

## 1.Display User Manual of a Command

Functionality: Shows the manual page with details about a command's usage, options, and arguments.

Syntax: `man <command>`

```
LS(1)                                User Commands                                LS(1)
NAME
  ls - list directory contents

SYNOPSIS
  ls [OPTION]... [FILE]...

DESCRIPTION
  List information about the FILES (the current directory by default).
  Sort entries alphabetically if none of -cftuvSUX nor --sort is speci-
  fied.

  Mandatory arguments to long options are mandatory for short options
  too.

  -a, --all
      do not ignore entries starting with .

  -A, --almost-all
      do not list implied . and ..

  --author
      Manual page ls(1) line 1 (press h for help or q to quit)
```

## 2.Change Current Working Directory.

Functionality: Changes the terminal's current working directory.

Syntax: `cd <directory-path>`

```
ubuntu@ubuntu:~/Desktop$ cd /home/ubuntu/Desktop
ubuntu@ubuntu:~/Desktop$
```

## 3.List Contents of the Current Directory.

Functionality: Lists all files and directories in the current location.

Syntax: `ls`

```
ubuntu@ubuntu:~/Desktop$ ls
main.txt  ubuntu-desktop-bootstrap_ubuntu-desktop-bootstrap.desktop
ubuntu@ubuntu:~/Desktop$
```

## 4.Read/Modify/Concatenate Text Files.

Functionality: Displays or manipulates file content.

Syntax:

Read: `cat <filename>`

Modify: `'nano <filename>`

Concatenate: `cat <file1> <file2> > <outputfile>`



The image shows a terminal window with a nano editor open on a file named 'main.txt'. The file contains a list of Linux commands: 'ls', 'man', 'touch', 'cd', 'cd ..', 'mkdir', 'rm', 'rmdir', and 'nano'. Below the terminal, there are three file icons: 'notes.txt', 'main.txt', and 'merge.txt'. The 'merge.txt' icon is highlighted, indicating it is the output of the concatenation command.

```
ubuntu@ubuntu:~/Desktop$ nano main.txt
GNU nano 7.2 main.txt
This all are the command of linux terminal
ls
man
touch
cd
cd ..
mkdir
rm
rmdir
nano

[ Read 10 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut      ^T Execute  ^C Location
^X Exit      ^R Read File ^\ Replace  ^U Paste    ^J Justify  ^_ Go To Line

ubuntu@ubuntu:~/Desktop$ cat main.txt notes.txt > merge.txt
ubuntu@ubuntu:~/Desktop$ cat merge.txt
This all are the command of linux terminal
ls
man
touch
cd
cd ..
mkdir
rm
rmdir
nano
ubuntu@ubuntu:~/Desktop$
```

## 5.Create a New Directory.

Functionality: Creates a new directory at the specified path.

Syntax: `mkdir <directory-name>`



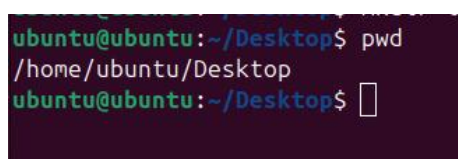
The image shows a terminal window where the 'mkdir labwork' command has been executed. To the right of the terminal, there is a folder icon labeled 'labwork', representing the newly created directory.

```
ubuntu@ubuntu:~/Desktop$ mkdir labwork
ubuntu@ubuntu:~/Desktop$
```

## 6.Display Current Working Directory.

Functionality: Prints the current directory path.

Syntax: `pwd`



The image shows a terminal window where the 'pwd' command has been executed, displaying the current working directory as '/home/ubuntu/Desktop'.

```
ubuntu@ubuntu:~/Desktop$ pwd
/home/ubuntu/Desktop
ubuntu@ubuntu:~/Desktop$
```

## 7. Write Arguments to Standard Output.

Functionality: Prints the provided string or variables.

Syntax: `echo <arguments>`

```
/home/ubuntu/Desktop
ubuntu@ubuntu:~/Desktop$ echo "Operating System Lab"
Operating System Lab
ubuntu@ubuntu:~/Desktop$
```

## 8. Remove a File.

Functionality: Deletes a specified file.

Syntax: `rm <filename>`

```
ubuntu@ubuntu:~/Desktop$ rm notes.txt
ubuntu@ubuntu:~/Desktop$ ls
labwork  merge.txt
main.txt  ubuntu-desktop-bootstrap_ubuntu-desktop-bootstrap.desktop
ubuntu@ubuntu:~/Desktop$
```

## 9. Delete a Directory.

Functionality: Removes an empty directory.

Syntax: `rmdir <directory-name>`

```
ubuntu@ubuntu:~/Desktop$ rmdir labwork
ubuntu@ubuntu:~/Desktop$ ls
main.txt  merge.txt  ubuntu-desktop-bootstrap_ubuntu-desktop-bootstrap.desktop
ubuntu@ubuntu:~/Desktop$
```

## 10. Copy a File or Directory.

Functionality: Copies a file or directory to a destination.

Syntax: `cp <source> <destination>`

```
ubuntu@ubuntu:~/Desktop$ cp main.txt backup.txt
ubuntu@ubuntu:~/Desktop$ ls
backup.txt  merge.txt
main.txt    ubuntu-desktop-bootstrap_ubuntu-desktop-bootstrap.desktop
ubuntu@ubuntu:~/Desktop$ cat backup.txt
This all are the command of linux terminal
ls
man
touch
cd
cd ..
mkdir
rm
rmdir
nano
ubuntu@ubuntu:~/Desktop$
```

## 10. Switch to Root User.

Functionality: Gains root privileges temporarily.

Syntax: `sudo su`

```
ubuntu@ubuntu:~$ sudo su
root@ubuntu:/home/ubuntu#
```

## 11. Move Files or Directories.

Functionality: Moves or renames files and directories.

