# OS LAB-1:

## BASIC LINUX COMMANDS:

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22BCE1778

SUBMITTED TO:

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1.The mkdir command is used to create a new directory under any directory.

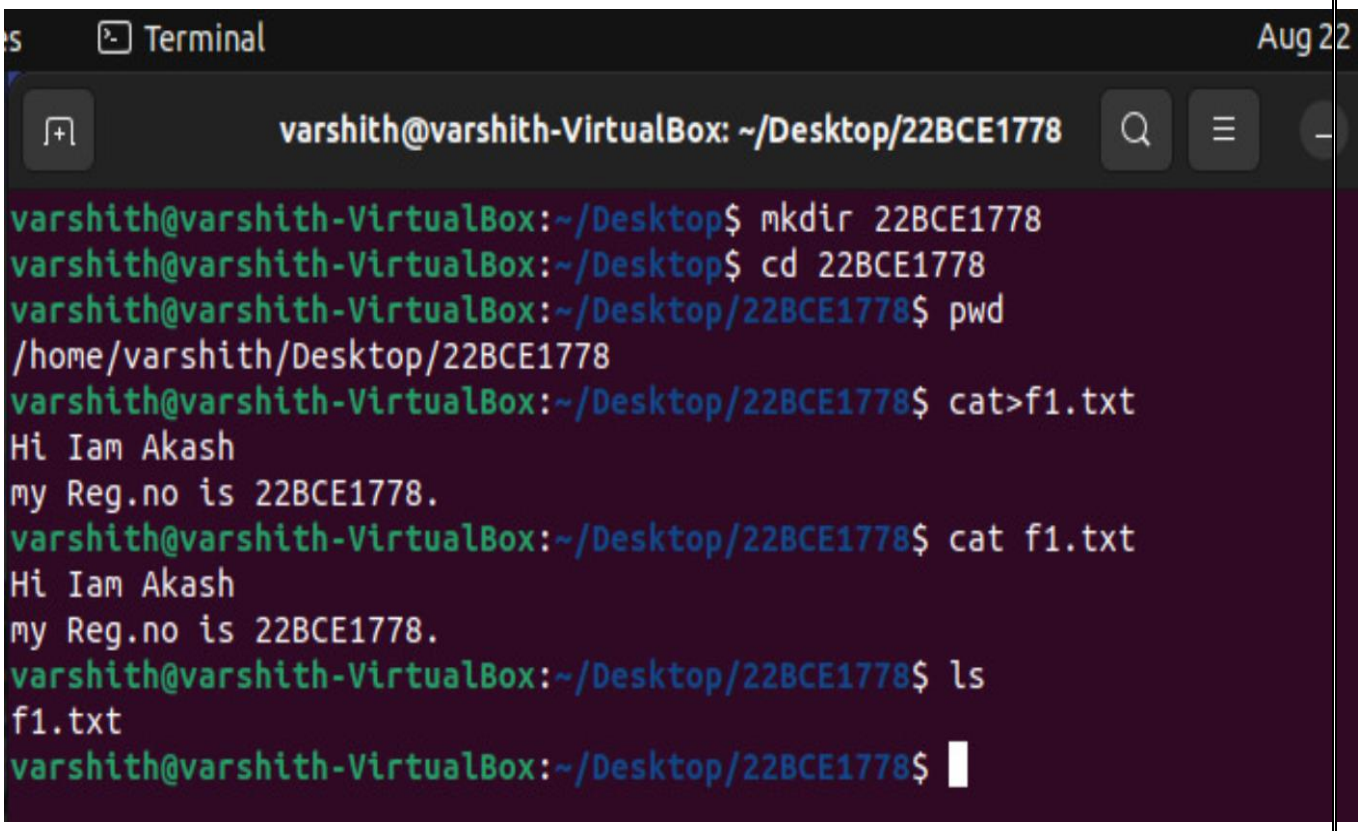
2.The pwd command is used to display the location of the current working directory.

3.The ls command is used to display a list of content of a directory.

4.The cd command is used to change the current directory.

5.The touch command is used to create empty files. We can create multiple empty files by executing it once.

6.The cat command is a multi-purpose utility in the Linux system. It can be used to create a file, display content of the file, copy the content of one file to another file, and more.

