

## Practical - 1

Aim: Linux Commands: Working with directories:

### 1. pwd: Print the current working directory.

The `pwd` command is mostly used to print the current working directory on your terminal. It is also one of the most commonly used commands.

Now, your terminal prompt should usually include the entire directory. If it doesn't this is a quick command to see which directory you're in. Another purpose for this command is when creating scripts because it can help us find the directory in which the script was saved. The below pictures are the output

Command: `pwd`

Example: `pwd`

`/home /user /Documents`

### 2. cd: Change the directory

The `cd` command is used to navigate between directories. It requires either the full path or the directory name, depending on your current working directory. If you run this command without any options, it will take you to your home folder.

Command: `cd <directory_path>`

Example: `cd /home /user /Pictures`

`pwd`

`/home /user /Pictures`

files in reverse. This command will write each FILE to standard output, the last line first. When no file is specified then this command will read the standard output.

Command (cat): cat file1.txt file2.txt

Example output: Contents of file1.txt  
Contents of file2.txt

Command (tac): tac file1.txt

Example output: (reverse lines):  
Last line of file1  
Second to last line  
First line of file1

12. View more/less: View file content page by page.

The more command in Linux is a useful tool for viewing text files in the Command prompt, particularly when dealing with large files like log files.

The less command in Linux is an indispensable utility for browsing the contents of text files interactively. Unlike traditional text editors, 'less' allows you to view text files page by page without loading the entire file into memory.

Command (more): more file1.txt

Output: (shows first screen of content)

Command (less): less file1.txt

Output: (shows first screen of content)  
(press "q" to quit)



13. strings: Display readable text in a binary file.  
The string command in Linux is a straightforward tool that extracts readable strings from a binary file.

Command:

strings file1.bin

Example output: Readable string 1

Readable string 2

Readable string 3

14. chmod: Change file permissions.

The chmod command is used to change the access mode of a file. The name is an abbreviation of change mode. Which states that every file and directory has a set of permissions that control the permissions like who can read, write and execute the files. The permissions have three categories: read, write and execute simultaneously represented by 'r', 'w' and 'x'.

Command (make a file executable):

chmod +x script.sh

3. ls : List directory contents.

The ls command is commonly used to identify the files and directories in the working directory. This command is one of the many often-used Linux commands that you should know.

This command can be used by itself without any arguments and it will provide us the output with all the details about the files and the directories in the current working directory. There is a lot of flexibility offered by this command in terms of displaying data in the output.

Command : ls

Example : ls

file1.txt file2.txt folder1 folder2

4. mkdir/rmdir : Create or remove directories

This mkdir command allows you to create fresh directories in the terminal itself. The default syntax is mkdir <directory name> and the new directory will be created.

The rmdir command is used to delete permanently an empty directory. To perform this command the user running this program must have sudo privileges in the parent directory.

Command : • Create a directory :  
mkdir new-directory.

• Remove a directory :  
rmdir old-directory



5. file : Determine file type  
 The file command in Linux is a vital utility for determining the type of a file. It identifies file types by examining their content rather than their file extensions, making it an indispensable tool for users who work with various file formats. The file type can be displayed in a human-readable format (e.g., ASCII text) or as a MIME type (e.g., 'text/plain; charset=us-ascii'). The file command tests each argument provided to categorize it accurately.

Command: file file1.txt

Example: file1.txt:ASCII text

6. touch - create empty file  
 The touch command creates an empty file when put in the terminal in this format as touch <file name>

Command: touch newfile.txt

7. rm - Remove files

The rm command in Linux is generally used to delete the files created in the directory.

Command: rm file1.txt

8. cp : copy files

The cp command of Linux is equivalent to copy-paste and cut-paste in windows.

Command: cp file1.txt /home/user/Backup/



9. mv: Move or rename files.  
The mv command is generally used for renaming the files in Linux.

Command: mv file1.txt newfile.txt (for rename)  
mv file1.txt /home/user/Backup/ (for move)

10. head/tail: View the beginning or end of a file.  
As their names imply, the head command will output the first part of the file, while the tail command will print the last part of the file. Both commands write the result to standard output.

Command (head): head file1.txt

- Output example: first 10 lines.

Line 1

⋮

Line 10

Command (tail): tail file1.txt

- Example output: last 10 lines

Line 91

⋮

Line 100

11. cat/tac: Concatenate files or reverse output.

The cat command is the simplest command to use when you want to see the contents of a particular file. The only issue is that it simply unloads the entire file to your terminal.

- tac Command is used to concatenate and print