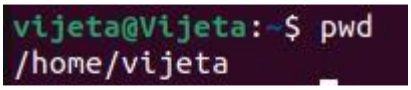
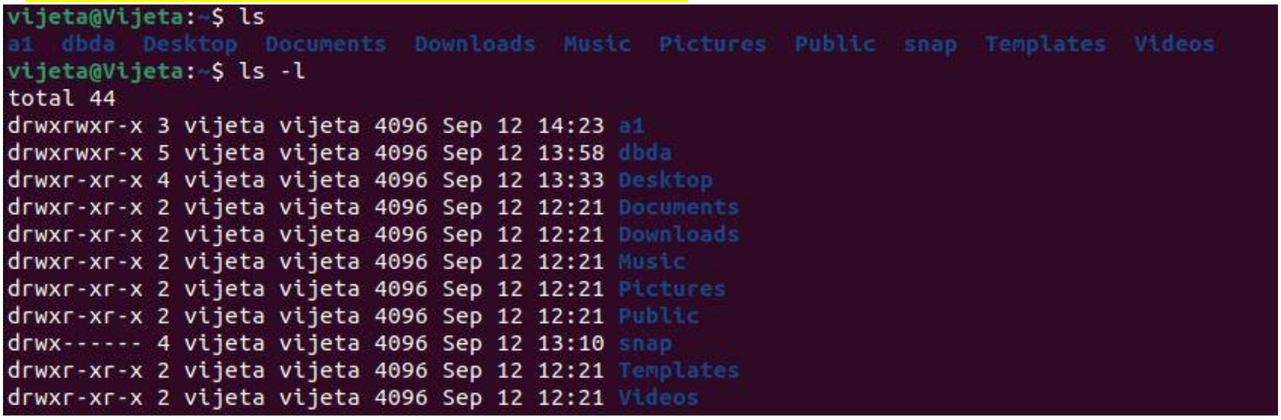
8. Use a command to show the current working directory



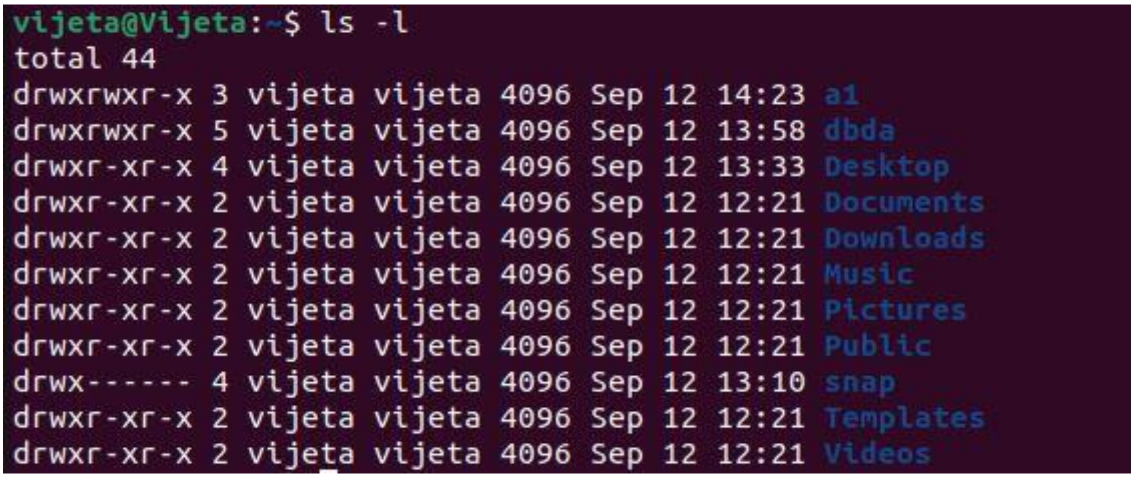
```
vijeta@Vijeta:~$ pwd
/home/vijeta
```

9. List the directory contents in the short and long format



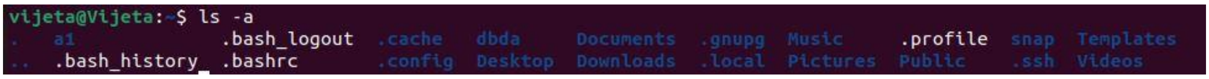
```
vijeta@Vijeta:~$ ls
a1  dbda  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
vijeta@Vijeta:~$ ls -l
total 44
drwxrwxr-x 3 vijeta vijeta 4096 Sep 12 14:23 a1
drwxrwxr-x 5 vijeta vijeta 4096 Sep 12 13:58 dbda
drwxr-xr-x 4 vijeta vijeta 4096 Sep 12 13:33 Desktop
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Documents
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Downloads
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Music
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Pictures
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Public
drwx------ 4 vijeta vijeta 4096 Sep 12 13:10 snap
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Templates
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Videos
```

