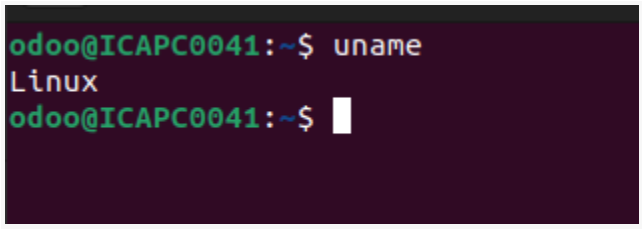
Ubuntu Commands

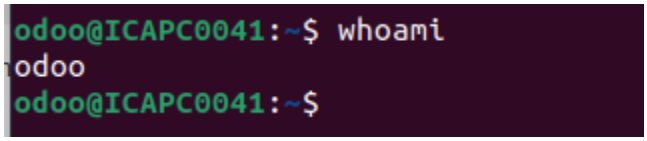
1.Uname:

The uname (UNIX name) command in Linux is a simple yet powerful tool that offers information about a Linux machine's operating system and hardware platform.



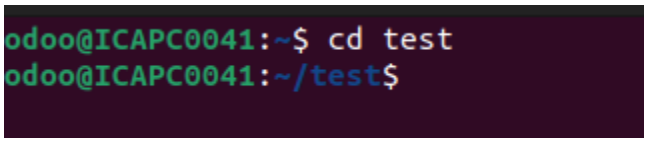
2.whoami:

The whoami command in Linux displays the username of the user who is currently logged in.



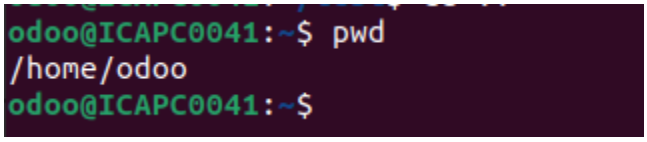
3.cd:

The cd command allows you to change directories in Linux, making it easier to navigate through the file system and manage your files efficiently.



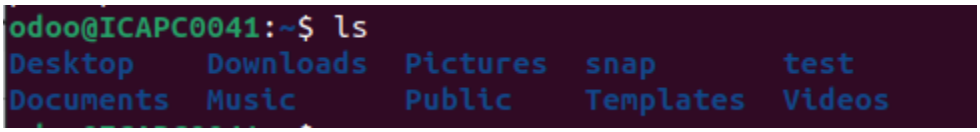
4.pwd:

The pwd command in Ubuntu prints the current working directory's full path.



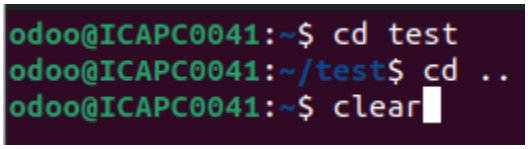
5.ls:

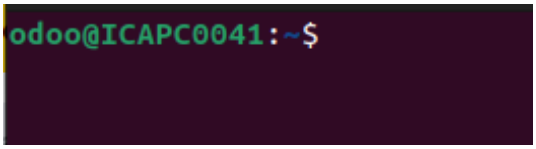
The ls command in Linux lists the contents of a directory, including files and directories.



6.clear:

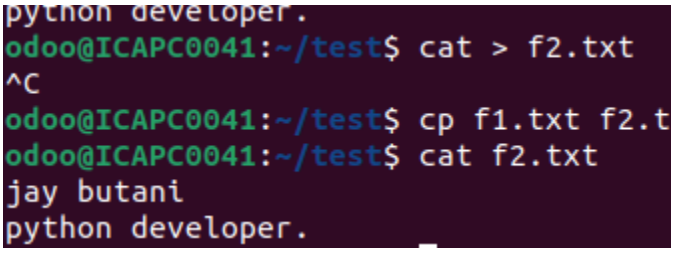
We can clear our terminal by using shortcut `CTRL+L` or clear command.





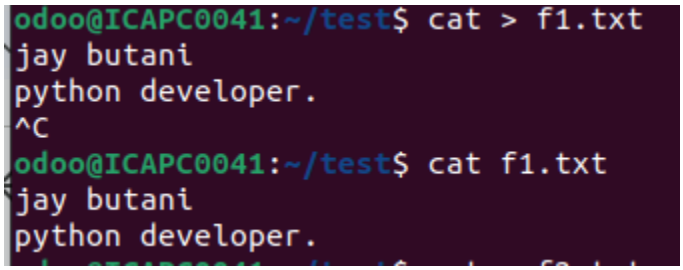
7.cp:

'cp' means copy. 'cp' command is used to copy a file or a directory.



8.cat:

The cat (concatenate) command in Linux displays file contents. It reads one or multiple files and prints their content to the terminal. cat is used to view file contents, combine files, and create new files.



9.head:

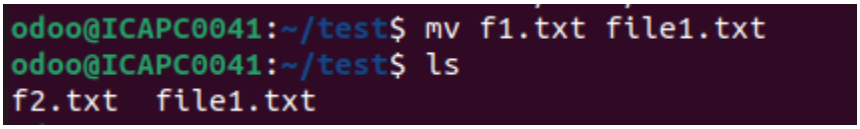
The 'head' command displays the starting content of a file. By default, it displays starting 10 lines of any file.