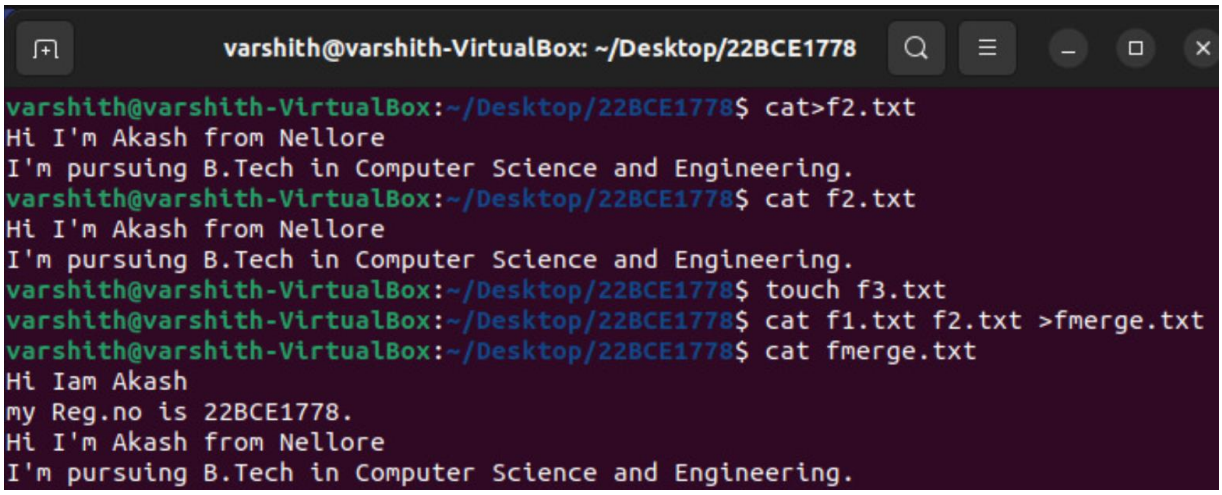


7.Fmerge : This is the argument to the cat command and specifies the name of the file you want to display. In this case, it's assuming there is a file named "fmerge" in the current directory, and it will display the contents of that file.

8.The head command is used to display the content of a file. It displays the first 10 lines of a file.

9.The tail command is similar to the head command. The difference between both commands is that it displays the last ten lines of the file content. It is useful for reading the error message.

10.The tac command is the reverse of cat command, as its name specified. It displays the file content in reverse order (from the last line).



```
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ vi f4.txt
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ head f4.txt
1
2
3
4
5
6
7
8
9
10
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ tail f4.txt
11
12
13
14
15
16
17
18
19
20
```

```
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ tac f4.txt
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
```

```
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ cat>f5.txt
Hello Everyone
Welcome to VIT Chennai
Glad to meet you all
Glad to meet you all
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ cat>f6.txt
Hi Guys
Welcome to VIT Chennai
I'm Happy to meet you
```

11.Wc : This wc, uniq, and nl command counts the number of lines, words, and characters in "document.txt,"

12.Uniq : sorts and displays unique lines from "data.txt" with line numbers, and also displays the contents of

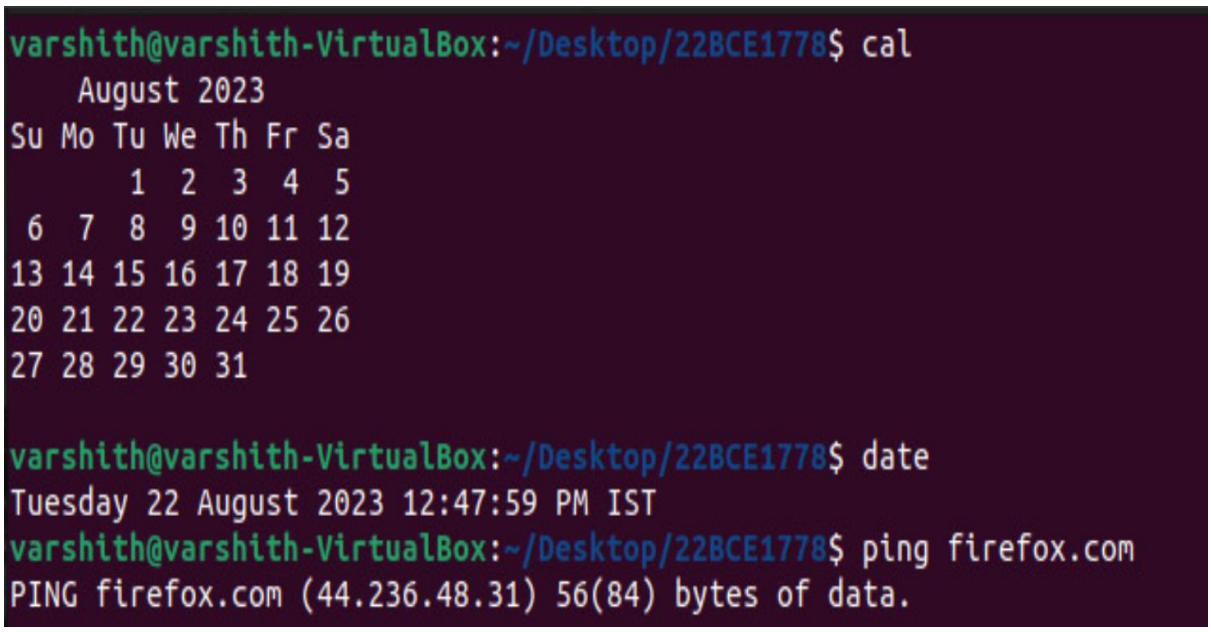
```
varshith@varshith-VirtualBox:~/Desktop$ cd 22BCE1778
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ ls
f1.txt  f2.txt  f3.txt  f4.txt  f5.txt  f6.txt  fmerge.txt
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ wc f5.txt
 4 16 80 f5.txt
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ cat f5.txt
Hello Everyone
Welcome to VIT Chennai
Glad to meet you all
Glad to meet you all
```

```
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ uniq f5.txt
Hello Everyone
Welcome to VIT Chennai
Glad to meet you all
varshith@varshith-VirtualBox:~/Desktop/22BCE1778$ nl f5.txt
     1  Hello Everyone
     2  Welcome to VIT Chennai
     3  Glad to meet you all
     4  Glad to meet you all
```

