CPUs. The twenty-eighth line shows the time 03:37:27 PM for all CPUs. The twenty-ninth line shows the time 03:37:27 PM for all CPUs. The thirtieth line shows the time 03:37:27 PM for all CPUs. The thirty-first line shows the time 03:37:27 PM for all CPUs. The thirty-second line shows the time 03:37:27 PM for all CPUs. The thirty-third line shows the time 03:37:27 PM for all CPUs. The thirty-fourth line shows the time 03:37:27 PM for all CPUs. The thirty-fifth line shows the time 03:37:27 PM for all CPUs. The thirty-sixth line shows the time 03:37:27 PM for all CPUs. The thirty-seventh line shows the time 03:37:27 PM for all CPUs. The thirty-eighth line shows the time 03:37:27 PM for all CPUs. The thirty-ninth line shows the time 03:37:27 PM for all CPUs. The fortieth line shows the time 03:37:27 PM for all CPUs. The forty-first line shows the time 03:37:27 PM for all CPUs. The forty-second line shows the time 03:37:27 PM for all CPUs. The forty-third line shows the time 03:37:27 PM for all CPUs. The forty-fourth line shows the time 03:37:27 PM for all CPUs. The forty-fifth line shows the time 03:37:27 PM for all CPUs. The forty-sixth line shows the time 03:37:27 PM for all CPUs. 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The sixty-third line shows the time 03:37:27 PM for all CPUs. The sixty-fourth line shows the time 03:37:27 PM for all CPUs. The sixty-fifth line shows the time 03:37:27 PM for all CPUs. The sixty-sixth line shows the time 03:37:27 PM for all CPUs. The sixty-seventh line shows the time 03:37:27 PM for all CPUs. The sixty-eighth line shows the time 03:37:27 PM for all CPUs. The sixty-ninth line shows the time 03:37:27 PM for all CPUs. The seventieth line shows the time 03:37:27 PM for all CPUs. The seventy-first line shows the time 03:37:27 PM for all CPUs. The seventy-second line shows the time 03:37:27 PM for all CPUs. The seventy-third line shows the time 03:37:27 PM for all CPUs. The seventy-fourth line shows the time 03:37:27 PM for all CPUs. The seventy-fifth line shows the time 03:37:27 PM for all CPUs. The seventy-sixth line shows the time 03:37:27 PM for all CPUs. The seventy-seventh line shows the time 03:37:27 PM for all CPUs. The seventy-eighth line shows the time 03:37:27 PM for all CPUs. The seventy-ninth line shows the time 03:37:27 PM for all CPUs. The eightieth line shows the time 03:37:27 PM for all CPUs. The eighty-first line shows the time 03:37:27 PM for all CPUs. The eighty-second line shows the time 03:37:27 PM for all CPUs. The eighty-third line shows the time 03:37:27 PM for all CPUs. The eighty-fourth line shows the time 03:37:27 PM for all CPUs. The eighty-fifth line shows the time 03:37:27 PM for all CPUs. The eighty-sixth line shows the time 03:37:27 PM for all CPUs. The eighty-seventh line shows the time 03:37:27 PM for all CPUs. The eighty-eighth line shows the time 03:37:27 PM for all CPUs. The eighty-ninth line shows the time 03:37:27 PM for all CPUs. The ninetieth line shows the time 03:37:27 PM for all CPUs. The ninety-first line shows the time 03:37:27 PM for all CPUs. The ninety-second line shows the time 03:37:27 PM for all CPUs. The ninety-third line shows the time 03:37:27 PM for all CPUs. The ninety-fourth line shows the time 03:37:27 PM for all CPUs. The ninety-fifth line shows the time 03:37:27 PM for all CPUs. The ninety-sixth line shows the time 03:37:27 PM for all CPUs. The ninety-seventh line shows the time 03:37:27 PM for all CPUs. The ninety-eighth line shows the time 03:37:27 PM for all CPUs. The ninety-ninth line shows the time 03:37:27 PM for all CPUs. The hundred line shows the time 03:37:27 PM for all CPUs.