10.tail:

Linux tail command is used to display the last ten lines of one or more files.

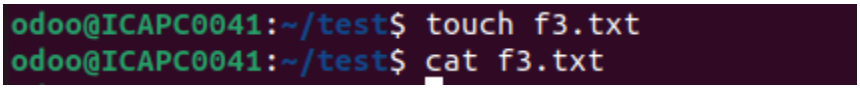
11.mv:

Linux mv command is used to move existing file or directory from one location to another. It is also used to rename a file or directory. If you want to rename a single directory or file then 'mv' option will be better to use.



12.touch:

The touch command in Linux is used to create empty files or update the timestamps of existing files.

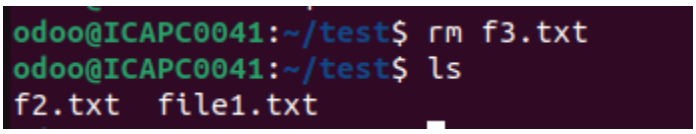


13.mkdir:

The mkdir command in Linux creates new directories, or folders, on your computer.

14.rm:

The rm command in Linux is used to remove files, directories, and symbolic links from the file system.

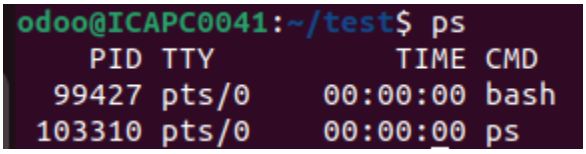


15.rmdir:

The rmdir command in Linux is used to remove empty directories from a system.

16.ps:

The ps command is used to view currently running processes on the system. It helps us to determine which process is doing what in our system, how much memory it is using, how much CPU space it occupies, user ID, command name, etc .



List of all running Process:

Command: ps -aux

```
odoo@ICAPC0041:~$ ps -aux
USER         PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.1 166812 11584 ?        Ss   09:34   0:01 /sbin/init splash
root           2  0.0  0.0      0     0 ?        S    09:34   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        S    09:34   0:00 [pool_workqueue_release]
root           4  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-rcu_g]
root           5  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-rcu_p]
root           6  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-slub_]
root           7  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-netns]
root           9  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/0:0H-events_highpri]
root          12  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-mm_pe]
root          13  0.0  0.0      0     0 ?        I    09:34   0:00 [rcu_tasks_kthread]
root          14  0.0  0.0      0     0 ?        I    09:34   0:00 [rcu_tasks_rude_kthread]
root          15  0.0  0.0      0     0 ?        I    09:34   0:00 [rcu_tasks_trace_kthread]
root          16  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/0]
root          17  0.0  0.0      0     0 ?        I    09:34   0:08 [rcu_preempt]
root          18  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/0]
root          19  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/0]
root          20  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/0]
root          21  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/1]
root          22  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/1]
root          23  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/1]
root          24  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/1]
root          26  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/1:0H-events_highpri]
root          27  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/2]
root          28  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/2]
root          29  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/2]
root          30  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/2]
root          32  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/2:0H-events_highpri]
root          33  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/3]
root          34  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/3]
root          35  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/3]
root          36  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/3]
root          38  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/3:0H-events_highpri]
root          39  0.0  0.0      0     0 ?        S    09:34   0:00 [kdevtmpfs]
root          40  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-inet_]
root          42  0.0  0.0      0     0 ?        S    09:34   0:00 [kauditd]
root          44  0.0  0.0      0     0 ?        S    09:34   0:00 [khungtaskd]
```

```
odoo        4289  0.0  0.6 33993664 55436 ?      Sl   09:47   0:06 /opt/google/chrome/chrome --type=utility --utility-sub-type=storage.mojom.S
odoo        4456  0.9  2.9 1213843492 240360 ?   Sl   09:47   3:44 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo        4477  0.3  4.7 3418032 380524 ?      Sl   09:47   1:19 /usr/lib/thunderbird/thunderbird
odoo        4610  0.0  0.1 281700 11648 ?        Sl   09:48   0:00 /usr/libexec/gvfsd-http --spawner :1.3 /org/gtk/gvfs/exec_spaw/1
odoo        4721  0.0  0.1 388728  9088 ?        Sl   09:49   0:00 /usr/libexec/gvfsd-network --spawner :1.3 /org/gtk/gvfs/exec_spaw/2
odoo        4739  0.0  0.1 316828  9216 ?        Sl   09:49   0:00 /usr/libexec/gvfsd-dnssd --spawner :1.3 /org/gtk/gvfs/exec_spaw/4
odoo        5172  0.3  2.8 1213864060 231336 ?   Sl   09:58   1:30 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo        7042  0.0  0.1 316780 11008 ?        Sl   10:44   0:00 /usr/libexec/gvfsd-recent --spawner :1.3 /org/gtk/gvfs/exec_spaw/5
odoo        7281  0.6  1.2 669228 98088 ?        Sl   10:54   2:09 /usr/bin/gedit --gapplication-service
odoo        8138  0.0  0.9 34186484 78720 ?      Sl   11:08   0:01 /opt/google/chrome/chrome --type=utility --utility-sub-type=audio.mojom.Aud
odoo       10405  0.8  2.8 1212121884 230920 ?   Sl   13:51   1:21 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       11221  0.0  1.4 1212098308 114048 ?   Sl   14:17   0:00 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       11241  0.0  1.6 1212099608 131572 ?   Sl   14:17   0:01 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       11250  0.0  1.7 1213803012 139024 ?   Sl   14:17   0:06 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
root       12024  0.0  0.0      0     0 ?        I    14:27   0:01 [kworker/u8:1-writeback]
root       12343  0.0  0.0      0     0 ?        I    14:32   0:00 [kworker/2:0-events]
root       12696  0.0  0.0      0     0 ?        I<   14:56   0:01 [kworker/u9:0-i915_flip]
root       13025  0.0  0.0      0     0 ?        I    15:31   0:00 [kworker/0:1]
root       13096  0.0  0.0      0     0 ?        I    15:37   0:00 [kworker/3:2-events]
root       13187  0.0  0.0      0     0 ?        I    15:47   0:00 [kworker/1:1-events]
root       13346  0.0  0.0      0     0 ?        I    16:06   0:00 [kworker/u8:0-events_unbound]
root       13457  0.0  0.0      0     0 ?        I    16:10   0:01 [kworker/1:0-i915-unordered]
root       13511  0.0  0.0      0     0 ?        I    16:15   0:00 [kworker/2:2-cgroup_destroy]
odoo       13577  0.1  0.7 2922368 60804 ?       Sl   16:19   0:00 gjs /usr/share/gnome-shell/extensions/ding@rastersoft.com/ding.js -E -P /us
root       13620  0.1  0.0      0     0 ?        D<   16:19   0:01 [kworker/u9:1+i915_flip]
root       13631  0.0  0.0      0     0 ?        I    16:19   0:00 [kworker/u8:2-events_power_efficient]
odoo       13687  0.0  0.0  87948  4736 ?        Sl   16:23   0:00 /usr/lib/libreoffice/program/oosplash --writer file:///home/odoo/Downloads/
odoo       13703  4.0  4.5 1104816 361748 ?      Sl   16:23   0:17 /usr/lib/libreoffice/program/soffice.bin --writer file:///home/odoo/Downloa
odoo       13872  1.7  2.4 1212133896 194280 ?   Sl   16:26   0:04 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
root       13894  0.1  0.0      0     0 ?        I<   16:27   0:00 [kworker/u9:2-i915_flip]
odoo       13909  0.0  1.3 1212090112 108608 ?   Sl   16:28   0:00 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       13921  0.8  1.7 1212111956 142504 ?   Sl   16:28   0:00 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       13977  6.2  2.3 1212125580 190152 ?   Sl   16:29   0:05 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       13987  2.0  1.8 1212097400 151100 ?   Sl   16:29   0:01 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       14016  4.4  1.6 1212097364 135188 ?   Sl   16:29   0:03 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
odoo       14036  0.0  0.8 1212081520 68356 ?    Sl   16:29   0:00 /opt/google/chrome/chrome --type=renderer --string-annotations --crashpad-h
```