13.cal: The "cal" command is used to display a calendar, showing the current month's days and dates, with Sunday as the first day of the week by default.

14.date: The "date" command is used to print the current date and time to the terminal, including details like the day of the week, month, day, time, and year.

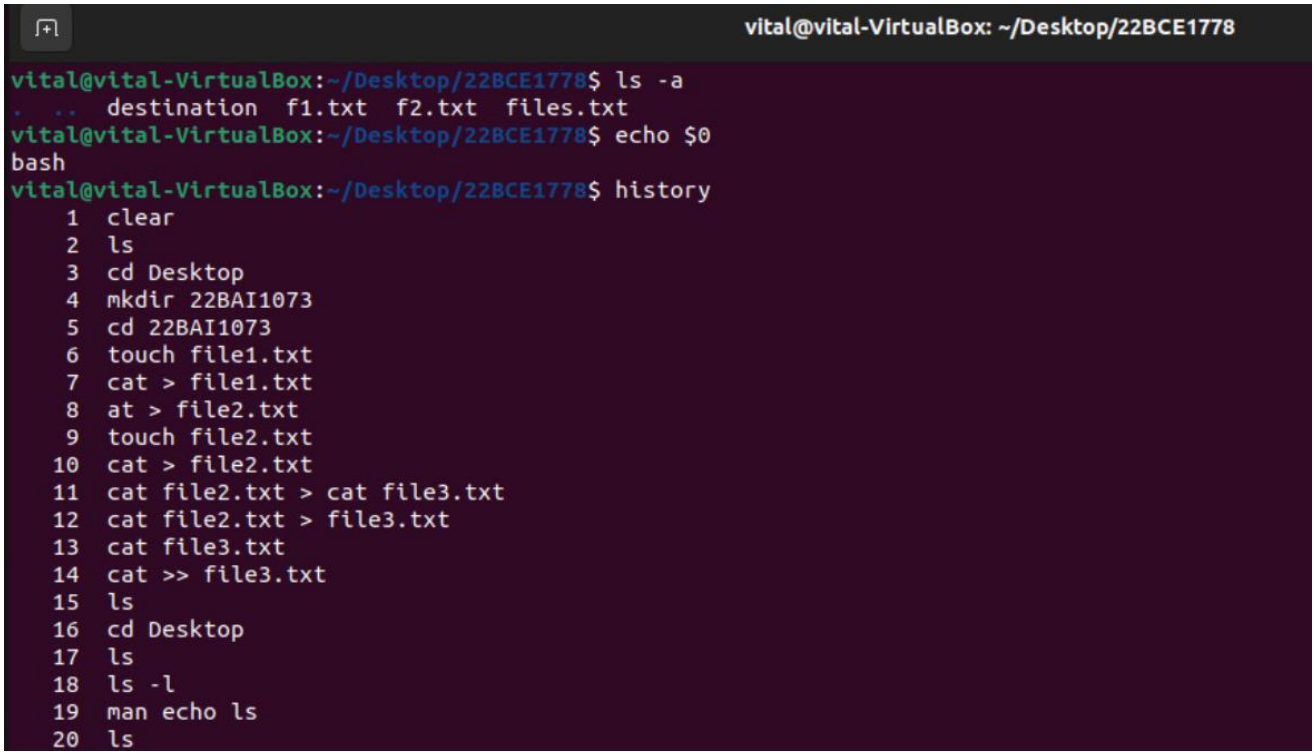
15.ping: The "ping" command is employed to test network connectivity and reachability by sending ICMP (Internet Control Message Protocol) echo requests to a specified host or IP address and receiving responses to assess the network's responsiveness.




16.ls -a: The "ls -a" command lists all files and directories, including hidden ones (those whose names begin with a dot), in the current directory.

17.echo: The "echo" command is used to display text or variables to the terminal, making it a handy tool for printing messages or information.

18.history: The "history" command shows a list of previously executed shell commands, allowing users to view their command history and repeat or recall commands easily.

