

Working With Directories: ‘pwd’ & ‘clear’

edurel



- Linux provides a **CLI** (Command Line Interface) to communicate with the OS.
- **CLI** is better for tasks which cannot be performed with the GUI.

Command	Explanation
pwd	Displays the current working directory of the terminal
/	Root directory
echo	Command that writes its arguments to standard output.
su	Used to switch to root user(so that super user permissions can be used to execute commands)
su username	Used to switch to a different user
sudo	Executes only that command with root/ super user privileges
clear	This command is used to clear the terminal screen. Contents will not be deleted but scrolled down

Working With Directories: ‘cd’

```
$ cd [directory]
```

cd	Changes the directory to the home directory
cd ~	This command also changes the directory to home directory
cd /	Changes the directory to root directory
cd ..	Changes the directory to its parent directory
cd 'xx yy'	We specify the folder name in inverted commas because there is a space in the folder name

Working With Directories: 'ls' Command

\$ ls [options] [file | Directory]

ls	This command lists all the contents in the current working directory
ls path	By specifying the path after ls, the content in that path will be displayed
ls -l	Using 'l' flag, lists all the contents along with its owner settings, permissions & time stamp (long format)
ls -a	Using 'a' flag, lists all the hidden contents in the specified directory
ls --author	Using '--author' flag, lists the contents in the specified directory along with its owner
ls -S	Using 'a' flag, sorts and lists all the contents in the specified directory by size
ls *.html	Using '*' flag, lists only the contents in the directory of a particular format
ls -IS > file.txt	Using '>' flag, copies the result of ls command into a text file

Working With Files: ‘cat’ Command

\$ cat [options] file1 [file2..]

cat	This command is used to display the content of text files and concatenate several files into one
cat -b	This is used to add line numbers to non blank lines
cat -n	This is used to add line numbers to all lines
cat -s	This is used to squeeze blank lines into one line
cat -E	Show \$ at the end of line

\$ cat > file1.txt

The ‘>’ flag can be used to create a new file and enter text contents from the terminal

\$ cat >> file1.txt

The ‘>>’ flag can be used to append text contents to an existing file from the terminal

Working With ‘grep’ Command

We use the ‘grep’ command to search for a particular string/ word in a text file.

This is similar to “Ctrl+F”, but executed via a CLI.

\$ grep options file1.txt // Returns results for matching string “options”

\$ grep -i options file1.txt // Returns the results for case insensitive strings

\$ grep -n options file1.txt // Returns the matching strings along with their line number

\$ grep -v options file1.txt // Returns the result of lines not matching the search string

\$ grep -c options file1.txt // Returns the number of lines in which the results matched search string

Working With ‘sort’ Command

We use the ‘sort’ command to sort the results of a search either alphabetically or numerically.
Files, file contents and directories can be sorted.

```
$ sort file1.txt // Sorts the contents of file1.txt and returns them in alphabetical order  
$ sort File1.txt File2.txt // Sorts the contents of both File1.txt & File2.txt  
$ sort -r file1.txt // 'r' flag returns the results in reverse order;  
$ sort -f file1.txt // 'f' flag does case insensitive sorting  
$ sort -n file1.txt // 'n' flag returns the results as per numerical order
```

Working With ‘|’ Command

The ‘|’ command a.k.a ‘pipe’ command is used to output the result of one command as input to another command.

