1. File and Directory Management

- `ls` – List directory contents
- `cd` – Change directory
- `pwd` – Print working directory
- `cp` – Copy files and directories
- `mv` – Move or rename files and directories
- `mkdir` – Make directories
- `rmdir` – Remove empty directories
- `rm` – Remove files or directories
- `touch` – Change file timestamps or create empty files
- `file` – Display file type
- `find` – Search for files in a directory hierarchy
- `locate` – Find files by name
- `tree` – Display directories in a tree-like format
- `stat` – Display file or file system status

2. File Viewing and Editing

- `cat` – Concatenate and display file content
- `more` – View file content interactively (page by page)
- `less` – View file content interactively (scrollable)
- `head` – Output the first part of a file
- `tail` – Output the last part of a file
- `nano` – Text editor (terminal-based)
- `vim` – Advanced text editors
- `emacs` – Text editor
- `grep` – Search text using patterns
- `sed` – Stream editor for filtering and transforming text
- `awk` – Pattern scanning and processing language
- `cut` – Remove sections from each line of files
- `sort` – Sort lines of text files
- `wc` – Count characters, words and line in of a text file
- `uniq` – Report or omit repeated lines

3. Process Management

- `ps` – Report a snapshot of current processes
- `top` – Display Linux tasks
- `htop` – Interactive process viewer (advanced top)
- `kill` – Send a signal to a process, typically to terminate
- `killall` – Terminate processes by name
- `bg` – Resume a suspended job in the background
- `fg` – Bring a job to the foreground
- `jobs` – List active jobs
- `uptime` – Show how long the system has been running
- `time` – Measure program running time

4. Disk Management

- `df` – Report file system disk space usage
- `du` – Estimate file space usage
- `lsblk` – List information about block devices
- `fdisk` – Partition table manipulator for Linux
- `parted` – A partition manipulation program
- `mkfs` – Create a file system
- `mount` – Mount a file system
- `umount` – Unmount a file system
- `fsck` – File system consistency check and repair

5. Networking

- `ifconfig` – Configure network interfaces
- `ip` – Show/manipulate routing, devices, and tunnels
- `nmcli` – Show/manipulate network interface and routing
- `ping` – Send ICMP Echo requests to network hosts
- `netstat` – Network statistics
- `ss` – Socket statistics (faster than netstat)
- `traceroute` – Trace the route packets take to a network host
- `nslookup` – Query Internet name servers interactively

- `dig` – DNS lookup utility
- `wget` – Non interactive network downloader
- `curl` – Transfer data with URLs
- `scp` – Secure copy files between hosts
- `ssh` – Secure shell for remote login
- `ftp` – File Transfer Protocol client
- `tcpdump` – Command-line packet analyzer

6. User and Group Management

- `useradd` – Add a user to the system
- `usermod` – Modify a user account
- `userdel` – Delete a user account
- `groupadd` – Add a group to the system
- `groupdel` – Delete a group
- `passwd` – Change user password
- `chage` – Change user password expiry information
- `whoami` – Print the current logged-in user
- `who` – Show who is logged in
- `w` – Show who is logged in and what they're doing
- `id` – Display user and group information
- `groups` – Show user's groups

7. System Information and Monitoring

- `uname` – Print system information
- `hostname` – Show or set the system's hostname
- `uptime` – How long the system has been running
- `dmesg` – Boot and system messages
- `free` – Display memory usage
- `top` – Display Linux tasks
- `vmstat` – Report virtual memory statistics
- `watch` – Execute a program periodically, showing output
- `lscpu` – Display information about the CPU architecture
- `lsusb` – List USB devices

- `lspci` – List PCI devices
- `lshw` – List hardware configuration

8. Archiving and Compression

- `tar` – Archive files
    - tar -czf archive.tar.gz /path/to/directory – Compress files using gzip
    - tar -xzf archive.tar.gz – Extract gzipped tarball
    - tar -cf archive.tar /path/to/directory – Create a tarball
    - tar -xf archive.tar – Extract tarball
- `zip` – Package and compress files into a ZIP archive
- `unzip` – Extract files from a ZIP archive
- `gzip` – Compress files using the gzip algorithm
- `gunzip` – Decompress files compressed with gzip
- `bzip2` – Compress files using the bzip2 algorithm
- `bunzip2` – Decompress files compressed with bzip2
- `xz` – Compress files using the xz algorithm
- `unxz` – Decompress files compressed with xz

9. Package Management (Depends on Distribution)

Debian-based (e.g., Ubuntu)

- `apt-get` – APT package handling utility
    - apt-get install <package> – Install a package
    - apt-get update – Update package list
    - apt-get upgrade – Upgrade installed packages
    - apt-get remove <package> – Remove a package

Red Hat-based (e.g., AlmaLinux, Fedora)

- `dnf` – Next-generation package manager (Fedora, CentOS 8+)
    - dnf install <package> – Install a package
    - dnf update – Update installed packages
    - dnf remove <package> – Remove a package

General Commands

- `rpm` – RPM package manager
  - rpm -i <package.rpm> – Install an RPM package
  - rpm -e <package> – Remove an RPM package

- `dpkg` – Debian package manager
  - dpkg -i <package.deb> – Install a Debian package
  - dpkg -r <package> – Remove a Debian package

10. System Services and Daemon Management

- `systemctl` – Control the systemd system and service manager
  - systemctl start <service> – Start a service
  - systemctl stop <service> – Stop a service
  - systemctl restart <service> – Restart a service
  - systemctl enable <service> – Enable a service to start on boot
  - systemctl disable <service> – Disable a service from starting on boot
  - systemctl status <service> – Check service status
- `journalctl` – Query and view logs from systemd's journal

11. Scheduling Tasks

- `cron` – Daemon for running scheduled commands
- `at` – Run commands at a specified time
- `batch` – Run commands when the system load is low
- `sleep` – Delay for a specified time

12. File Permissions and Security

- `chmod` – Change file permissions
- `chown` – Change file owner and group
- `chgrp` – Change the group ownership of a file
- `umask` – Set default permissions for new files
- `setfacl` – Set file access control lists (ACL)

- `getfacl` – Get file access control lists (ACL)
- `sudo` – Execute a command as another user (usually root)
- `visudo` – Edit the sudoers file safely
- `passwd` – Change a user's password
- `sudoers` – Manage sudo access for users
- `gpasswd` – Administer group password
- `ss` – Display socket statistics (for secure network connections)
- `firewalld` – Frontend for managing firewall rules (used in some distros like Fedora and Red Hat)
- `iptables` – Administration tool for IPv4 packet filtering and NAT (Network Address Translation)
- `nmap` – Network exploration tool (can be used for security auditing)

13. System Backup and Restore

- `rsync` – Remote file and directory synchronization
- `cpio` – Copy files to and from archives
- `dd` – Low-level copying and backup of entire filesystems

14. System Shutdown and Reboot

- `shutdown` – Shut down the system
    - shutdown -h now – Immediately shut down
    - shutdown -r now – Reboot the system
    - shutdown -h +10 – Shut down after 10 minutes
- `reboot` – Reboot the system
- `halt` – Halt the system immediately (equivalent to turning off power)
- `poweroff` – Power off the system