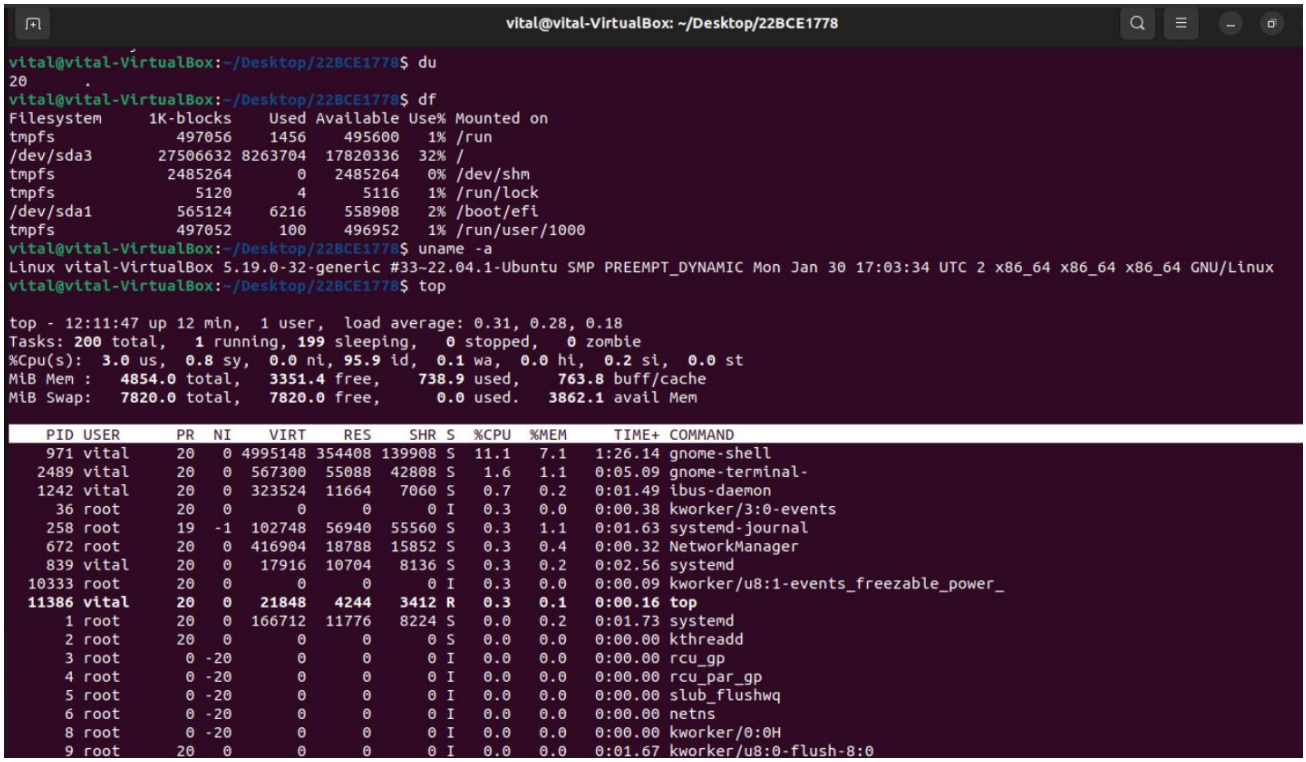



19.du: The "du" command is used to display the disk usage of files and directories in the current location or a specified path, showing the amount of space they occupy.

20.df: The "df" command provides information about disk space usage on the system, including the capacity, used space, and available space on mounted filesystems.

21.uname -a: "uname -a" is a command that displays detailed system information, including the kernel name, network node hostname, kernel release, kernel version, machine hardware name, and more.

22.top: The "top" command allows users to monitor real-time system processes and resource usage, providing a dynamic view of CPU, memory, and other system statistics.