10. Explore attributes given in long format e.g. file type, file permissions, file size, file owner etc



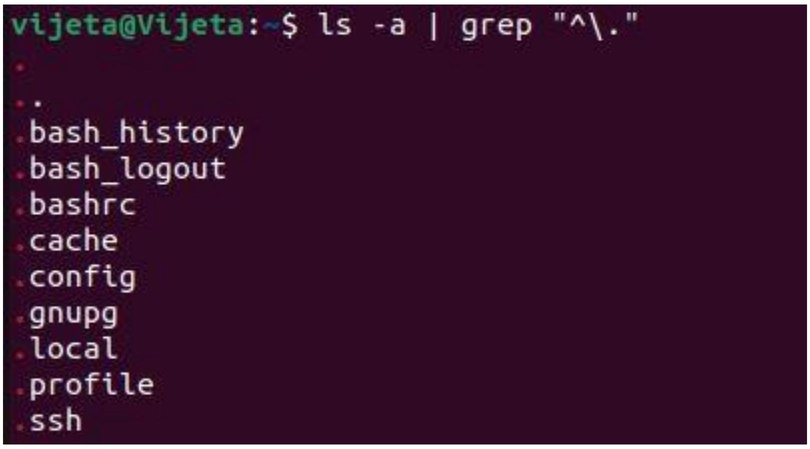
```
vijeta@Vijeta:~$ ls -l
total 44
drwxrwxr-x 3 vijeta vijeta 4096 Sep 12 14:23 a1
drwxrwxr-x 5 vijeta vijeta 4096 Sep 12 13:58 dbda
drwxr-xr-x 4 vijeta vijeta 4096 Sep 12 13:33 Desktop
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Documents
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Downloads
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Music
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Pictures
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Public
drwx------ 4 vijeta vijeta 4096 Sep 12 13:10 snap
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Templates
drwxr-xr-x 2 vijeta vijeta 4096 Sep 12 12:21 Videos
```

11. List all files along with hidden files in the current working directory.



```
vijeta@Vijeta:~$ ls -a
.   a1             .bash_logout  .cache   dbda     Documents  .gnupg  Music     .profile  snap  Templates
..  .bash_history  .bashrc       .config  Desktop  Downloads  .local  Pictures  Public    .ssh  Videos
```

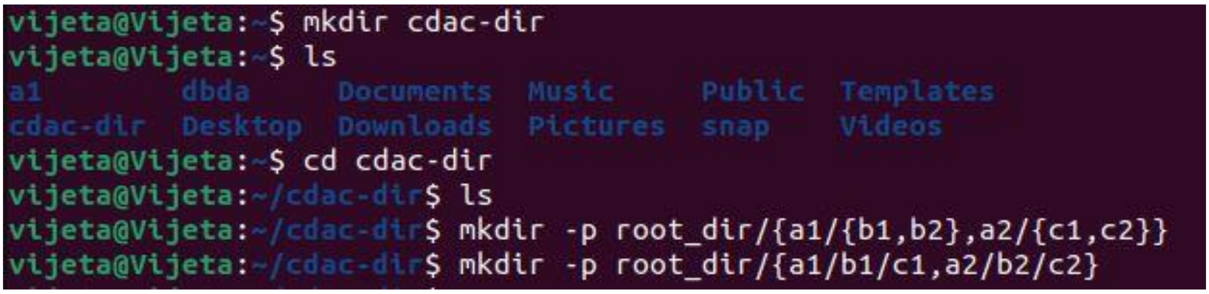
12. list only hidden files in the directory



```
vijeta@Vijeta:~$ ls -a | grep "^\."
.
..
.bash_history
.bash_logout
.bashrc
.cache
.config
.gnupg
.local
.profile
.ssh
```

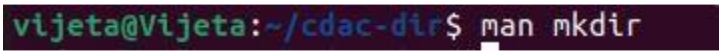
13. Make a directory and name it as cdac-dir and change the current working directory to the new directory.(Hint : use mkdir,cd commands). 3. Create following nested directories inside the current directory by invoking a single command for only one time.

Note : here root_dir is the current directory.

