

OPERATING SYSTEM

EX NO: 01

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BASIC LINUX COMMANDS

```
liveuser@localhost-live:~$ date
Sun Apr 20 11:23:45 PM UTC 2025
liveuser@localhost-live:~$ date +%m
04
liveuser@localhost-live:~$ date +%d
20
liveuser@localhost-live:~$ date +%Y
2025
liveuser@localhost-live:~$ date +%H
23
liveuser@localhost-live:~$ date +%M
24
liveuser@localhost-live:~$ date +%S
34
liveuser@localhost-live:~$ echo "God is Love"
God is Love
liveuser@localhost-live:~$ who
liveuser seat0      2025-04-20 22:51
liveuser tty2      2025-04-20 22:51
liveuser@localhost-live:~$ id
uid=1000(liveuser) gid=1000(liveuser) groups=1000(liveuser),10(wheel) context=unconfined_u:unconfined
_r:unconfined_t:s0-s0:c0.c1023
liveuser@localhost-live:~$ ps
  PID TTY          TIME CMD
 3489 pts/1    00:00:00 bash
 3538 pts/1    00:00:00 ps
liveuser@localhost-live:~$ ps -aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.5  0.5 40740 21316 ?        Ss   22:49   0:10 /usr/lib/systemd/systemd --switched
root         2  0.0  0.0      0     0 ?        S    22:49   0:00 [kthreadd]
root         3  0.0  0.0      0     0 ?        S    22:49   0:00 [pool_workqueue_release]
root         4  0.0  0.0      0     0 ?        I<   22:49   0:00 [kworker/R-rcu_gp]
root         5  0.0  0.0      0     0 ?        I<   22:49   0:00 [kworker/R-sync_wq]
root         6  0.0  0.0      0     0 ?        I<   22:49   0:00 [kworker/R-kvfree_rcu_reclaim]
root         7  0.0  0.0      0     0 ?        I<   22:49   0:00 [kworker/R-slub_flushwq]
root         8  0.0  0.0      0     0 ?        I<   22:49   0:00 [kworker/R-netns]
root        12  0.0  0.0      0     0 ?        I    22:49   0:00 [kworker/u8:0-events_unbound]
root        13  0.0  0.0      0     0 ?        I<   22:49   0:00 [kworker/R-mm_percpu_wq]
root        14  0.0  0.0      0     0 ?        I    22:49   0:00 [kworker/u8:1-ipv6_addrconf]
root        15  0.0  0.0      0     0 ?        I    22:49   0:00 [rcu_tasks_kthread]
```

```
liveuser@localhost-live:~ — ping google.com
liveuser@localhost-live:~
liveuser@localhost-live:~$ whoami
liveuser
liveuser@localhost-live:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
LiveOS_rootfs    772M  25M  747M   4% /
devtmpfs         4.0M   0  4.0M   0% /dev
tmpfs            1.9G   92K  1.9G   1% /dev/shm
tmpfs            772M  25M  747M   4% /run
/dev/sr0         2.3G  2.3G   0 100% /run/initramfs/live
/dev/loop0       2.0G  2.0G   0 100% /run/rootfsbase
tmpfs            1.0M   0  1.0M   0% /run/credentials/systemd-journald.service
tmpfs            1.9G   8.0K  1.9G   1% /tmp
tmpfs            1.0M   0  1.0M   0% /run/credentials/systemd-resolved.service
tmpfs           386M  180K  386M   1% /run/user/1000
liveuser@localhost-live:~$ history
 1 date
 2 $ date + %m
 3 wc notes
 4 wc note
 5 wc note
 6 cp note note1
 7 cat note1
 8 cal
 9 top
10 whoami
11 df -h
12 history
liveuser@localhost-live:~$ free -h
              total        used          free      shared  buff/cache   available
Mem:           3.8Gi         1.2Gi         124Mi         48Mi         2.7Gi         2.5Gi
Swap:          3.8Gi          996Ki          3.8Gi
liveuser@localhost-live:~$ ls -l
total 8
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Desktop
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 23:04 diwi
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Documents
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Downloads
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Music
```

```
liveuser@localhost-live:~ — ping google.com
12 history
liveuser@localhost-live:~$ free -h
              total        used        free      shared  buff/cache   available
Mem:           3.8Gi        1.2Gi        124Mi        48Mi         2.7Gi         2.5Gi
Swap:          3.8Gi          996Ki        3.8Gi

liveuser@localhost-live:~$ ls -l
total 8
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Desktop
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 23:04 diwi
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Documents
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Downloads
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Music
-rw-r--r--. 1 liveuser liveuser 35 Apr 20 23:06 note
-rw-r--r--. 1 liveuser liveuser 35 Apr 20 23:12 note1
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Pictures
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Public
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Templates
drwxr-xr-x. 2 liveuser liveuser 40 Apr 20 22:51 Videos
liveuser@localhost-live:~$ file note
note: ASCII text