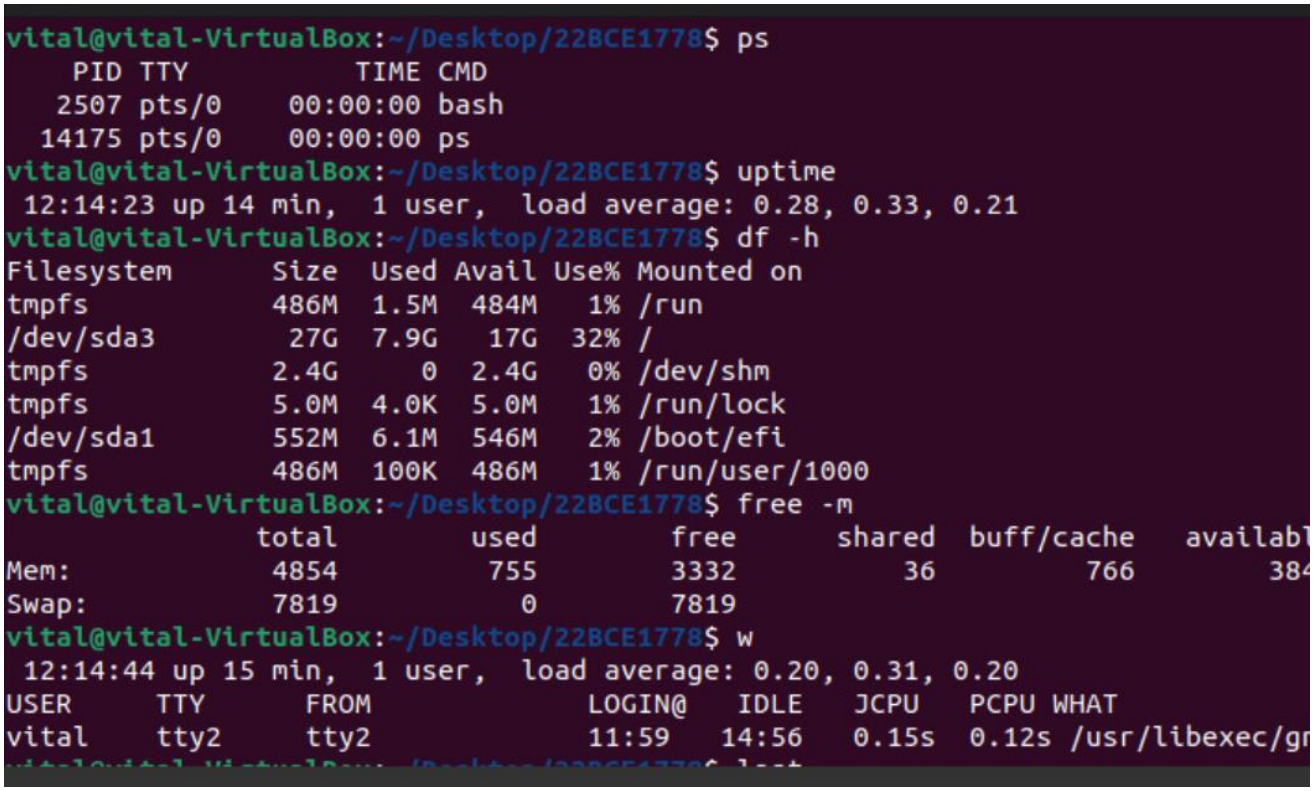

23.ps: "ps" is used to list the currently running processes on the system, providing details such as process IDs (PIDs), CPU and memory usage, and the command associated with each process.

24.uptime: The "uptime" command provides information about how long the system has been running, as well as the current system load averages.

25.df -h: "df -h" is a variation of the "df" command that displays disk space usage in a more human-readable format, showing sizes in gigabytes, megabytes, etc., for easier comprehension.

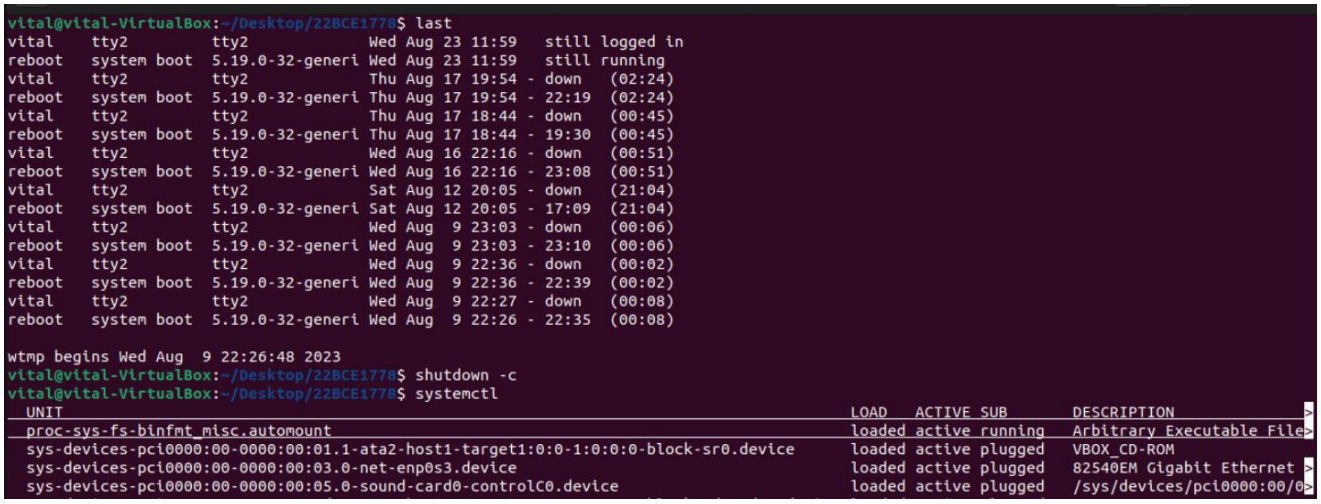
26.free -m: "free -m" displays system memory usage, including total, used, and free memory, in megabytes.