List processes for a specific user:

Command: ps -u user_name

```
odoo@ICAPC0041:~$ ps -u odoo
    PID TTY          TIME CMD
   1404 ?        00:00:00 systemd
   1405 ?        00:00:00 (sd-pam)
   1412 ?        00:00:00 pipewire
   1413 ?        00:00:00 pipewire-media-
   1414 ?        00:00:08 pulseaudio
   1430 ?        00:00:02 dbus-daemon
   1440 ?        00:00:00 gnome-keyring-d
   1443 ?        00:00:00 gvfsd
   1446 ?        00:00:00 xdg-document-po
   1451 ?        00:00:00 gvfsd-fuse
   1456 ?        00:00:00 xdg-permission-
   1482 ?        00:00:03 tracker-miner-f
   1497 ?        00:00:01 gvfs-udisks2-vo
   1502 ?        00:00:00 gvfs-goa-volume
   1506 ?        00:00:00 goa-daemon
   1508 tty2     00:00:00 gdm-wayland-ses
   1511 tty2     00:00:00 gnome-session-b
   1527 ?        00:00:00 goa-identity-se
   1541 ?        00:00:01 gvfs-afc-volume
   1553 ?        00:00:00 gvfs-mtp-volume
   1564 ?        00:00:00 gvfs-gphoto2-vo
   1583 ?        00:00:00 gnome-session-c
   1596 ?        00:00:00 gnome-session-b
   1614 ?        00:00:00 at-spi-bus-laun
   1621 ?        00:20:40 gnome-shell
   1628 ?        00:00:00 dbus-daemon
   1666 ?        00:00:00 gnome-shell-cal
   1672 ?        00:00:00 evolution-sourc
   1678 ?        00:00:00 dconf-service
   1683 ?        00:00:00 evolution-calen
   1694 ?        00:00:00 evolution-addre
   1704 ?        00:00:00 gvfsd-trash
   1718 ?        00:00:00 gjs
   1720 ?        00:00:00 at-spi2-registr
   1733 ?        00:00:00 sh
   1734 ?        00:00:00 gsd-a11y-settin
```

```
   4168 pts/0    00:00:00 bash
   4232 ?        00:06:32 chrome
   4238 ?        00:00:00 cat
   4239 ?        00:00:00 cat
   4241 ?        00:00:00 chrome_crashpad
   4243 ?        00:00:00 chrome_crashpad
   4249 ?        00:00:00 chrome
   4250 ?        00:00:00 chrome
   4252 ?        00:00:00 chrome
   4275 ?        00:05:57 chrome
   4280 ?        00:01:11 chrome
   4289 ?        00:00:06 chrome
   4456 ?        00:03:45 chrome
   4477 ?        00:01:20 thunderbird
   4610 ?        00:00:00 gvfsd-http
   4721 ?        00:00:00 gvfsd-network
   4739 ?        00:00:00 gvfsd-dnssd
   5172 ?        00:01:30 chrome
   7042 ?        00:00:00 gvfsd-recent
   7281 ?        00:02:11 gedit
   8138 ?        00:00:01 chrome
  10405 ?        00:01:25 chrome
  11221 ?        00:00:00 chrome
  11241 ?        00:00:01 chrome
  11250 ?        00:00:06 chrome
  13577 ?        00:00:01 gjs
  13687 ?        00:00:00 oosplash
  13703 ?        00:00:17 soffice.bin
  13872 ?        00:00:05 chrome
  13977 ?        00:00:15 chrome
  13987 ?        00:00:04 chrome
  14016 ?        00:00:12 chrome
  14167 ?        00:01:45 chrome
  14226 ?        00:00:00 chrome
  14312 ?        00:00:02 eog
  14388 ?        00:00:00 chrome
  14419 pts/0    00:00:00 ps
```

