- tar
  Archives files into a compressed file (tarball).
  Example: tar -czvf archive.tar.gz folder/
- man
  Displays the manual page for a command.
  Example: man ls

Directory and File Commands

UNIX is a powerful operating system widely used for managing files and directories through a command-line interface. Mastering its basic commands is essential for efficient navigation and file management.

1. Listing Files and Directories (ls)

The ls command lists the contents of a directory. By default, it shows only visible files.

ls -l displays detailed info such as permissions, ownership, size, and modification date.

ls -a shows all files, including hidden ones (those starting with a dot).

Example:ls -la

2. Changing Directories (cd)

The cd command changes the current working directory.

cd /path/to/directory moves to a specified directory.

cd .. moves up one directory level.

cd alone returns to the home directory.

Example:cd /usr/local

3. Displaying Current Directory (pwd)

pwd prints the full path of the current directory, helping users know their location in the file system.

Example:pwd

4. Creating Directories (mkdir)

mkdir creates a new directory.

Example:mkdir projects

5. Removing Directories (rmdir and rm -r)

rmdir deletes an empty directory.

rm -r removes a directory along with all its contents recursively.

Example:rmdir old_folder

rm -r temp_folder

6. Creating and Modifying Files (touch)

touch creates an empty file or updates the last modified timestamp of an existing file.

Example:touch notes.txt

7. Copying Files and Directories (cp)

cp copies files or directories. Use -r to copy directories recursively.

Example:cp notes.txt backup_notes.txt

cp -r dir1 dir2

8. Moving or Renaming Files (mv)

mv moves files or directories or renames them.

Example:mv file1.txt file2.txt # Renames file1.txt to file2.txt

mv file.txt /home/user/Documents/ # Moves file.txt

9. Viewing File Contents (cat)

cat displays the contents of a file on the terminal.

Example:cat notes.txt

10. File Type Identification (file)

file tells the type of file (text, binary, directory, etc.).

Example:file notes.txt

11. Viewing File Details (stat)

stat provides detailed information about a file, including size, permissions, and timestamps.

Example:stat notes.txt

12. Searching Files (find)

find searches for files and directories matching criteria like name or type.

Example:find . -name "*.txt

13. Changing Permissions (chmod)

chmod changes file or directory permissions using numeric or symbolic modes.

Example:chmod 644 notes.txt # Owner can read/write, others can read only

14. Changing Ownership (chown)

chown changes the owner and group of a file or directory. Usually requires superuser privileges.

Example: sudo chown john:staff notes.txt

General Purpose Utilities in UNIX

General Purpose Utilities in UNIX are standard commands used for text processing, system information, communication, and user-level operations. These are not tied to a specific shell and are available across all UNIX-like operating systems.

1. echo

The 'echo' command displays a line of text or a variable value.

Used to print messages, often in scripts to show status or values.

Syntax: echo [text or variable]

Example: echo "Welcome to UNIX"

Output: Welcome to UNIX

2. date

Displays or sets the system date and time.

Check or format the current date and time.

Syntax: date [+format]

Example: date "+%d-%m-%Y %H:%M:%S"

Output: 29-07-2025 23:10:55

3. cal

Displays a simple calendar.

View calendar for planning.

Syntax: cal [month] [year]

Example: cal 7 2025

Output: (Sample July 2025 calendar)

4. clear

Clears the terminal screen.

Remove clutter for better readability.

Syntax: clear

5. whoami

Shows the current logged-in username.

Identify the user executing commands.

Syntax: whoami

Example: whoami

Output: student

6. uname

Displays system information.

Determine OS, kernel version, etc.

Syntax: uname [option]

Example: uname -a

Output: Linux ubuntu …

7. passwd

Change the user password.

Update password credentials securely.

Syntax: passwd

Prompts:

Current password

New password

8. who / w

'who' shows logged-in users; 'w' shows user activity.

Monitor sessions and usage.

Syntax:

who

w

Example: who

Output: student tty1 …

9. uptime

Shows system uptime and load.

Check availability and performance.

Syntax: uptime

Output: Up for 2 days, load average…

10. history

Displays command history.

Recall or reuse past commands.

Syntax: history

Example: history

Output: 100 ls -l

11. man

Displays manual pages for commands.

Learn usage and options of commands.

Syntax: man [command]

Example: man ls

Press 'q' to exit.

12. hostname

Shows the system hostname.

Identify the system on a network.

Syntax: hostname

Example: hostname

Output: ubuntu-server

13. tty

Displays terminal device name.

Identify the terminal session.

Syntax: tty