liveuser@localhost-live:~$ rev note
.suiclec eerged 001 ta sliob retaw
liveuser@localhost-live:~$ env
SHELL=/bin/bash
SESSION_MANAGER=local/unix:@/tmp/.ICE-unix/1980,unix/unix:/tmp/.ICE-unix/1980
COLORTERM=truecolor
HISTCONTROL=ignoredups
XDG_MENU_PREFIX=gnome-
PTYXIS_PROFILE=558e11d142c3a29bd000759d68057bbb
HOSTNAME=localhost-live
HISTSIZE=1000
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
MEMORY_PRESSURE_WRITE=c29tZSAyMDAwMDAgMjAwMDAwMAA=
XMODIFIERS=@im=ibus
DESKTOP_SESSION=gnome
GPG_TTY=/dev/pts/0
EDITOR=/usr/bin/nano
PWD=/home/liveuser
XDG_SESSION_DESKTOP=gnome
LOGNAME=liveuser
```

```
liveuser@localhost-live:~  
root      3513  0.0  0.1  15900  6956 ?        S    23:23   0:00 systemd-nsresourcework: waiting..  
root      3516  0.0  0.1  15696  7368 ?        S    23:23   0:00 systemd-nsresourcework: waiting..  
root      3523  0.0  0.1  16164  7648 ?        S    23:24   0:00 systemd-userwork: waiting..  
root      3530  0.0  0.0      0      0 ?        I    23:24   0:00 [kworker/0:1-mm_percpu_wq]  
liveuser  3540  100  0.1  234868  5072 pts/1    R+   23:24   0:00 ps -aux  
liveuser@localhost-live:~$ ls  
Desktop diwi Documents Downloads Music note note1 Pictures Public Templates Videos  
liveuser@localhost-live:~$ cat > hello  
hi hello  
liveuser@localhost-live:~$ mv hello hi  
liveuser@localhost-live:~$ wc hello  
wc: hello: No such file or directory  
liveuser@localhost-live:~$ wc hi  
1 2 9 hi  
liveuser@localhost-live:~$ rm hi  
liveuser@localhost-live:~$ cat > list1  
1. apple 2. orange liveuser@localhost-live:~$ cp list1 list2  
liveuser@localhost-live:~$ cat list2  
1. apple 2. orange liveuser@localhost-live:~$ who  
liveuser seat0      2025-04-20 22:51  
liveuser tty2      2025-04-20 22:51  
liveuser@localhost-live:~$ id  
uid=1000(liveuser) gid=1000(liveuser) groups=1000(liveuser),10(wheel) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023  
liveuser@localhost-live:~$ uname -m  
x86_64  
liveuser@localhost-live:~$ uname -n  
localhost-live  
liveuser@localhost-live:~$ uname -r  
6.14.0-63.fc42.x86_64  
liveuser@localhost-live:~$ uname -s  
Linux  
liveuser@localhost-live:~$ uname -v  
#1 SMP PREEMPT_DYNAMIC Mon Mar 24 19:53:37 UTC 2025  
liveuser@localhost-live:~$ uname -a  
Linux localhost-live 6.14.0-63.fc42.x86_64 #1 SMP PREEMPT_DYNAMIC Mon Mar 24 19:53:37 UTC 2025 x86_64  
GNU/Linux  
liveuser@localhost-live:~$ hostname  
localhost-live  
liveuser@localhost-live:~$
```

```
liveuser@localhost-live:~ — top
liveuser@localhost-live:~
liveuser@localhost-live:~$ wc note
 1  6 35 note
liveuser@localhost-live:~$ cp note note1
liveuser@localhost-live:~$ cat note1
water boils at 100 degree celcius.
liveuser@localhost-live:~$ cal
    April 2025
Su Mo Tu We Th Fr Sa
                1  2  3  4  5
 6  7  8  9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30

liveuser@localhost-live:~$ top

top - 23:13:19 up 23 min,  2 users,  load average: 0.06, 0.37, 1.16
Tasks: 223 total,   3 running, 220 sleeping,   0 stopped,   0 zombie
%Cpu(s):  1.1 us,   3.4 sy,   0.0 ni, 91.8 id,   0.0 wa,   2.7 hi,   1.0 si,   0.0 st
MiB Mem :  3856.4 total,   147.7 free,  1239.3 used,  2741.3 buff/cache
MiB Swap:  3856.0 total,  3855.0 free,    1.0 used.  2617.1 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 2022 liveuser   20   0 4244648 386912 153176 S   7.1   9.8   1:46.18 gnome-shell
 2986 liveuser   20   0 1919924 260336 129836 S   4.3   6.6   0:32.79 ptyxis
 1161 root        20   0         0         0      0 I   1.9   0.0   0:10.41 kworker/u10:4-events_unbound
   78 root        20   0         0         0      0 I   0.3   0.0   0:03.98 kworker/u9:5-kvfree_rcu_recl+
    1 root        20   0    40740  21316 11596 S   0.0   0.5   0:10.63 systemd
    2 root        20   0         0         0      0 S   0.0   0.0   0:00.02 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_gp
    5 root         0 -20         0         0      0 I   0.0   0.0   0:00.00 kworker/R-sync_wq
    6 root         0 -20         0         0      0 I   0.0   0.0   0:00.00 kworker/R-kvfree_rcu_reclaim
    7 root         0 -20         0         0      0 I   0.0   0.0   0:00.00 kworker/R-slub_flushwq
    8 root         0 -20         0         0      0 I   0.0   0.0   0:00.00 kworker/R-netns
   12 root        20   0         0         0      0 I   0.0   0.0   0:00.00 kworker/u8:0-events_unbound
   13 root         0 -20         0         0      0 I   0.0   0.0   0:00.00 kworker/R-mm_percpu_wq
   14 root        20   0         0         0      0 I   0.0   0.0   0:00.11 kworker/u8:1-inet6_addrconf
```