17.kill:

It is used for manually terminating the processes. The behaviour of the kill command is slightly different among the shells and the */bin/kill* standalone executable.

```
 103310 pts/0    00:00:00 ps
odoo@ICAPC0041:~/test$ type -a kill
kill is a shell builtin
kill is /usr/bin/kill
kill is /bin/kill
```

Kill a specific process:

Command: kill PID

```
odoo@ICAPC0041:~$ kill 2364
odoo@ICAPC0041:~$ ps -aux
USER         PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.1 166812 11584 ?        Ss   09:34   0:01 /sbin/init splash
root           2  0.0  0.0      0     0 ?        S    09:34   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        S    09:34   0:00 [pool_workqueue_release]
root           4  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-rcu_g]
root           5  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-rcu_p]
root           6  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-slub_]
root           7  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-netns]
root           9  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/0:0H-events_highpri]
root          12  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-mm_pe]
root          13  0.0  0.0      0     0 ?        I    09:34   0:00 [rcu_tasks_kthread]
root          14  0.0  0.0      0     0 ?        I    09:34   0:00 [rcu_tasks_rude_kthread]
root          15  0.0  0.0      0     0 ?        I    09:34   0:00 [rcu_tasks_trace_kthread]
root          16  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/0]
root          17  0.0  0.0      0     0 ?        I    09:34   0:09 [rcu_preempt]
root          18  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/0]
root          19  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/0]
root          20  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/0]
root          21  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/1]
root          22  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/1]
root          23  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/1]
root          24  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/1]
root          26  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/1:0H-events_highpri]
root          27  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/2]
root          28  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/2]
root          29  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/2]
root          30  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/2]
root          32  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/2:0H-events_highpri]
root          33  0.0  0.0      0     0 ?        S    09:34   0:00 [cpuhp/3]
root          34  0.0  0.0      0     0 ?        S    09:34   0:00 [idle_inject/3]
root          35  0.0  0.0      0     0 ?        S    09:34   0:00 [migration/3]
root          36  0.0  0.0      0     0 ?        S    09:34   0:00 [ksoftirqd/3]
root          38  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/3:0H-events_highpri]
root          39  0.0  0.0      0     0 ?        S    09:34   0:00 [kdevtmpfs]
root          40  0.0  0.0      0     0 ?        I<   09:34   0:00 [kworker/R-inet_]
```

Stop a process:

Use the pkill command with the process name. The basic syntax is pkill process_name.

Command: killall -u user_name

```
odoo@ICAPC0041:~$ killall -u root
systemd(1): Operation not permitted
kthreadd(2): Operation not permitted
pool_workqueue_release(3): Operation not permitted
kworker/R-rcu_g(4): Operation not permitted
kworker/R-rcu_p(5): Operation not permitted
kworker/R-slub_(6): Operation not permitted
kworker/R-netns(7): Operation not permitted
kworker/0:0-events(8): Operation not permitted
kworker/0:0H-events_highpri(9): Operation not permitted
kworker/0:1-cgroup_destroy(10): Operation not permitted
kworker/u8:0-flush-8:0(11): Operation not permitted
kworker/R-mm_pe(12): Operation not permitted
rcu_tasks_kthread(13): Operation not permitted
rcu_tasks_rude_kthread(14): Operation not permitted
rcu_tasks_trace_kthread(15): Operation not permitted
ksoftirqd/0(16): Operation not permitted
rcu_preempt(17): Operation not permitted
migration/0(18): Operation not permitted
idle_inject/0(19): Operation not permitted
cpuhp/0(20): Operation not permitted
cpuhp/1(21): Operation not permitted
idle_inject/1(22): Operation not permitted
migration/1(23): Operation not permitted
ksoftirqd/1(24): Operation not permitted
kworker/1:0-events(25): Operation not permitted
kworker/1:0H-events_highpri(26): Operation not permitted
cpuhp/2(27): Operation not permitted
idle_inject/2(28): Operation not permitted
migration/2(29): Operation not permitted
ksoftirqd/2(30): Operation not permitted
kworker/2:0-events(31): Operation not permitted
kworker/2:0H-events_highpri(32): Operation not permitted
cpuhp/3(33): Operation not permitted
idle_inject/3(34): Operation not permitted
migration/3(35): Operation not permitted
ksoftirqd/3(36): Operation not permitted
kworker/3:0-cgroup_destroy(37): Operation not permitted
```