26.w: The "w" command shows a list of logged-in users, along with their login times, the commands they are currently running, and more.




27.last: "last" displays a list of recent system login activity, including user logins, logouts, and system restarts, along with corresponding timestamps.

28.shutdown -c: "shutdown -c" is used to cancel a scheduled system shutdown, providing a way to abort a shutdown operation that has been initiated.




29.du -h: "du -h" is used to display the disk usage of files and directories in the current location, with sizes shown in a human-readable format (e.g., kilobytes, megabytes).

30.hostname: The "hostname" command prints the name of the current host or machine.

31.gzip: "gzip" is a command used to compress files, reducing their size to save disk space.

32.find destination: The "find" command is used to search for files and directories within a specified "destination" directory or path.

33.lshw: The "lshw" command provides detailed information about hardware components in a Linux system.

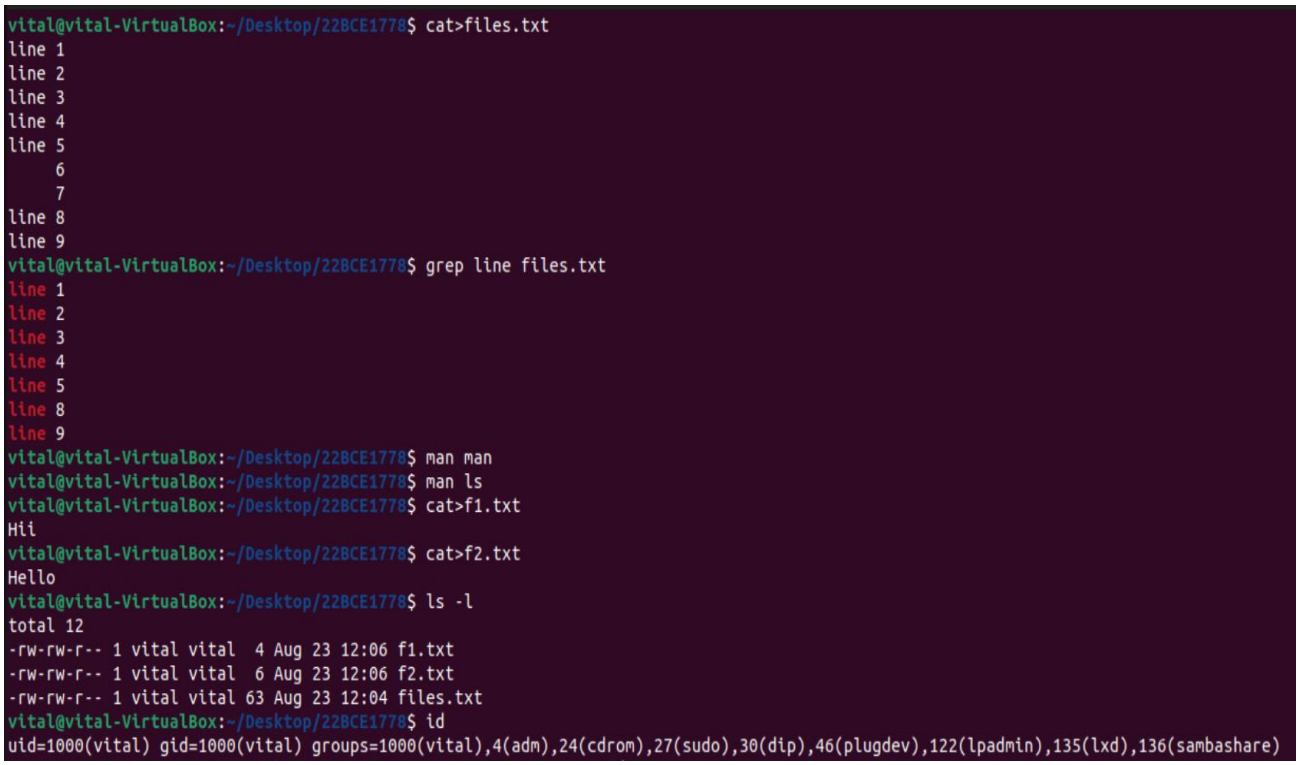
34.grep: "grep" is a powerful text-searching utility that searches for patterns or text within files or command output.

35.man man: "man man" opens the manual page for the "man" command, providing information about how to use the manual itself.

36.man ls: "man ls" opens the manual page for the "ls" command, providing detailed information on how to use the "ls" command for listing files and directories.

37.ls -l: The "ls -l" command lists files and directories in long format, displaying additional details such as permissions, ownership, size, and modification date.

id: The "id" command provides information about the current user, including their user and group IDs.