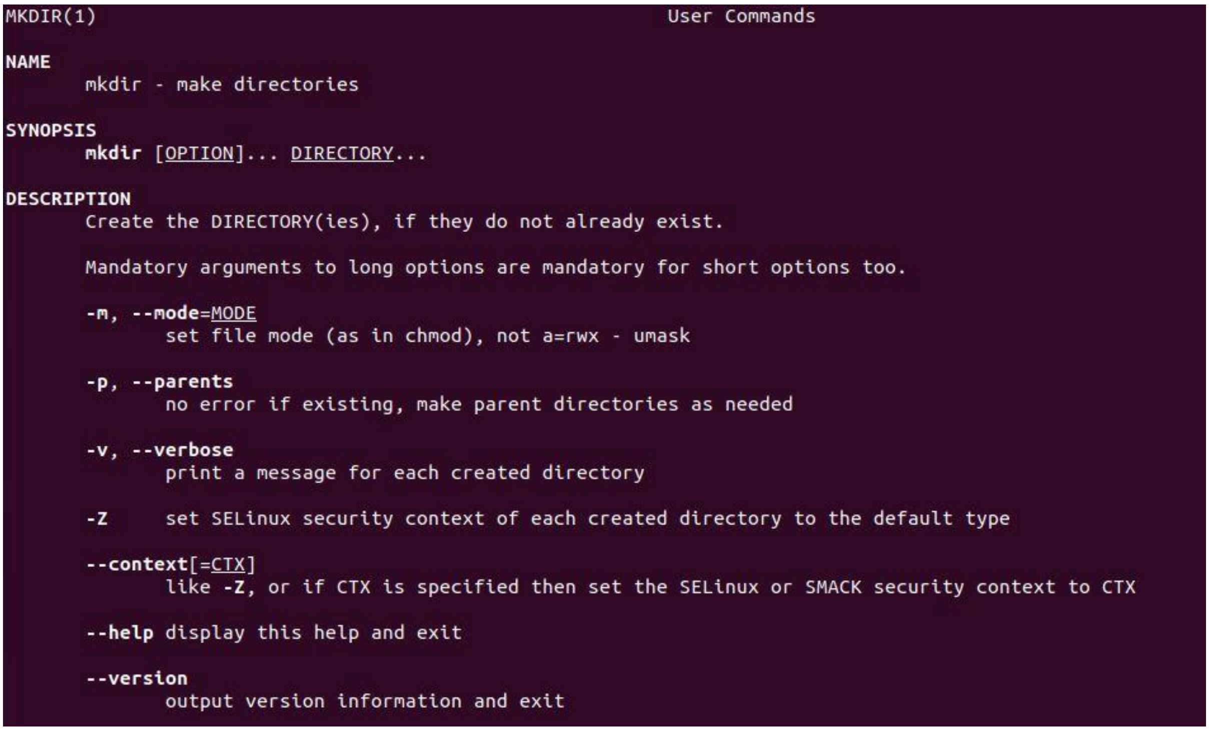


```
vijeta@Vijeta:~$ mkdir cdac-dir
vijeta@Vijeta:~$ ls
a1        dbda     Documents  Music     Public  Templates
cdac-dir  Desktop  Downloads  Pictures  snap    Videos
vijeta@Vijeta:~$ cd cdac-dir
vijeta@Vijeta:~/cdac-dir$ ls
vijeta@Vijeta:~/cdac-dir$ mkdir -p root_dir/{a1/{b1,b2},a2/{c1,c2}}
vijeta@Vijeta:~/cdac-dir$ mkdir -p root_dir/{a1/b1/c1,a2/b2/c2}
```

14. (Hint : explore the man page of **mkdir**)

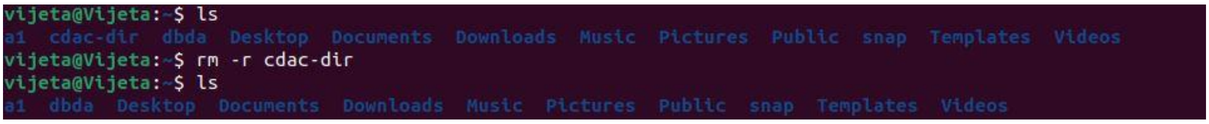


```
vijeta@Vijeta:~/cdac-dir$ man mkdir
```



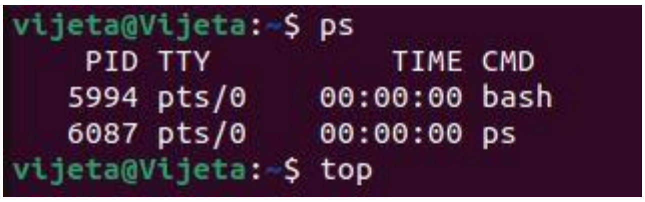
```
MKDIR(1)                                                   User Commands

NAME
       mkdir - make directories

SYNOPSIS
       mkdir [OPTION]... DIRECTORY...

DESCRIPTION
       Create the DIRECTORY(ies), if they do not already exist.

       Mandatory arguments to long options are mandatory for short options too.

       -m, --mode=MODE
              set file mode (as in chmod), not a=rwx - umask

       -p, --parents
              no error if existing, make parent directories as needed

       -v, --verbose
              print a message for each created directory

       -Z     set SELinux security context of each created directory to the default type

       --context[=CTX]
              like -Z, or if CTX is specified then set the SELinux or SMACK security context to CTX

       --help display this help and exit

       --version
              output version information and exit
```

15. List the directories(folders), then remove the **cdac-dir** directory and list the folders again to show that it is no longer present.(Hint : use **rm, ls** command