-Syntax: `mv <source> <destination>`

```
ubuntu@ubuntu:~/Desktop$ mv main.txt labwork/
ubuntu@ubuntu:~/Desktop$ cd labwork
ubuntu@ubuntu:~/Desktop/labwork$ ls
main.txt
ubuntu@ubuntu:~/Desktop/labwork$ mv main.txt root.txt
ubuntu@ubuntu:~/Desktop/labwork$ ls
root.txt
ubuntu@ubuntu:~/Desktop/labwork$
```

## 12. Search for a String in a File.

Functionality: Searches for a specific word or pattern in a file.

Syntax: `grep "<string>" <file>`

```
ubuntu@ubuntu:~/Desktop$ grep "nano" merge.txt
nano
ubuntu@ubuntu:~/Desktop$
```

### 13. Print Top N Lines of a File.

Functionality: Displays the first N lines of a file.

Syntax: `head -n <N> <file>`

```
ubuntu@ubuntu:~/Desktop$ head -n 7 merge.txt
This all are the command of linux terminal
ls
man
touch
cd
cd ..
mkdir
ubuntu@ubuntu:~/Desktop$
```

### 14. Print Last N Lines of a File.

Functionality: Displays the last N lines of a file.

Syntax: `tail -n <N> <file>`

```
ubuntu@ubuntu:~/Desktop$ tail -n 7 merge.txt
touch
cd
cd ..
mkdir
rm
rmdir
nano
ubuntu@ubuntu:~/Desktop$
```

### 15. Remove Read Permission from Owner.

Functionality: Revokes the owner's read permission for a file. Syntax: `chmod u-r <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod u-r backup.txt
ubuntu@ubuntu:~/Desktop$ ls -l backup.txt
--w-rw-r-- 1 ubuntu ubuntu 87 Jan 17 16:20 backup.txt
ubuntu@ubuntu:~/Desktop$
```

### 16. Change Specific Permissions.

Functionality: Sets or removes specific file permissions.

-Syntax: `chmod u+r,w-x,g+w <filename>`



```
ubuntu@ubuntu:~/Desktop$ chmod u+rw,g+x merge.txt
ubuntu@ubuntu:~/Desktop$ ls -l merge.txt
-rwxrwxr-- 1 ubuntu ubuntu 87 Jan 17 16:14 merge.txt
ubuntu@ubuntu:~/Desktop$
```

### 17.Add Write Permission to Owner, None to Others.

-Functionality: Allows write access for the owner only.

Syntax: `chmod u+w,o-rwx <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod u+w,u-rx,g-rwx,o-rwx merge.txt
ubuntu@ubuntu:~/Desktop$ ls -l merge.txt
--w----rwx 1 ubuntu ubuntu 87 Jan 17 16:14 merge.txt
ubuntu@ubuntu:~/Desktop$
```

### 18.Assign Permissions to Users.

Functionality: Modifies file access for users, groups, and others.

Syntax: `chmod u+rw,g+rx,o+r <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod u+rw,g+rw,g-x,o+r,o-wx merge.txt
ubuntu@ubuntu:~/Desktop$ ls
backup.txt  merge.txt
labwork    ubuntu-desktop-bootstrap_ubuntu-desktop-bootstrap.desktop
ubuntu@ubuntu:~/Desktop$ ls -l merge.txt
-rwxrw-r-- 1 ubuntu ubuntu 87 Jan 17 16:14 merge.txt
ubuntu@ubuntu:~/Desktop$
```

### 19.Assign R/W/X to Others.

Functionality: Gives read, write, and execute permissions to others.

Syntax: `chmod o+rw <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod o+rw backup.txt
ubuntu@ubuntu:~/Desktop$ ls -l backup.txt
--w-rw-rwx 1 ubuntu ubuntu 87 Jan 17 16:20 backup.txt
ubuntu@ubuntu:~/Desktop$
```

### 20.Remove All Permissions from All Users.

Functionality: Clears all permissions on a file.

Syntax: `'chmod a-rwx <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod a-rwx merge.txt
ubuntu@ubuntu:~/Desktop$ ls -l merge.txt
----- 1 ubuntu ubuntu 87 Jan 17 16:14 merge.txt
ubuntu@ubuntu:~/Desktop$
```

### 21.Remove Read Permission Using Absolute Mode.

Functionality: Uses numeric mode to restrict read access.

Syntax: `chmod 700 <filename>`

### 22.Set R/W for Owner, None for Group/Other.

Functionality: Assigns permissions in numeric mode.

Syntax: `chmod 600 <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod 600 confidential.txt
ubuntu@ubuntu:~/Desktop$ ls -l confidential.txt
-rw----- 1 ubuntu ubuntu 0 Jan 17 16:43 confidential.txt
ubuntu@ubuntu:~/Desktop$
```

### 23.Add Execute for Owner, Read for Group/Others.

Functionality: Adds execution and read access.

Syntax: `chmod u+x,g+r,o+r <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod u+x,g+r,o+r script.sh
ubuntu@ubuntu:~/Desktop$ ls -l script.sh
-rwxrwxr-- 1 ubuntu ubuntu 0 Jan 17 16:45 script.sh
ubuntu@ubuntu:~/Desktop$
```

### 24.Add Execute Permission to All Users.

Functionality: Enables execution by everyone.

Syntax: `chmod a+x <filename>`

```
ubuntu@ubuntu:~/Desktop$ chmod a+x run.sh
ubuntu@ubuntu:~/Desktop$ ls -l run.sh
-rwxrwxr-x 1 ubuntu ubuntu 0 Jan 17 16:45 run.sh
ubuntu@ubuntu:~/Desktop$
```