38.hostname -i: "hostname -i" displays the IP address associated with the system's hostname.

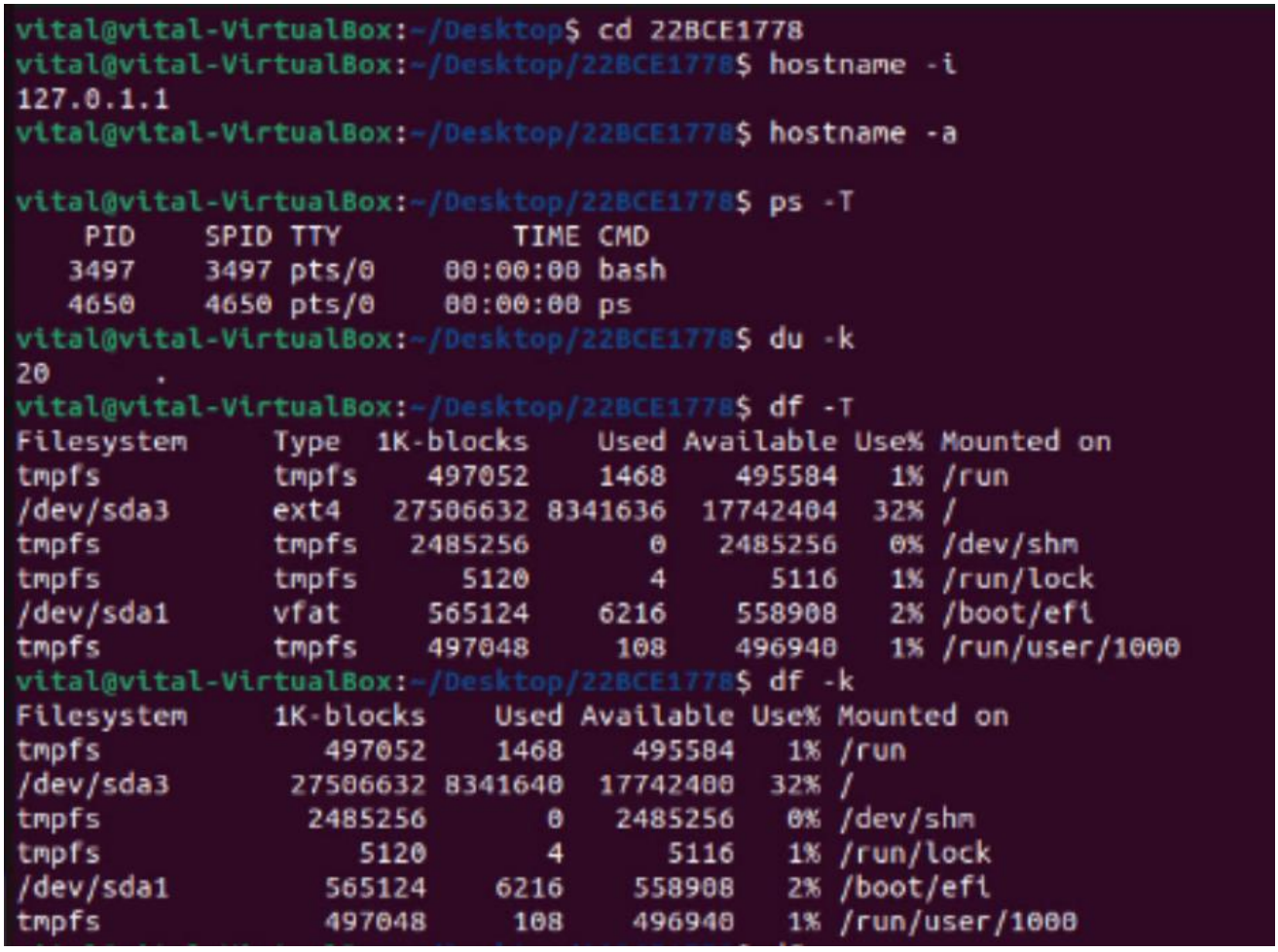
39.hostname -a: "hostname -a" displays all aliases for the system's hostname.

40.ps -T: "ps -T" lists running processes and includes information about their associated threads.

41.du -k: "du -k" displays disk usage in kilobytes, providing a more detailed view of file sizes.

42.df -T: "df -T" lists disk space usage with filesystem type information.

43.df -k: "df -k" displays disk usage in kilobytes, showing the space used and available on mounted filesystems.




44.df -m: "df -m" provides disk usage information in megabytes, making it easier to understand larger storage values.

45.dd: The "dd" command is used for low-level copying and conversion of files and data, often used for tasks like creating disk images.