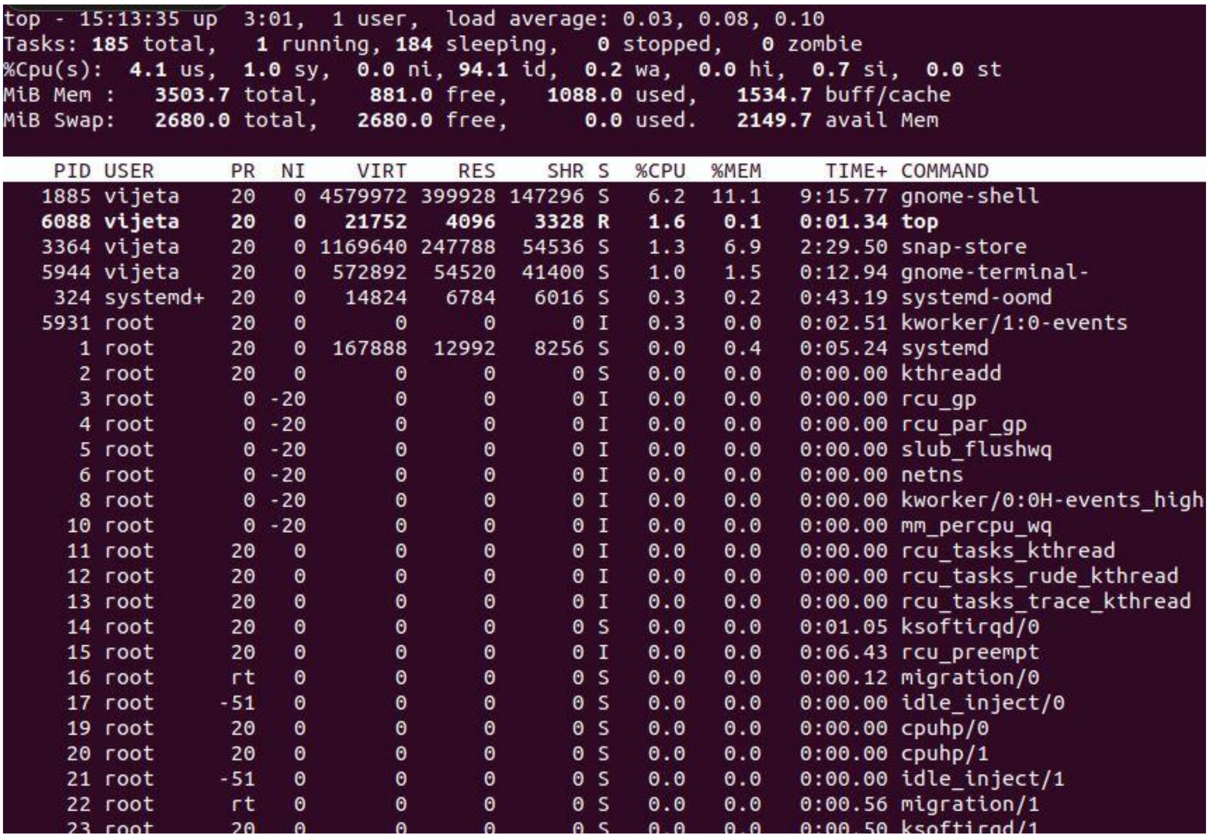


```
vijeta@Vijeta:~$ ls
a1  cdac-dir  dbda  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
vijeta@Vijeta:~$ rm -r cdac-dir
vijeta@Vijeta:~$ ls
a1  dbda  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
```

26. List processes running in shell, all running processes(**Hint**: use man page of **ps** command) and show top processes in decreasing order of their resource utilization.(**Hint**: use **top** command).

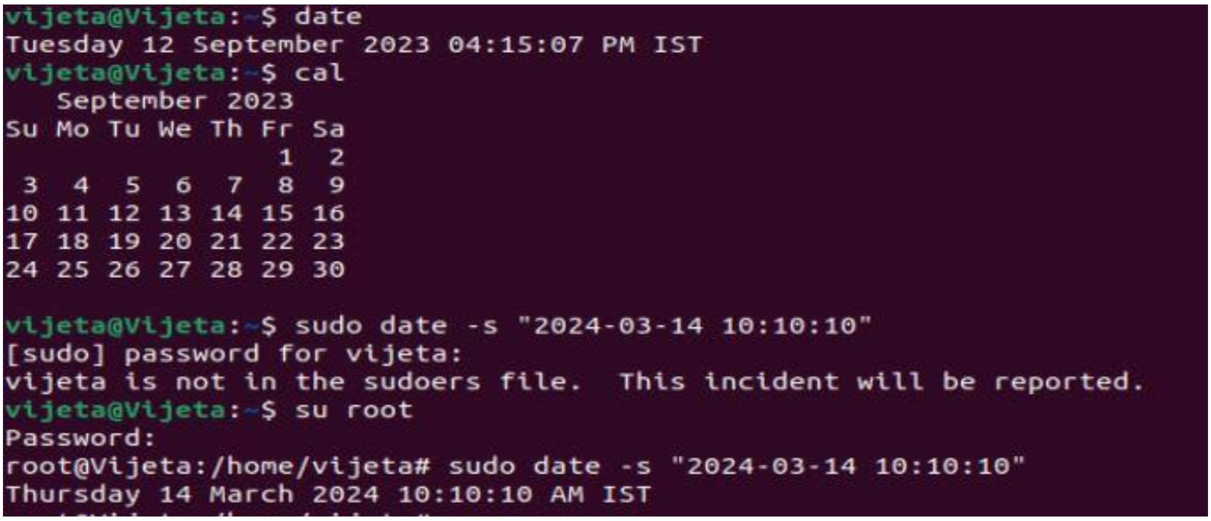


```
vijeta@Vijeta:~$ ps
    PID TTY          TIME CMD
   5994 pts/0    00:00:00 bash
   6087 pts/0    00:00:00 ps
vijeta@Vijeta:~$ top
```



