

Directory and File Operations

- **pwd** - Print name of current/working directory

Syntax: `pwd`

- **ls** - List directory contents

Syntax: `ls [OPTION]... [FILE]...`

- `-a` : Do not ignore entries starting with `.`
- `-d` : List directory entries instead of contents
- `-l` : Use a long listing format
- `-r` : Reverse order while sorting

- **mkdir** - Make directories

Syntax: `mkdir DIRECTORY_NAME`

- **rmdir** - Remove empty directories

Syntax: `rmdir [OPTION]... DIRECTORY...`

File Viewing and Manipulation

- **whatis** - Display one-line manual page descriptions

Syntax: `whatis [command name(s)]`

- **man** - Display detailed manual for a command

Syntax: `man [command name]`

- **cat** - Concatenate files and print on the standard output

Syntax: `cat [OPTION]... [FILE]...`

- `-n` : Number all output lines
- `-E` : Display `$` at end of each line
- `-T` : Display TAB characters as `^I`
- `-A` : Equivalent to `-vET`

- **cp** - Copy files and directories

Syntax: `cp [OPTION] SOURCE DEST`

- **rm** - Remove files or directories

Syntax: `rm [OPTION]... FILE...`

- `-f` : Ignore nonexistent files, never prompt
- `-i` : Prompt before every removal
- `-r` : Remove directories and contents recursively
- `-d` : Remove empty directories

- **head** - Output the first part of files

Syntax: `head [OPTION]... [FILE]...`

- `-c K` : Print the first `K` bytes of each file
- `-n K` : Print the first `K` lines instead of 10
- **tail** - Output the last part of files
Syntax: `tail [OPTION]... [FILE]...`
 - `-c K` : Output the last `K` bytes
 - `-n K` : Print the last `K` lines instead of 10

File Permissions

- **chmod** - Change file mode bits
Syntax: `chmod [OPTION]... MODE[,MODE]... FILE...`
 - Uses symbolic or octal mode (see image for details)

Text Processing

- **cut** - Remove sections from each line of files
Syntax: `cut OPTION... [FILE]...`
 - `-b` : Select only these bytes
 - `-c` : Select only these characters
 - `-d` : Use DELIM instead of TAB for field delimiter
 - `-f` : Select only these fields
- **grep** - Print lines matching a pattern
Syntax: `grep [OPTIONS] PATTERN [FILE...]`
 - `-i` : Ignore case distinctions
 - `-v` : Invert match (select non-matching lines)
 - `-o` : Print only the matched parts
 - `-n` : Prefix each line with line number
- **wc** - Print newline, word, and byte counts for each file
Syntax: `wc [OPTION]... [FILE]...`
 - `-c` : Print byte counts
 - `-l` : Print newline counts
 - `-L` : Print length of longest line
 - `-w` : Print word counts
- **sort** - Sort lines of text files
Syntax: `sort [OPTION]... [FILE]...`

Miscellaneous Commands

- **cal** - Displays a calendar
Syntax: `cal [month] [year]`
- **cmp** - Compare two files byte by byte
Syntax: `cmp [OPTION]... FILE1 FILE2`
- **date** - Print or set the system date and time
Syntax: `date [OPTION]... [+FORMAT]`
- **clear** - Clear the terminal screen
Syntax: `clear`

Process Management

- **getppid()** - Returns the process ID of the parent of the calling process
Syntax: `pid_t getppid(void);`
- **getpid()** - Returns the process ID of the calling process
Syntax: `pid_t getpid(void);`
- **ps** - List currently running processes
Syntax: `ps [options]`
 - **PID** – Unique process ID
 - **TTY** – Terminal type
 - **TIME** – CPU time consumed
 - **CMD** – Command that launched the process

System Calls (File Manipulation)

Some common system calls:

- **create** - Create a new file
- **delete** - Delete a file
- **read** - Read from a file
- **write** - Write to a file
- **reposition** - Move file pointer
- **close** - Close a file
- **get/set attributes** - Retrieve or modify file attributes