46.rm: "rm" is used to remove or delete files and directories.

```
vital@vital-VirtualBox:~/Desktop/22BCE1778$ df -m
Filesystem     1M-blocks  Used Available Use% Mounted on
tmpfs                486     2       484   1% /run
/dev/sda3          26862  8147     17327  32% /
tmpfs                2428     0      2428   0% /dev/shm
tmpfs                   5     1         5   1% /run/lock
/dev/sda1             552     7       546   2% /boot/efi
tmpfs                486     1       486   1% /run/user/1000
vital@vital-VirtualBox:~/Desktop/22BCE1778$ dd
fdsdffdff
fdsdffdff
fdsdffdff
fdsdffdff
0+2 records in
0+1 records out
20 bytes copied, 39.9537 s, 0.0 kB/s
vital@vital-VirtualBox:~/Desktop/22BCE1778$ cat>w.txt
Hi
vital@vital-VirtualBox:~/Desktop/22BCE1778$ rm f2.txt
vital@vital-VirtualBox:~/Desktop/22BCE1778$ ls
destination  f1.txt  files.txt.gz  w.txt
```

47.unzip: The "unzip" command is used to extract files from a compressed ZIP archive.

48.zip: "zip" is used to create compressed ZIP archives from files and directories.

49."rmdir" deletes empty directories, while "rm" removes files and directories, including non-empty ones, in one line.

The "rm" command is a more versatile tool for deleting files and directories, including non-empty directories.

```
vital@vital-VirtualBox:~/Desktop/22BCE1778$ unzip
UnZip 6.00 of 20 April 2009, by Debian. Original by Info-ZIP.

Usage: unzip [-Z] [-opts[modifiers]] file[.zip] [list] [-x xlist] [-d exdir]
  Default action is to extract files in list, except those in xlist, to exdir;
  file[.zip] may be a wildcard.  -Z => ZipInfo mode ("unzip -Z" for usage).

  -p  extract files to pipe, no messages     -l  list files (short format)
  -f  freshen existing files, create none    -t  test compressed archive data
  -u  update files, create if necessary      -z  display archive comment only
  -v  list verbosely/show version info       -T  timestamp archive to latest
  -x  exclude files that follow (in xlist)   -d  extract files into exdir
modifiers:
  -n  never overwrite existing files         -q  quiet mode (-qq => quieter)
  -o  overwrite files WITHOUT prompting      -a  auto-convert any text files
  -j  junk paths (do not make directories)   -aa treat ALL files as text
  -U  use escapes for all non-ASCII Unicode  -UU ignore any Unicode fields
  -C  match filenames case-insensitively     -L  make (some) names lowercase
  -X  restore UID/GID info                   -V  retain VMS version numbers
  -K  keep setuid/setgid/tacky permissions   -M  pipe through "more" pager
  -O CHARSET  specify a character encoding for DOS, Windows and OS/2 archives
  -I CHARSET  specify a character encoding for UNIX and other archives

See "unzip -hh" or unzip.txt for more help.  Examples:
  unzip data1 -x joe   => extract all files except joe from zipfile data1.zip
  unzip -p foo | more  => send contents of foo.zip via pipe into program more
  unzip -fo foo ReadMe => quietly replace existing ReadMe if archive file newer
vital@vital-VirtualBox:~/Desktop/22BCE1778$ whatis pwd
pwd (1)              - print name of current/working directory
```

```
vital@vital-VirtualBox:~/Desktop/22BCE1778$ zip
Copyright (c) 1990-2008 Info-ZIP - Type 'zip "-L"' for software license.
Zip 3.0 (July 5th 2008). Usage:
zip [-options] [-b path] [-t mmddyyyy] [-n suffixes] [zipfile list] [-xi list]
  The default action is to add or replace zipfile entries from list, which
  can include the special name - to compress standard input.
  If zipfile and list are omitted, zip compresses stdin to stdout.
  -f   freshen: only changed files  -u   update: only changed or new files
  -d   delete entries in zipfile    -m   move into zipfile (delete OS files)
  -r   recurse into directories     -j   junk (don't record) directory names
  -0   store only                   -l   convert LF to CR LF (-ll CR LF to LF)
  -1   compress faster              -9   compress better
  -q   quiet operation              -v   verbose operation/print version info
  -c   add one-line comments        -z   add zipfile comment
  -@   read names from stdin        -o   make zipfile as old as latest entry
  -x   exclude the following names  -i   include only the following names
  -F   fix zipfile (-FF try harder) -D   do not add directory entries
  -A   adjust self-extracting exe   -J   junk zipfile prefix (unzipsfx)
  -T   test zipfile integrity       -X   eXclude eXtra file attributes
  -y   store symbolic links as the link instead of the referenced file
  -e   encrypt                      -n   don't compress these suffixes
  -h2  show more help

vital@vital-VirtualBox:~/Desktop/22BCE1778$ mkdir jayampu
vital@vital-VirtualBox:~/Desktop/22BCE1778$ rmdir jayampu
vital@vital-VirtualBox:~/Desktop/22BCE1778$
```