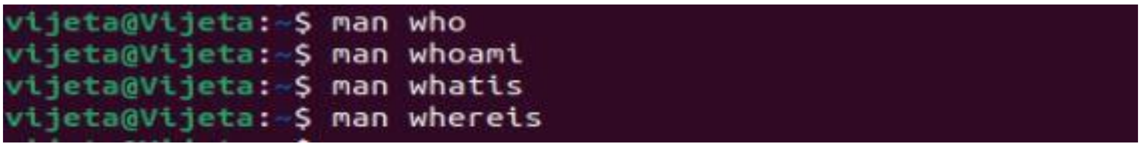
```
top - 15:13:35 up  3:01,  1 user,  load average: 0.03, 0.08, 0.10
Tasks: 185 total,   1 running, 184 sleeping,   0 stopped,   0 zombie
%Cpu(s):  4.1 us,  1.0 sy,  0.0 ni, 94.1 id,  0.2 wa,  0.0 hi,  0.7 si,  0.0 st
MiB Mem :   3503.7 total,    881.0 free,   1088.0 used,   1534.7 buff/cache
MiB Swap:   2680.0 total,   2680.0 free,      0.0 used.   2149.7 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   1885 vijeta    20   0 4579972 399928 147296 S   6.2  11.1   9:15.77 gnome-shell
   6088 vijeta    20   0   21752   4096   3328 R   1.6   0.1   0:01.34 top
   3364 vijeta    20   0 1169640 247788  54536 S   1.3   6.9   2:29.50 snap-store
   5944 vijeta    20   0  572892  54520  41400 S   1.0   1.5   0:12.94 gnome-terminal-
    324 systemd+  20   0   14824   6784   6016 S   0.3   0.2   0:43.19 systemd-oomd
   5931 root      20   0       0      0      0 I   0.3   0.0   0:02.51 kworker/1:0-events
      1 root      20   0  167888  12992   8256 S   0.0   0.4   0:05.24 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       0 -20       0      0      0 I   0.0   0.0   0:00.00 slub_flushwq
      6 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
      8 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_high
     10 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
     11 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_kthread
     12 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_rude_kthread
     13 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_trace_kthread
     14 root      20   0       0      0      0 S   0.0   0.0   0:01.05 ksoftirqd/0
     15 root      20   0       0      0      0 I   0.0   0.0   0:06.43 rcu_preempt
     16 root      rt   0       0      0      0 S   0.0   0.0   0:00.12 migration/0
     17 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
     19 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
     20 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/1
     21 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/1
     22 root      rt   0       0      0      0 S   0.0   0.0   0:00.56 migration/1
     23 root      20   0       0      0      0 S   0.0   0.0   0:00.50 ksoftirqd/1
```

27. Display current time and calendar (**Hint**: use **date, cal** commands) 2. Change the current date and time of the system to following 14th March 2024, 10:10 AM

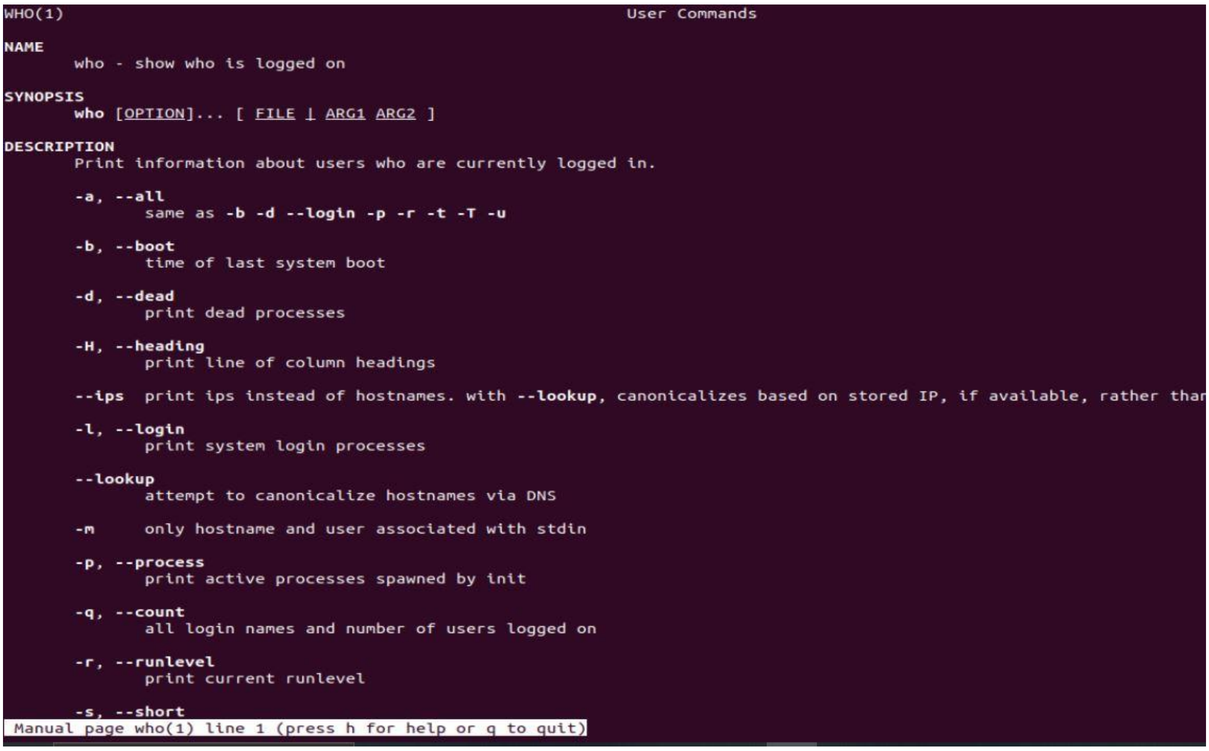


```
vijeta@Vijeta:~$ date
Tuesday 12 September 2023 04:15:07 PM IST
vijeta@Vijeta:~$ cal
   September 2023
Su Mo Tu We Th Fr Sa
                1  2
 3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30

vijeta@Vijeta:~$ sudo date -s "2024-03-14 10:10:10"
[sudo] password for vijeta:
vijeta is not in the sudoers file.  This incident will be reported.
vijeta@Vijeta:~$ su root
Password:
root@Vijeta:/home/vijeta# sudo date -s "2024-03-14 10:10:10"
Thursday 14 March 2024 10:10:10 AM IST
```

