

1. **tar:**
 - **Description:** Archive and compress files or directories.
 - **Usage:** **tar [options] file(s)**
 - **[options]:** Optional flags to customize the behavior of the **tar** command.
 - **file(s):** The files or directories to be archived.
 - **Example:** **tar -czvf archive.tar.gz folder/**
2. **ls:**
 - **Description:** List files and directories in the current location.
 - **Usage:** **ls [options] [file(s)]**
 - **[options]:** Optional flags to modify the output or behavior of the **ls** command.
 - **[file(s)]:** Optional argument specifying specific files or directories to list.
 - **Example:** **ls -l**
3. **cd:**
 - **Description:** Change the current directory.
 - **Usage:** **cd [directory]**
 - **[directory]:** Optional argument indicating the directory to change to. If not provided, it defaults to the home directory.
 - **Example:** **cd Documents/**
4. **pwd:**
 - **Description:** Print the current working directory.
 - **Usage:** **pwd**
 - **Example:** **pwd**
5. **mkdir:**
 - **Description:** Create a new directory.
 - **Usage:** **mkdir [directory]**
 - **[directory]:** The name of the directory to be created.
 - **Example:** **mkdir NewDirectory**
6. **cp:**
 - **Description:** Copy files or directories.
 - **Usage:** **cp [options] source destination**
 - **[options]:** Optional flags to control the copy operation.
 - **source:** The source file or directory.
 - **destination:** The destination directory or file.
 - **Example:** **cp file.txt backup/**
7. **rm:**
 - **Description:** Remove or delete files.
 - **Usage:** **rm [options] file(s)**
 - **[options]:** Optional flags for customizing the removal process.
 - **file(s):** The files to be removed.
 - **Example:** **rm oldfile.txt**

8. **rmdir:**

- **Description:** Remove empty directories.
- **Usage:** **rmdir [directory]**
- **[directory]:** The directory to be removed.
- **Example:** **rmdir EmptyDirectory/**

9. **touch:**

- **Description:** Create an empty file or update the timestamp of an existing file.
- **Usage:** **touch [options] file(s)**
- **[options]:** Optional flags to modify the behavior.
- **file(s):** The files to be created or updated.
- **Example:** **touch newfile.txt**

10. **cat:**

- **Description:** Concatenate and display the content of files.
- **Usage:** **cat [options] file(s)**
- **[options]:** Optional flags for modifying output.
- **file(s):** The files to be concatenated and displayed.
- **Example:** **cat file.txt**

11. **df:**

- **Description:** Display disk space usage.
- **Usage:** **df [options] [file(s)]**
- **[options]:** Optional flags for customizing the output.
- **[file(s)]:** Optional arguments specifying specific files or directories.
- **Example:** **df -h**

12. **du:**

- **Description:** Display directory space usage.
- **Usage:** **du [options] [file(s)]**
- **[options]:** Optional flags for customizing the output.
- **[file(s)]:** Optional arguments specifying specific files or directories.
- **Example:** **du -sh Documents/**

13. **tar:**

- **Description:** Archive and compress files or directories.
- **Usage:** **tar [options] file(s)**
- **[options]:** Optional flags to customize the behavior of the **tar** command.
- **file(s):** The files or directories to be archived.
- **Example:** **tar -xzvf archive.tar.gz**

14. **htop:**

- **Description:** Interactive process viewer and system monitor.
- **Usage:** **htop**
- **Example:** **htop**

15. **ssh:**

- **Description:** Secure Shell, used for remote login to a server.
- **Usage:** `ssh [user@]hostname [command]`
- **user:** The user to log in as (optional).
- **hostname:** The remote server's address.
- **command:** A command to execute on the remote server (optional).
- **Example:** `ssh username@192.168.0.1`

16. **ssh-keygen:**

- **Description:** Generate SSH key pairs.
- **Usage:** `ssh-keygen [options] [file]`
- **[options]:** Optional flags to customize key generation.
- **[file]:** The file to which the key will be written.
- **Example:** `ssh-keygen -t rsa`

17. **uname:**

- **Description:** Display system information.
- **Usage:** `uname [options]`
- **[options]:** Optional flags to customize the output.
- **Example:** `uname -a`

18. **man:**

- **Description:** Display the manual or help pages for a command.
- **Usage:** `man [command]`
- **[command]:** The command for which you want to see the manual.
- **Example:** `man ls`

19. **wc:**

- **Description:** Count words, lines, and characters in a file.
- **Usage:** `wc [options] [file(s)]`
- **[options]:** Optional flags to customize the output.
- **[file(s)]:** The files to be counted.
- **Example:** `wc -l file.txt`

20. **zip:**

- **Description:** Package and compress files.
- **Usage:** `zip [options] zipfile file(s)`
- **[options]:** Optional flags for customizing the compression.
- **zipfile:** The name of the zip file to be created.
- **file(s):** The files to be included in the zip.
- **Example:** `zip -r archive.zip folder/`

21. **head:**

- **Description:** Display the beginning of a file.
- **Usage:** `head [options] [file(s)]`
- **[options]:** Optional flags for customizing the output.
- **[file(s)]:** The files to display.

- **Example:** `head -n 5 file.txt`

22. tail:

- **Description:** Display the end of a file.
- **Usage:** `tail [options] [file(s)]`
- **[options]:** Optional flags for customizing the output.
- **[file(s)]:** The files to display.
- **Example:** `tail -f log.txt`

23. chmod:

- **Description:** Change file permissions.
- **Usage:** `chmod [options] mode file(s)`
- **[options]:** Optional flags for modifying permissions.
- **mode:** The permission mode to be set.
- **file(s):** The files to which the permissions apply.
- **Example:** `chmod +x script.sh`

24. alias:

- **Description:** Create or display command aliases.
- **Usage:** `alias [name[=value] ...]`
- **name[=value]:** The alias name and optional value.
- **Example:** `alias ll='ls -l'`

25. Grep

- **Description:** Search for patterns in files.
- **Usage:** `grep [options] pattern [file(s)]`
- **[options]:** Optional flags for customizing the search behavior.
- **pattern:** The pattern to search for in the specified file(s).
- **[file(s)]:** The files to search for the specified pattern.
- **Example:**
- `grep "error" logfile.txt` - Search for the string "error" in the file logfile.txt.
- `grep -r "pattern" /path/to/directory` - Recursively search for a pattern in all files under a directory.

26. Find

- **Description:** Search for files and directories in a directory hierarchy.
- **Usage:** `find [path] [options] [expression]`
- **[path]:** The starting directory for the search (default is the current directory).
- **[options]:** Optional flags for customizing the search.
- **[expression]:** Criteria for matching files and directories.
- **Example:**
- `find /path/to/search -name "*.log"` - Find all files with a ".log" extension in the specified directory.

27. ps:

- Description: Display information about active processes.
- Usage: `ps [options]`
- [options]: Optional flags for customizing the output.
- Example:
- `ps aux` - Display a detailed list of all processes running on the system.