



File and Directory Management

No	Command	Description	Example
1	<code>pwd</code>	Prints the current working directory.	<code>pwd</code> displays the full path of the current directory.
2	<code>ls</code>	Lists directory contents.	<code>ls -l</code> lists files in long format, showing permissions, owner, size, and modification date. <code>ls -a</code> lists files including hidden files (those starting with a dot) <code>ls -la</code> list directory contents in a long format, including hidden files.
3	<code>cd</code>	Changes the current directory.	<code>cd /home/user</code> changes the directory to /home/user.
4	<code>mkdir</code>	Creates a new directory.	<code>mkdir newdir</code> creates a directory named newdir.
5	<code>rmdir</code>	Removes an empty directory.	<code>rmdir olddir</code> removes the empty directory olddir.
6	<code>touch</code>	Creates an empty file or updates the timestamp of an existing file.	<code>touch newfile.txt</code> creates an empty file named newfile.txt.
7	<code>echo</code>	Displays a line of text or a variable value.	<code>echo "Hello, World!"</code> prints Hello, World! to the terminal. <code>echo "Hello, World!" > filename.txt</code> creates a new text file named "filename.txt" (or overwrites it if it already exists) and writes the phrase "Hello, World!" into it.

			<code>echo "Hello, World!" >> filename.txt</code> appends the phrase "Hello, World!" to the end of the existing file named "filename.txt" (or creates the file if it doesn't exist).
8	<code>cp</code>	Copies files or directories.	<code>cp file1.txt file2.txt</code> copies file1.txt to file2.txt. <code>cp file1.txt ./Desktop</code> copies the file named "file1.txt" from the current directory to the Desktop folder.
9	<code>mv</code>	used for moving and renaming files and directories.	<code>mv oldname.txt newname.txt</code> renames oldname.txt to newname.txt in the current directory. <code>mv file1.txt ./Desktop</code> moves the file named "file1.txt" from the current directory to the Desktop folder.
10	<code>rm</code>	Removes files or directories.	<code>rm file.txt</code> deletes file.txt.
File Viewing and Editing			
11	<code>cat</code>	Concatenates and displays file content.	<code>cat file.txt</code> displays the content of file.txt.
12	<code>less</code>	Views file content one screen at a time.	<code>less file.txt</code> displays file.txt content one screen at a time.
13	<code>more</code>	displays the content of the file one screen at a time.	<code>more file.txt</code>
14	<code>nano</code>	Open the Nano text editor.	<code>nano file.txt</code> opens file.txt in the Nano editor.
15	<code>vim</code>	Open the Vim text editor.	<code>vim file.txt</code> opens file.txt in the Vim editor.

16	<code>head</code>	Displays the first part of a file.	<code>head -n 10 file.txt</code> shows the first 10 lines of <code>file.txt</code> .
17	<code>tail</code>	Displays the last part of a file.	<code>tail -n 10 file.txt</code> shows the last 10 lines of <code>file.txt</code> .
18	<code>cmp</code>	Compare two files byte by byte.	<code>cmp file1 file2</code> compares <code>file1</code> and <code>file2</code> .
19	<code>diff</code>	Compares files line by line.	<code>diff file1 file2</code> shows the differences between <code>file1</code> and <code>file2</code> .
20	<code>sort</code>	Sorts lines of text files.	<code>sort file.txt</code> sorts the lines in <code>file.txt</code> .
21	<code>find</code>	Searches for files in a directory hierarchy.	<code>find /home -name "*.txt"</code> finds all <code>.txt</code> files in the <code>/home</code> directory.
22	<code>chmod</code>	Changes file permissions.	<code>chmod 755 script.sh</code> sets the permissions of <code>script.sh</code> to <code>rxwxr-xr-x</code> .
23	<code>chown</code>	Changes file owner and group.	<code>chown user:group file.txt</code> changes the owner and group of <code>file.txt</code> to <code>user</code> and <code>group</code> .
24	<code>grep</code>	Searches for patterns in files.	<code>grep "pattern" file.txt</code> searches for "pattern" in <code>file.txt</code> .
25	<code>awk</code>	A programming language for pattern scanning and processing.	<code>awk '{print \$1}' file.txt</code> prints the first field of each line in <code>file.txt</code> .
Process Management			
26	<code>ps</code>	Displays information about active processes.	<code>ps aux</code> shows detailed information about all running processes.