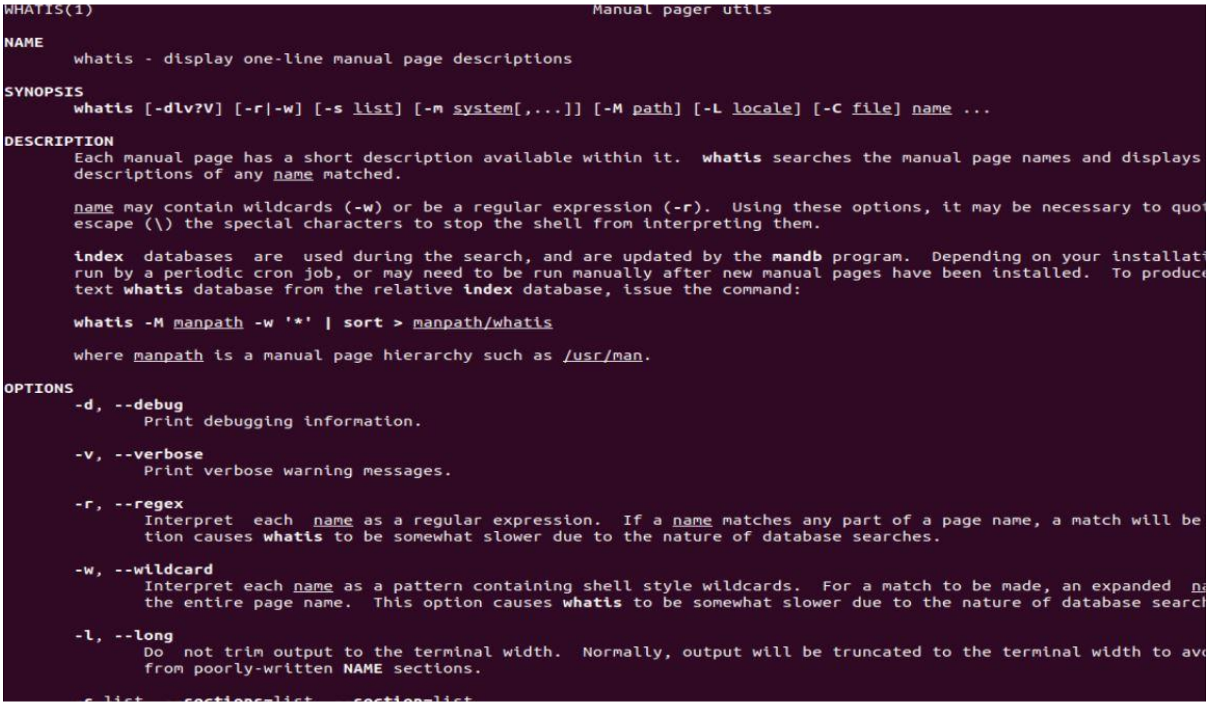
29. who, whoami, whatis, whereis, (**Hint**: use man pages).