‘|’ are used to perform two operations in the same command

```
$ grep dh File1.txt File2.txt | sort // Searches for string 'dh' from both files and sorts the results
```

```
$ grep dh File1.txt File2.txt | sort -r // Sorts the results in reverse order
```

Working With Files & Directories: 'cp' Command

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\$ cp [options] source destination

cp	This command is used to copy files and directories
cp -i	Enters interactive mode; CLI asks before overwriting files
cp -n	Does not overwrite the file
cp -u	Updates the destination file only when source file is different from destination file
cp -R	Recursive copy; Copies even hidden files
cp -v	Verbose; Prints informative messages

Working With Files & Directories: 'rm' & 'rmdir'

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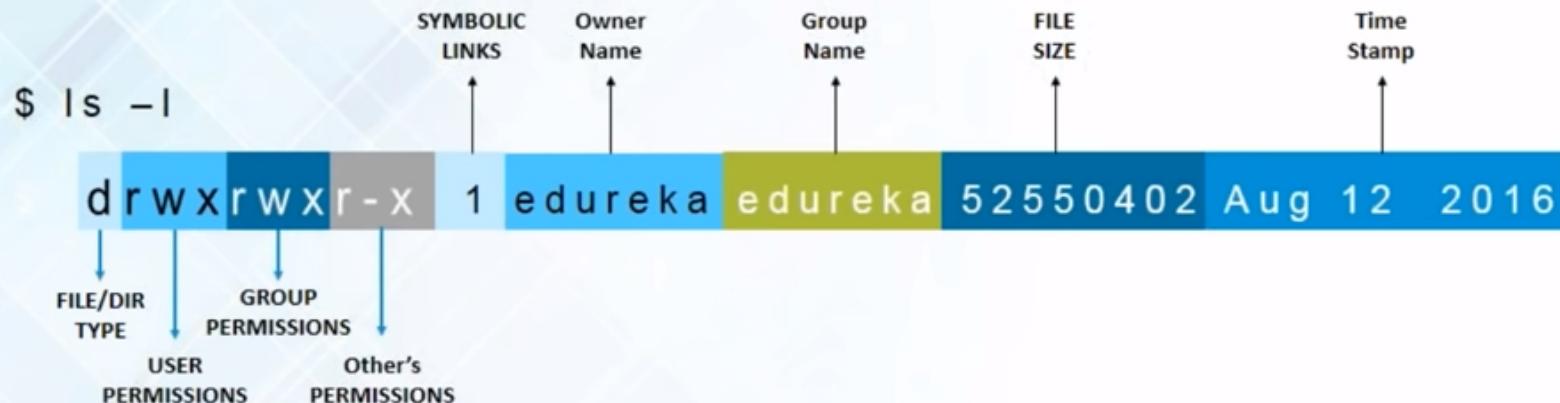
```
$ rmdir filename  
$ rm filename/foldername
```

rmdir	This command is used to remove the specified directory (Empty)
rmdir -p	Removes both the parent and child directory
rmdir -pv	Removes all the parent and sub directories along with the verbose.
rm -r	Removes even non empty directories.
rm -rp	Removes non empty directories including parent and subdirectories.



Working With User Permissions: ‘r’, ‘w’ & ‘x’

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FILE TYPES

- Normal File – ‘-’
- Directory – ‘d’
- Character Special File – ‘c’
- Binary Special File – ‘b’

FILE PERMISSIONS

- Read – ‘r’
- Write – ‘w’
- Execute – ‘x’

DENOTATIONS

- Users – ‘u’
- Groups – ‘g’
- Others – ‘o’
- All – ‘a’

Working With User Permissions: ‘r’, ‘w’ & ‘x’

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chmod : To change the access permissions of files and directories

chown : To change the owner of files and directories

chgrp : To change the group ownership of file and directories

Commands	Explanation
chmod g+wx filename	This gives the write and execute permission to group members
chmod u=rwx,o-wx filename	This gives the read, write and execute permission to owners, and removes the write and execute ownership from other members
chown username filename	Changes the owner of the specified file
chown username:groupname filename	Changes both the owner and group ownership of the specified file
chgrp groupname filename	Changes the group ownership of the specified file

Hands-on: Linux Commands

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pwd, clear, ls &
cd commands

02

cat, grep, sort,
pipe commands

03

cp, mv, mkdir,
rm, rmdir & user
permissions

04

Linux repository,
tar files, env var
& regex

05

Processes,
adding users
& ssh