18.chmod & chown:

The "chmod" command modifies the read, write, and execute permissions of specified files and the search permissions of specified directories.

```
odoo@ICAPC0041:~/test$ chmod -r f2.txt
odoo@ICAPC0041:~/test$ cat f2.txt
cat: f2.txt: Permission denied
odoo@ICAPC0041:~/test$
```

Linux chown command is used to change a file's ownership, directory, or symbolic link for a user or group. The chown stands for change owner. In Linux, each file is associated with a corresponding owner or group.

Giving access to a file:

Command: chmod +rwx filename to add permissions.

```
odoo@ICAPC0041:~/test$ chmod +r f2.txt
odoo@ICAPC0041:~/test$ cat f2.txt
jay butani
python developer.
a
b
c
d
e
f
g
h
i
j
k
l
odoo@ICAPC0041:~/test$ cat >> f2.txt
^C
odoo@ICAPC0041:~/test$ chmod -w f2.txt
odoo@ICAPC0041:~/test$ cat >> f2.txt
bash: f2.txt: Permission denied
odoo@ICAPC0041:~/test$ chmod +w f2.txt
odoo@ICAPC0041:~/test$ cat >> f2.txt
jay
^C
```

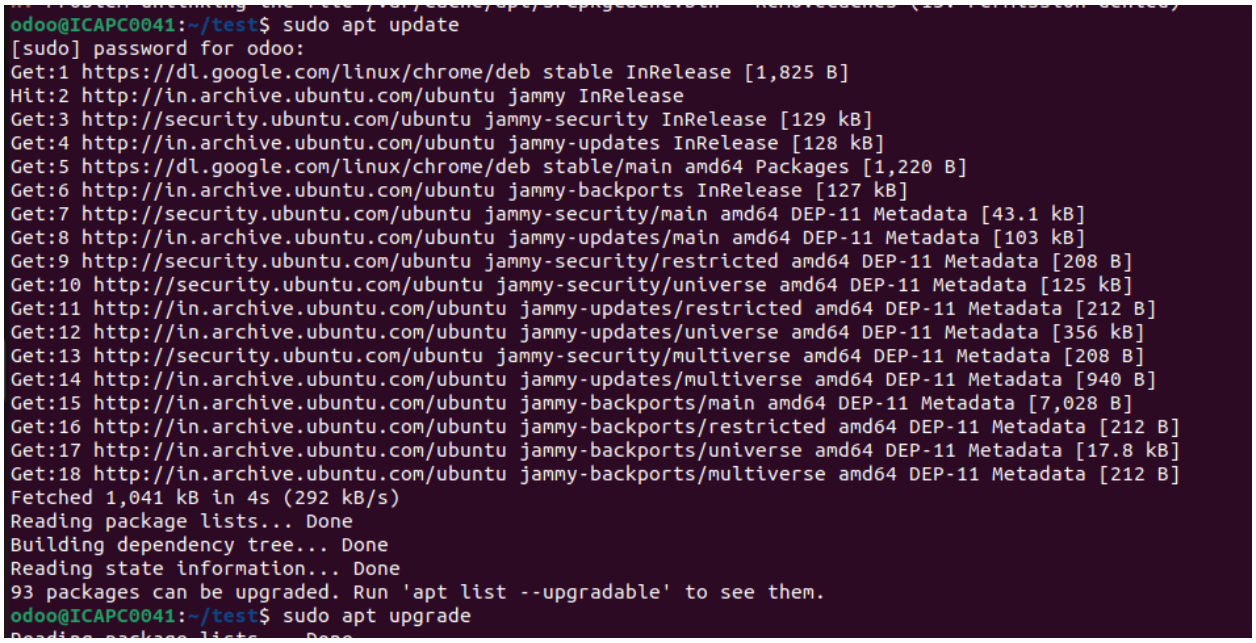
Changing the owner of a file or directory:

Command: chown -c ownername filename or directory

```
odoo@ICAPC0041:~/test$ chown root file1.txt
chown: changing ownership of 'file1.txt': Operation not permitted
odoo@ICAPC0041:~/test$ ^C
odoo@ICAPC0041:~/test$ cd ..
odoo@ICAPC0041:~$ ls -l
total 60
drwxr-xr-x 2 odoo odoo 4096 Jan  3 11:30 Desktop
drwxr-xr-x 3 odoo odoo 4096 Jan 10 11:59 Documents
drwxr-xr-x 2 odoo odoo 4096 Jan 10 17:00 Downloads
-rw-rw-r-- 1 odoo odoo    0 Jan  2 14:06 example.py
-rw-rw-r-- 1 odoo odoo    4 Jan  2 18:25 f1.txt
-rw-rw-r-- 1 odoo odoo    0 Jan  2 14:06 f2.py
-rw-rw-r-- 1 odoo odoo    0 Jan  2 14:07 f3.pdf
lrwxrwxrwx 1 odoo odoo   14 Jan  2 14:40 linkfile.txt -> test/file1.txt
drwxr-xr-x 2 odoo odoo 4096 Nov 29 13:37 Music
drwxr-xr-x 3 odoo odoo 4096 Jan  1 14:57 Pictures
drwxrwxr-x 4 odoo odoo 4096 Jan  9 16:35 Practice
drwxrwxr-x 4 odoo odoo 4096 Jan 10 10:46 practiceenv
drwxr-xr-x 2 odoo odoo 4096 Nov 29 13:37 Public
drwxrwxr-x 2 odoo odoo 4096 Jan 10 16:26 Python_Practice
drwx------ 6 odoo odoo 4096 Dec 31 15:17 snap
drwxr-xr-x 2 odoo odoo 4096 Nov 29 13:37 Templates
drwxrwxr-x 2 odoo odoo 4096 Jan  2 14:49 test
drwxrwxr-x 8 odoo odoo 4096 Jan  9 16:36 trainee-jay
drwxr-xr-x 2 odoo odoo 4096 Nov 29 13:37 Videos
odoo@ICAPC0041:~$ chown -c root example.py
chown: changing ownership of 'example.py': Operation not permitted
odoo@ICAPC0041:~$
```

19.apt:

apt provides a high-level Command Line Interface (CLI) for the APT package management system, offering a user-friendly interface intended for interactive use. It simplifies common tasks like installation, upgrades, and removal, with better defaults than more specialized tools like apt-get and apt-cache.

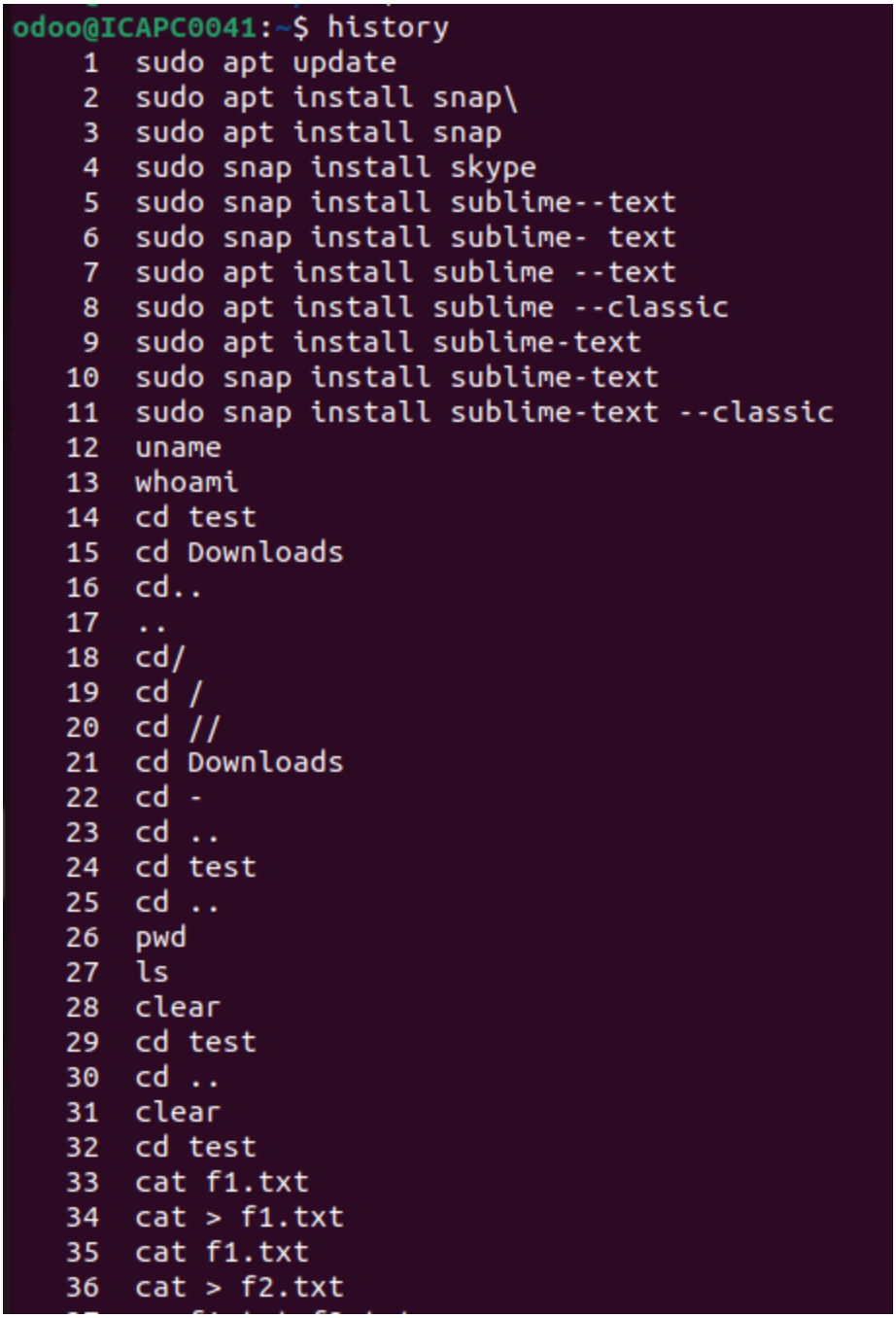


20.apt-get:

An older tool with a low-level interface that gives users more control over package management. It's a good choice for advanced users or those who need more control, or for scripting purposes. Apt-get has more options than apt, which can be useful for writing low-level scripts and tools.