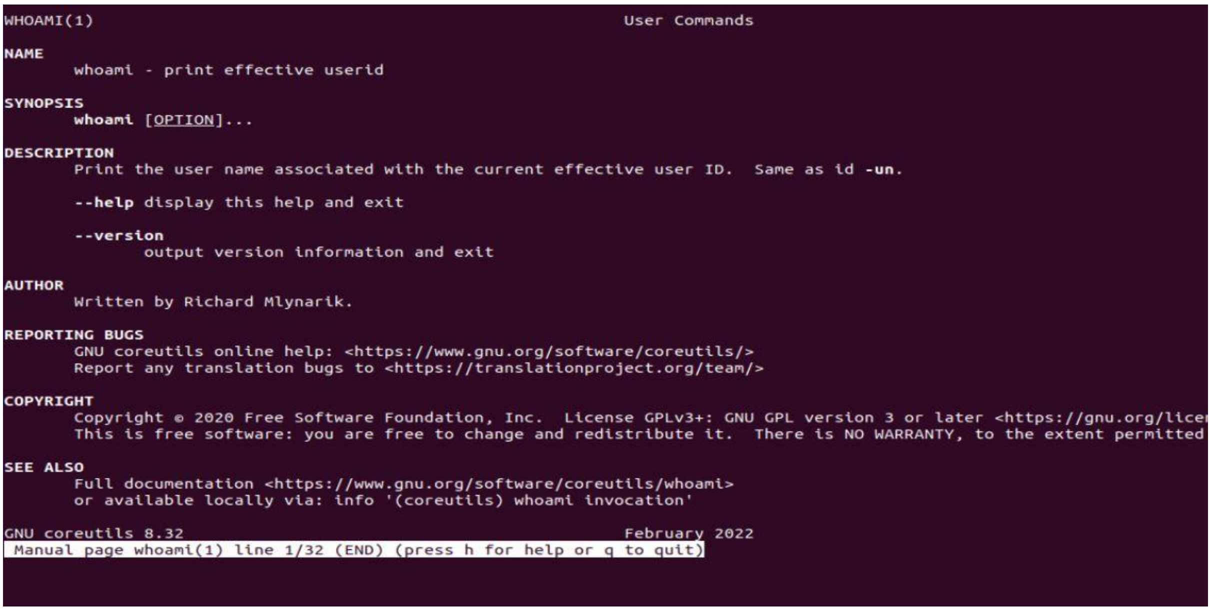
```
vijeta@Vijeta:~$ man who
vijeta@Vijeta:~$ man whoami
vijeta@Vijeta:~$ man whatis
vijeta@Vijeta:~$ man whereis
```



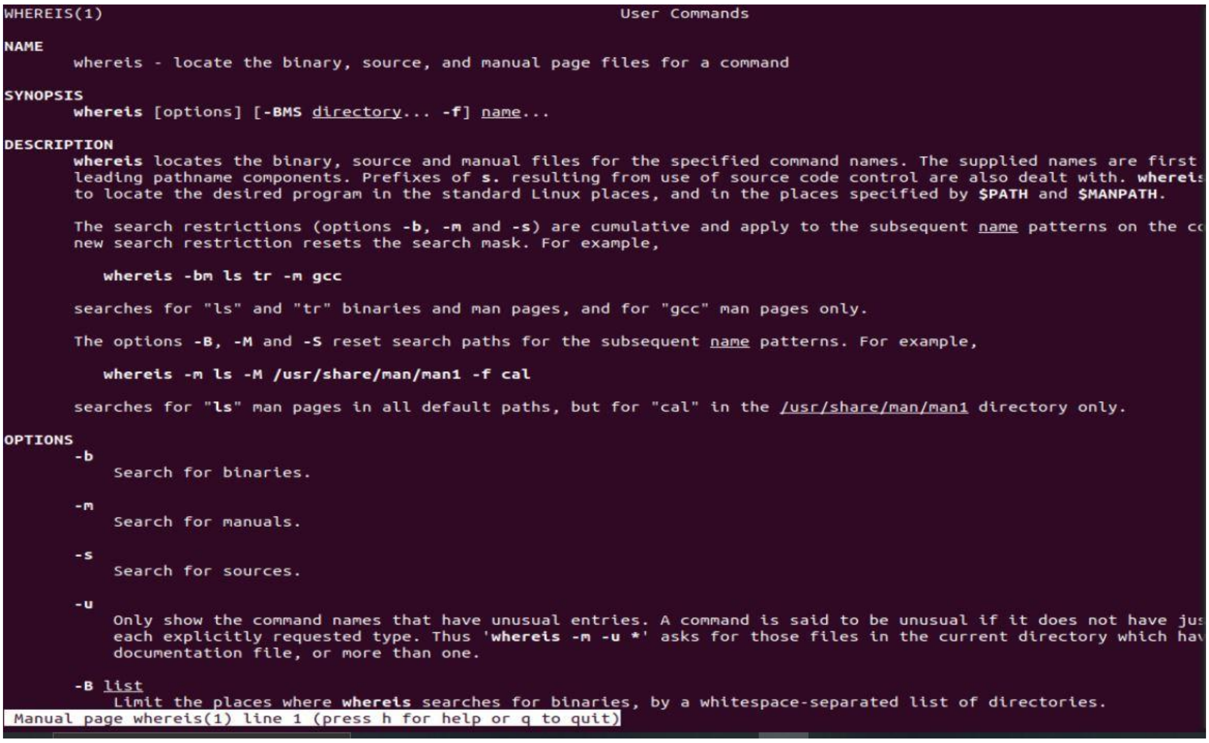
```
WHO(1)                                                              User Commands

NAME
       who - show who is logged on

SYNOPSIS
       who [OPTION]... [ FILE | ARG1 ARG2 ]

DESCRIPTION
       Print information about users who are currently logged in.

       -a, --all
              same as -b -d --login -p -r -t -T -u

       -b, --boot
              time of last system boot

       -d, --dead
              print dead processes

       -H, --heading
              print line of column headings

       --ips  print ips instead of hostnames. with --lookup, canonicalizes based on stored IP, if available, rather thar

       -l, --login
              print system login processes

       --lookup
              attempt to canonicalize hostnames via DNS

       -m     only hostname and user associated with stdin

       -p, --process
              print active processes spawned by init

       -q, --count
              all login names and number of users logged on

       -r, --runlevel
              print current runlevel

       -s, --short
 Manual page who(1) line 1 (press h for help or q to quit)
```



```
WHATIS(1)                                                       Manual pager utils

NAME
       whatis - display one-line manual page descriptions

SYNOPSIS
       whatis [-dlv?V] [-r|-w] [-s list] [-m system[,...]] [-M path] [-L locale] [-C file] name ...

DESCRIPTION
       Each manual page has a short description available within it.  whatis searches the manual page names and displays
       descriptions of any name matched.

       name may contain wildcards (-w) or be a regular expression (-r).  Using these options, it may be necessary to quot
       escape (\) the special characters to stop the shell from interpreting them.

       index  databases  are  used during the search, and are updated by the mandb program.  Depending on your installati
       run by a periodic cron job, or may need to be run manually after new manual pages have been installed.  To produce
       text whatis database from the relative index database, issue the command:

       whatis -M manpath -w '*' | sort > manpath/whatis

       where manpath is a manual page hierarchy such as /usr/man.

OPTIONS
       -d, --debug
              Print debugging information.

       -v, --verbose
              Print verbose warning messages.

       -r, --regex
              Interpret  each  name as a regular expression.  If a name matches any part of a page name, a match will be
              tion causes whatis to be somewhat slower due to the nature of database searches.

       -w, --wildcard
              Interpret each name as a pattern containing shell style wildcards.  For a match to be made, an expanded  na
              the entire page name.  This option causes whatis to be somewhat slower due to the nature of database search

       -l, --long
              Do  not trim output to the terminal width.  Normally, output will be truncated to the terminal width to avo
              from poorly-written NAME sections.
```

