* **man:** It is used to display the user manual of any command that we run on the terminal.

**Syntax**: man ls

* **ls**: It list the files and directories in the current directory.

**Syntax**: ls [/directory/folder/path]

* -R – lists all the files in the subdirectories.
* -a – shows all files, including hidden ones.
* -lh – converts sizes to readable formats, such as MB, GB, and TB.
* **cd**: Changes the current directory.

**Syntax:** cd /directory/folder/path

* cd ~[username] – goes to another user’s home directory.
* cd .. – moves one directory up.
* cd- – switches to the previous directory.
* **pwd**: Shows the current working directory.

**Syntax**: pwd [option]

* **mkdir**: Creates a new directory.

**Syntax**: mkdir [option] [directory\_name]

* **rmdir**: Deletes an empty directory.

**Syntax:** rmdir [option] directory\_name

* **rm**: The rm command is used to delete files, groups of files, directories.

**Syntax:** rm [filename1] [filename2] [filename3]

* -i – prompts a confirmation before deletion.
* -f – allows file removal without a confirmation.
* -r – deletes files and directories recursively.
* **cp:** Use the cpcommand to copy files or directories, including their content, from your current location to another.

**Syntax:** cp filename.txt /home/username/Documents

* **mv:** Use the**mv** command to move or rename files and directories. To move items, enter the file name followed by the destination directory:

**Syntax**: mv filename.txt /home/username/Documents

* **touch**: The touch command in Linux is used to create a new empty file.

**Syntax:** touch /home/directory/path/file.txt

* **cat:** The cat (concatenate) command in Linux displays file contents. It reads one or multiple

files and prints their content to the terminal.

**Syntax:** cat filename.txt

There are various ways to use the cat command:

* cat > filen.txt – creates a new file.
* cat file1.txt file2.txt > file3.txt – merges file1.txt with file2.txt and stores the output in filename3.txt.
* tac file.txt – displays content in reverse order.
* **nano, vi:** Nano & vi is a simple yet powerful command line-based text editor.

**Syntax:** nano file1.txt, vi file2.txt

* **grep:** Grep, short for “global regular expression print”, The grep command in Unix/Linux is a powerful tool used for searching and manipulating text patterns within files.

**Syntax**: grep blue notepad.txt

* grep -i  Use the -i option to display both uppercase and lowercase results.
* **sed:** The **sed**command lets you find, replace, and delete patterns in a file without using a text editor.

**Syntax**: sed [option] 'script' input\_file, Example: sed 's/unix/linux/' geekfile.txt

Use the **s**subcommand to replace matching patterns or **d**to delete them.

Here the “s” specifies the substitution operation. The “/” are delimiters. The “unix” is the search pattern and the “linux” is the replacement string.

By default, the sed command replaces the first occurrence of the pattern in each line and it won’t replace the second, third…occurrence in the line.

* **zip**: zip can compress multiple files and even entire directory hierarchies.

**Syntax**: zip [file\_name.zip] [file\_name]

**Unzip**: Use the **unzip** command to [extract the compressed file](https://www.hostinger.in/tutorials/how-to-unzip-files-linux/).

**Syntax**: unzip [file\_name.zip]

* **gzip**: gzip is used to compress individual(single) files not directory.

**Syntax**: gzip [Options] [filenames]

**Compress** file using gzip: gzip myfile.txt

**Decompress** file using gzip: gzip -d myfile.txt.gz

* **Tar**: Tar is used to combine numerous files and directories into a single archive.

**Syntax:** tar [options] [file/directory]

tar Command Options:

* + -c: Create a new archive.

tar -cvf archive.tar file1.txt file2.txt

* + -x: Extract files from an archive.

tar -xvf archive.tar

* + -t: List the contents of an archive.

tar -tvf archive.tar

* + -f: Use the following archive file.
  + -v: Verbose output.
  + -z: Compress or decompress the archive using gzip.
  + -j: Compress or decompress the archive using bzip2.
* **Head**: The**head** command prints the first ten lines of a text file or piped data in your

command-line interface. Here’s the general syntax:

**Syntax:** head [option] [file]

head note.txt

The head command accepts several options, such as:

* -n – changes the number of lines printed. For example, head -n 5 shows the first five lines.
* -c – prints the file’s first customized number of bytes.
* -q – disables headers specifying the file name.
* **Tail:** The**tail** command displays the last ten lines of a file, which is useful for checking new

data and errors. Here’s the syntax:

Syntax: tail [option] [file]

tail -n colors.txt

* **sudo:** **Superuser do**or **sudo**is one of the most basic commands in Linux. It runs your

command with administrative or root permissions.