27	<code>top</code>	Displays real-time system resource usage.	<code>top</code> shows real-time processes and system resource usage.
28	<code>htop</code>	An interactive process viewer.	<code>htop</code> provides an interactive view of system processes.
29	<code>kill</code>	Terminates a process by PID.	<code>kill 1234</code> terminates the process with PID 1234.
30	<code>killall</code>	Terminates processes by name.	<code>killall firefox</code> terminates all processes named <code>firefox</code> .
31	<code>pstree</code>	Displays running processes as a tree	<code>pstree</code> shows the process hierarchy, with child processes indented under their parents.
32	<code>pkill</code>	Terminates processes by name or other attributes.	<code>pkill firefox</code> terminates all processes named <code>firefox</code> .
System Information			
33	<code>uname</code>	Prints system information.	<code>uname -a</code> displays all system information.
34	<code>neofetch</code>	Displays system information with an aesthetic layout.	<code>neofetch</code> shows system information in a visually appealing format.
35	<code>df</code>	Displays disk space usage of file systems.	<code>df -h</code> shows disk space usage in a human-readable format.
36	<code>du</code>	Estimates file and directory space usage.	<code>du -sh /path/to/directory</code> shows the total size of a directory in human-readable format.
37	<code>free</code>	Displays memory usage.	<code>free -h</code> shows memory usage in a human-readable format.

38	<code>lscpu</code>	Displays information about the CPU architecture.	<code>lscpu</code>
39	<code>lshw</code>	Lists hardware information.	<code>sudo lshw</code>
40	<code>lsblk</code>	Lists information about block devices.	<code>lsblk</code>
User and Group Management			
41	<code>whoami</code>	Displays the current logged-in user.	<code>whoami</code> shows the username of the current user.
42	<code>sudo</code>	Executes a command as another user, typically the superuser.	<code>sudo apt-get update</code> runs the <code>apt-get update</code> command with superuser privileges.
43	<code>su</code>	Switch to another user account.	<code>su - user</code> switches to the <code>user</code> account.
44	<code>useradd</code>	Adds a new user.	<code>sudo useradd newuser</code> adds a new user named <code>newuser</code> .
45	<code>adduser</code>	Adds a new user with a more interactive interface .	<code>sudo adduser newuser</code> interactively adds a new user named <code>newuser</code> .
46	<code>passwd</code>	Changes a user's password.	<code>passwd</code> prompts to change the current user's password. <code>sudo passwd newuser</code> change <code>newuser's</code> password
47	<code>userdel</code>	Deletes a user account.	<code>sudo userdel username</code> removes the specified user account.
48	<code>usermod</code>	Modifies user account properties.	<code>sudo usermod -aG sudo username</code> adds the user to the <code>sudo</code> group.
49	<code>groupadd</code>	Creates a new group.	<code>sudo groupadd newgroup</code> creates a new group named <code>newgroup</code> .

50	<code>groupdel</code>	Deletes a group	<code>sudo groupdel groupname</code> removes the specified group.
51	<code>groups</code>	Displays group membership for a user.	<code>groups username</code> shows all groups the specified user belongs to.
52	<code>id</code>	Displays user and group information for a specified user.	<code>id username</code> shows user ID, group ID, and group memberships for the specified user.
Network Configuration and Monitoring			
53	<code>ifconfig</code>	Display network interface information. Configures network interfaces.	<code>ifconfig eth0</code> displays the configuration of the <code>eth0</code> interface.
54	<code>ip address</code>	Displays IP addresses and interfaces.	<code>ip address show</code> shows all IP addresses and network interfaces.
55	<code>ping</code>	Sends ICMP ECHO_REQUEST packets to network hosts.	<code>ping google.com</code> sends ping requests to <code>google.com</code> .
56	<code>netstat</code>	Displays network connections, routing tables, and interface statistics.	<code>netstat -tuln</code> shows listening ports and their status.
57	<code>ss</code>	Displays socket statistics.	<code>ss -tuln</code> shows listening sockets. <code>ss -l4p</code> displays all listening IPv4 sockets along with the associated processes
58	<code>traceroute</code>	Traces the route packets take to a network host.	<code>traceroute google.com</code> shows the route to <code>google.com</code> .
59	<code>ssh</code>	Connects to a remote machine via SSH.	<code>ssh user@hostname</code> connects to the remote machine <code>hostname</code> as <code>user</code> .