21.history:

The history command in Linux allows users to view and manipulate the history of commands that have been entered. It can be used to quickly access and reuse previously executed commands.



22.nano:

Nano is a command-line text editor in Linux that can be used for basic text editing tasks.

- **Open a file**: Type nano filename to open the file for editing
- **Save**: Press Ctrl+O to save the current file
- **Exit**: Press Ctrl+X to exit nano

- **Move cursor**: Use the arrow keys to move the cursor
- **Page navigation**: Press Ctrl+V to move down one page or Ctrl+Y to move up one page
- **Search**: Press Ctrl+W to search for a string of text
- **Cut and paste**: Press Ctrl+K to cut the current line and Ctrl+U to paste the cut text
- **Select text**: Move the cursor to the beginning of the text and press Alt+a to set a selection mark
- **Spell check**: Install the spell package to check the spelling of a particular line

```
 GNU nano 6.2                                          file1.txt
jay butani
python developer.
```

23.ifconfig:

The command ifconfig stands for interface configurator. This command enables us to initialize an interface, assign IP address, enable or disable an interface. It display route and network interface.

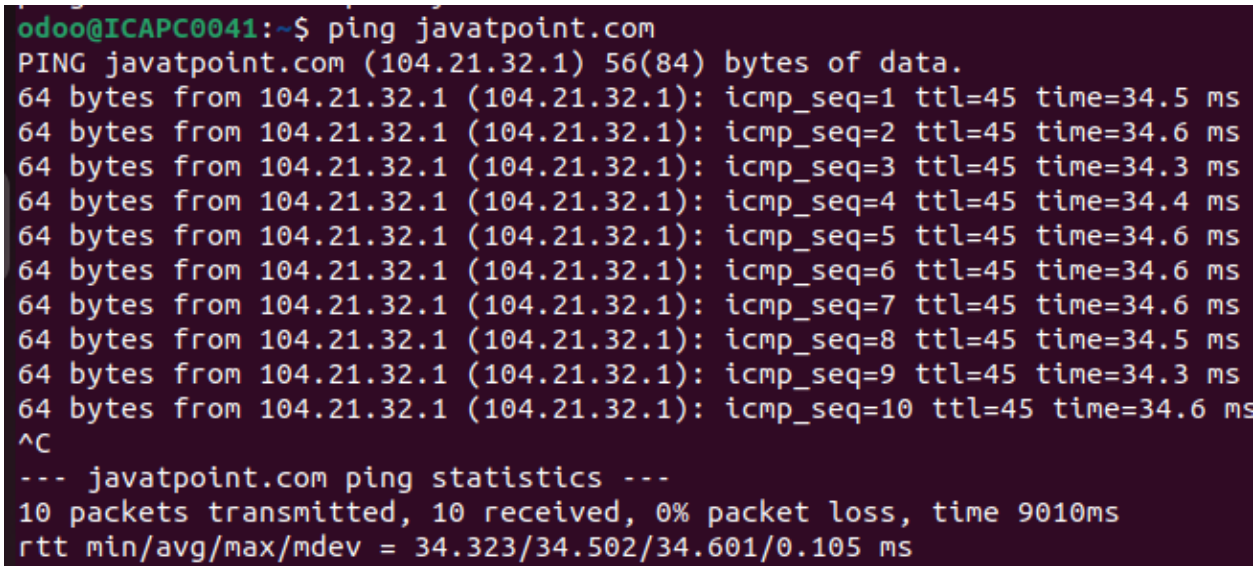
You can view IP address, MAC address and MTU (Maximum Transmission Unit) with ifconfig command.

```
odoo@ICAPC0041:~$ sudo apt install net-tools
[sudo] password for odoo:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 93 not upgraded.
Need to get 204 kB of archives.
After this operation, 819 kB of additional disk space will be used.
Get:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Fetched 204 kB in 1s (150 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 201958 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20181103.0eebece-1ubuntu5_amd64.deb ...
Unpacking net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Processing triggers for man-db (2.10.2-1) ...
odoo@ICAPC0041:~$ ifconfig
eno1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.1.55  netmask 255.255.255.0  broadcast 192.168.1.255
        inet6 fe80::cd5:65a4:4a3c:bba  prefixlen 64  scopeid 0x20<link>
        ether 44:8a:5b:7b:78:e4  txqueuelen 1000  (Ethernet)
        RX packets 1113433  bytes 1172491351 (1.1 GB)
        RX errors 0  dropped 2  overruns 0  frame 0
        TX packets 524298  bytes 138214929 (138.2 MB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
        device interrupt 20  memory 0xf7c00000-f7c20000

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 20675  bytes 2369608 (2.3 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 20675  bytes 2369608 (2.3 MB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

24.ping:

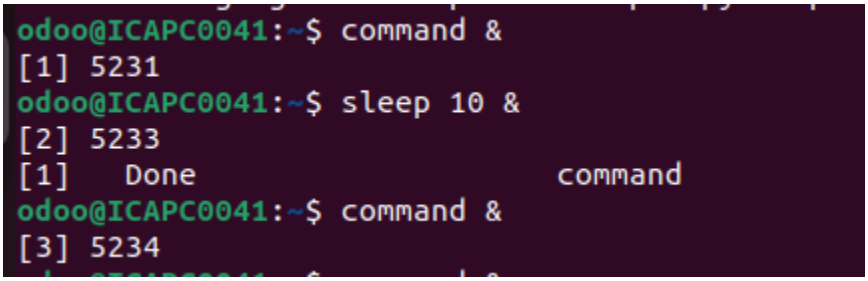
Ping is short for Packet Internet Groper. This command is mainly used for checking the network connectivity among host/server and host. The ping command takes the URL or IP address as input and transfers the data packet to a specified address along with a "PING" message. Then, it will get a reply from the host/server. This time is known as "latency".



Ubuntu Operators

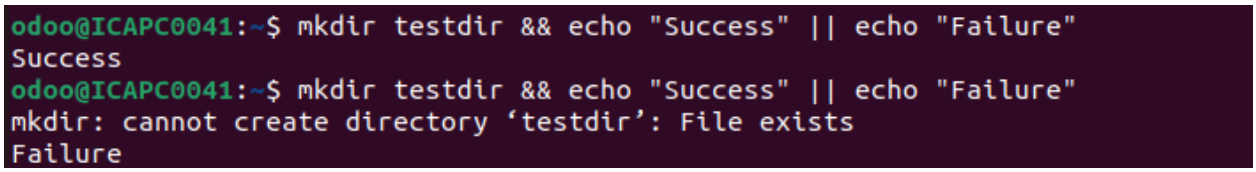
1.&:

This command sends a process/script/command to the background.



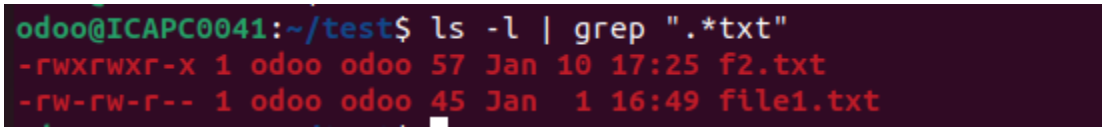
2.&&:

The command following this operator will only execute if the command preceding this operator has been successfully executed.



3.|:

The output of the first command acts as input to the second command.



4.>,>>,<:

Redirects the output of a command or a group of commands to a file or stream.

the “>” is the output redirection operator used for overwriting files that already exist in the directory. While, the “>>” is an output operator as well, but, it appends the data of an existing file. Often, both of these operators are used together to modify files in Linux.

>,>>:

```
odoo@ICAPC0041:~/test$ cat > file1.txt
jay
butani
^C
odoo@ICAPC0041:~/test$ cat file1.txt
jay
butani
odoo@ICAPC0041:~/test$ cat >> file1.txt
append
^C
odoo@ICAPC0041:~/test$ cat file1.txt
jay
butani
append
```

<:

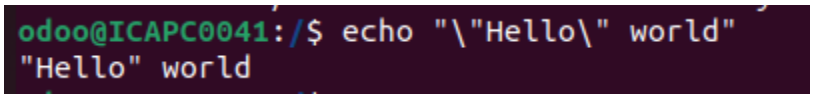
The < operator is used to redirect input from a file or another source to a command. It tells command to read input from the specified file instead of the standard input.

```
odoo@ICAPC0041:~/test$ diff <(cat f2.txt) <(cat file1.txt)
1,14d0
< jay butani
< python developer.
< a
< b
< c
< d
< e
< f
< g
< h
< i
< j
< k
< l
15a2,3
> butani
> append
```

5.\:

The backslash can escape spaces in file or directory names to prevent the shell from treating them as seprate arguments.

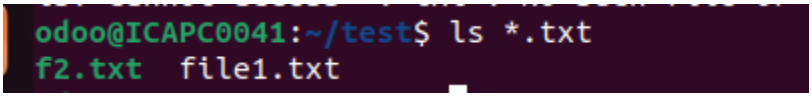
The backslash can escape single or double quotes to include them in a string.



6.*:

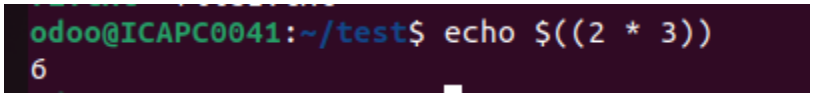
In the shell, * acts as a wildcard character, matching zero or more characters in filenames or patterns. For example:

- ls *.txt lists all files ending in .txt.



In arithmetic expressions within the shell or scripts, * represents the multiplication operator. For example:

- echo $((2 * 3)) outputs 6.



7.^:

The ^ operator is used to math the beginning of a line or string in regular expression.