**Syntax:** sudo (command)

* **su:** The **'su'** command in Linux is used to switch to another user. You can use it by typing su

username in the terminal, where 'username' is the user you want to switch to. In this

example, we're using the 'su' command to switch to the user 'john'.

**Syntax**: su [options] [username [argument]]

* **lscpu:** The lscpu command, short for *list CPU*, provides a detailed list of information about the [CPUs](https://phoenixnap.com/glossary/cpu-definition) in the system. This includes the CPU number, architecture, vendor, family, model, and CPU caches.

**Syntax**: lscpu [options]

* **free:** The Linux free command outputs a summary of RAM usage, including total, used, free, shared, and available memory and swap space. The command helps [monitor resource usage](https://phoenixnap.com/kb/top-command-in-linux) and **allows** an admin to determine if there's enough room for running new programs.

**Syntax**: free [options]

free -h: will show output in human readable format.

**Note:** To display Linux human readable file size, use the **free** with the **-h** option.

* **df:** The df command displays information about total space and available space on a file

system.

**Syntax**: df [options] [file]

These are some acceptable options:

* -m – displays information on the file system usage in MBs.
* -k – prints file system usage in KBs.
* -T – shows the file system type in a new column.
* **cat /etc/os-release:** It will display specific details about your Linux distribution and version.
* **Hostname**: **Hostname**command to display the system’s hostname.

**Syntax:** hostname [option]

**You can run it without an option or use the following:**

* -a – displays the hostname’s alias.
* -A – shows the machine’s Fully Qualified Domain Name (FQDN).
* -i – outputs the machine’s IP address.
* **Uname**: The **uname** or **unix name** command prints information about your machine,

including its hardware, system name, and Linux kernel.

**Syntax:** uname [option]

**While you can use it without an option, add the following to modify the command:**

* -a – prints all the system information.
* -s – outputs the kernel name.
* -n – shows the system’s node hostname.
* **systemctl**: Systemctl is the command-line tool that manages the systemd system and

service manager in Linux. It lets users control and manage system services and

units with commands to start, stop, restart, and check their status.

**Syntax**: systemctl [commandname] [service\_name]

* **Uptime:** Uptime Command in Linux: It is used to find out how long the system is active (running).

**Syntax**: uptime [-option]

* **top:** The ` top` command is a built-in utility in Linux that provides a real-time, dynamic view of the system's performance. It displays information about CPU usage, memory usage, running processes, and more, allowing users to monitor and analyze system activity effectively.

**Syntax**: top

* **Kill & killall:** The Linux **kill** command is used to forcefully end a process in Linux using its PID, while the **killall**command terminates all processes with a specific name.

**Syntax**: kill [signal] PID

**Some Common Signals in kill Command**

| Signal Name | Signal Number | Description |
| --- | --- | --- |
| SIGHUP | 1 | It hang-up detected on controlling terminals or death of controlling process. |
| SIGINT | 2 | It interrupts from keyboard. |
| SIGKILL | 9 | It kills signal. |
| SIGTERM | 15 | It terminates signal. |

* **du:** Command du stands for Disk Usage. It is used to check the information of disk usage of files and directories on a system. Command du display a list of all the files along with their respective sizes. By default, size given is in kilobytes. Show disk usage of a directory.
* **-h:** Displays sizes in human-readable format
* **-time:** show time of last modification of any file or directory.

**Syntax**: du -h /home/Chaman/test

* **git clone:** The git clone command creates a copy of an existing Git repository. This repository can be hosted on platforms like GitHub.

**Syntax:** git clone https://github.com/YOUR-USERNAME/YOUR-REPOSITORY