60	<code>nc</code>	A versatile networking utility for reading from and writing to network connections.	<code>nc -l 1234</code> listens on port 1234. <code>nc hostname 80</code> connects to 'hostname' on port 80.
Package Management			
61	<code>apt</code>	Manages packages on Debian-based systems.	<code>sudo apt install package</code> installs the specified package. <code>sudo apt remove package</code> removes the specified package. <code>apt update</code> update the package list <code>apt upgrade</code> upgrade installed packages to their latest versions <code>apt dist-upgrade</code> perform a comprehensive system upgrade
62	<code>apt-get</code>	An older command-line tool for package management on Debian-based systems.	<code>sudo apt-get install package</code> installs the specified package. <code>sudo apt-get remove package</code> removes the specified package.
63	<code>yum</code>	Package manager for RPM-based Linux distributions (e.g., CentOS, RHEL).	<code>sudo yum install package</code> installs the specified package. <code>sudo yum remove package</code> removes the specified package.
64	<code>dnf</code>	Next-generation package manager for RPM-based distributions (successor to yum).	<code>sudo dnf install package</code> installs the specified package. <code>sudo dnf remove package</code> removes the specified package.
65	<code>rpm</code>	Low-level package manager for RPM-based systems.	<code>rpm -i package.rpm</code> installs an RPM package. <code>rpm -e package</code> removes an installed RPM package.

66	<code>dpkg</code>	Low-level package manager for Debian-based systems.	<code>sudo dpkg -i package.deb</code> installs a Debian package. <code>sudo dpkg -r package</code> removes an installed Debian package
67	<code>snap</code>	Universal Linux package manager for containerized applications.	<code>sudo snap install package</code> installs a snap package. <code>sudo snap remove package</code> removes a snap package.
68	<code>zypper</code>	Package manager for openSUSE and SUSE Linux Enterprise.	<code>sudo zypper install package</code> installs the specified package. <code>sudo zypper remove package</code> removes the specified package.
Other Commands			
69	<code>ln</code>	Creates hard and symbolic links.	<code>ln -s target linkname</code> creates a symbolic link named <code>linkname</code> pointing to <code>target</code> .
70	<code>clear</code>	Clears the terminal screen.	<code>clear</code> clears the terminal display.
71	<code>exit</code>	Exits the current shell or session.	<code>exit</code> logs out of the current session.
72	<code>finger</code>	Displays information about system users.	<code>finger user</code> shows details about <code>user</code> .
73	<code>man</code>	Displays the manual page for a command.	<code>man ls</code> shows the manual for the <code>ls</code> command.
74	<code>whatis</code>	Displays a brief description of a command.	<code>whatis ls</code> provides a short description of the <code>ls</code> command.
75	<code>curl</code>	Transfers data from or to a server.	<code>curl -O http://example.com/file.txt</code> downloads <code>file.txt</code> from the specified URL.

76	<code>zip</code>	Compresses files into a zip archive.	<code>zip archive.zip file1 file2</code> compresses file1 and file2 into archive.zip.
77	<code>unzip</code>	Extracts files from a zip archive.	<code>unzip archive.zip</code> extracts files from archive.zip.
78	<code>resolvectl status</code>	Shows the current DNS settings.	<code>resolvectl status</code> displays the DNS configuration and status.
79	<code>iptables</code>	Configures packet filtering rules.	<code>sudo iptables -L</code> lists all current iptables rules.
80	<code>ufw</code>	Manages firewall with Uncomplicated Firewall.	<code>sudo ufw enable</code> enables the firewall.
81	<code>cal</code>	Displays a calendar.	<code>cal</code> shows the current month's calendar.
82	<code>systemctl</code>	Manages systemd services.	<code>systemctl status nginx</code> shows the status of the nginx service.
83	<code>history</code>	Displays the command history.	<code>history</code> shows the list of previously executed commands.
84	<code>dig</code>	Queries DNS servers.	<code>dig example.com</code> retrieves DNS information for example.com.
85	<code>host</code>	Performs DNS lookups.	<code>host example.com</code> shows the IP address of example.com.
86	<code>arp</code>	Displays and modifies the ARP table.	<code>arp -a</code> shows the current ARP table.

87	<code>iwconfig</code>	Configures wireless network interfaces.	<code>iwconfig wlan0</code> shows the configuration of the <code>wlan0</code> wireless interface.
88	<code>hostname</code>	Displays or sets the system's hostname.	<code>hostname</code> shows the current hostname.
89	<code>whois</code>	Queries the WHOIS database for domain information.	<code>whois example.com</code> retrieves WHOIS information for <code>example.com</code> .
90	<code>reboot</code>	Reboots the system.	<code>sudo reboot</code> restarts the system.
91	<code>shutdown</code>	Shuts down or reboots the system.	<code>sudo shutdown -h now</code> shuts down the system immediately.