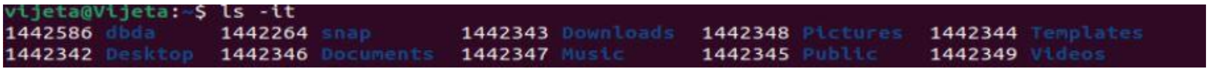


```
WHOAMI(1)                                                     User Commands

NAME
       whoami - print effective userid

SYNOPSIS
       whoami [OPTION]...

DESCRIPTION
       Print the user name associated with the current effective user ID.  Same as id -un.

       --help display this help and exit

       --version
              output version information and exit

AUTHOR
       Written by Richard Mlynarik.

REPORTING BUGS
       GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
       Report any translation bugs to <https://translationproject.org/team/>

COPYRIGHT
       Copyright © 2020 Free Software Foundation, Inc.  License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licer
       This is free software: you are free to change and redistribute it.  There is NO WARRANTY, to the extent permitted

SEE ALSO
       Full documentation <https://www.gnu.org/software/coreutils/whoami>
       or available locally via: info '(coreutils) whoami invocation'

GNU coreutils 8.32                                            February 2022
 Manual page whoami(1) line 1/32 (END) (press h for help or q to quit)
```



```
WHEREIS(1)                                                    User Commands

NAME
       whereis - locate the binary, source, and manual page files for a command

SYNOPSIS
       whereis [options] [-BMS directory... -f] name...

DESCRIPTION
       whereis locates the binary, source and manual files for the specified command names. The supplied names are first
       leading pathname components. Prefixes of s. resulting from use of source code control are also dealt with. whereis
       to locate the desired program in the standard Linux places, and in the places specified by $PATH and $MANPATH.

       The search restrictions (options -b, -m and -s) are cumulative and apply to the subsequent name patterns on the cc
       new search restriction resets the search mask. For example,

          whereis -bm ls tr -m gcc

       searches for "ls" and "tr" binaries and man pages, and for "gcc" man pages only.

       The options -B, -M and -S reset search paths for the subsequent name patterns. For example,

          whereis -m ls -M /usr/share/man/man1 -f cal

       searches for "ls" man pages in all default paths, but for "cal" in the /usr/share/man/man1 directory only.

OPTIONS
       -b
           Search for binaries.

       -m
           Search for manuals.

       -s
           Search for sources.

       -u
           Only show the command names that have unusual entries. A command is said to be unusual if it does not have jus
           each explicitly requested type. Thus 'whereis -m -u *' asks for those files in the current directory which hav
           documentation file, or more than one.

       -B list
           Limit the places where whereis searches for binaries, by a whitespace-separated list of directories.
 Manual page whereis(1) line 1 (press h for help or q to quit)
```

39. How do you use the "ls" command to list all files and directories in the current directory?



```
vijeta@Vijeta:~$ ls -it
1442586 dbda      1442264 snap       1442343 Downloads  1442348 Pictures  1442344 Templates
1442342 Desktop   1442346 Documents  1442347 Music      1442345 Public    1442349 Videos
```