4ITRC2 Operating System Lab

Lab Assignment 2

Aim:
To study and understand Ubuntu Commands

To perform:
Execute different Commands

To Submit:
Part 1: Outputs of the following commands

1. pwd: Prints the current working directory.

2. cd: Changes directories.

3. ls: Lists files and directories.

4. mkdir: Creates new directories.

5. rm: Removes files or directories.

6. touch: Creates empty files or updates file timestamps.

7. hostname: Displays the system's hostname.

8. cat: Concatenates and displays file contents.

9. chmod: Changes file permissions.

10. echo: Prints text or variables to the terminal.

11. grep: Searches for a pattern in files.

12. fgrep: Similar to grep but searches for fixed strings.

13. mv: Moves or renames files and directories.

14. cp: Copies files and directories.

15. more: Displays file contents one screen at a time.

16. less: Similar to 'more' but allows backward navigation.

17. wc: Counts lines, words, and characters in a file.

18. awk: Pattern scanning and processing language.

19. sed: Stream editor for filtering and transforming text.

20. tail: Displays the last few lines of a file.

Part 2: Answers to the following Questions

1. How to navigate to a Specific Directory?

Use the cd command followed by the directory path. Example: cd /home/user/Documents

2. How to see detailed information about files and directories using ls?

Use the ls -l command to list files with detailed information.

3. How to create multiple directories in Linux using mkdir command?

Use the mkdir command with multiple directory names. Example: mkdir dir1 dir2 dir3

4. How to remove multiple files at once with rm?

List the files separated by spaces. Example: rm file1.txt file2.txt file3.txt

5. Can rm be used to delete directories?

Yes, use rm -r to recursively delete directories.

6. How Do You Copy Files and Directories in Linux?

Use cp for files and cp -r for directories.

7. How to Rename a file in Linux Using mv Command

Use mv oldname newname.

8. How to Move Multiple files in Linux Using mv Command

List all files followed by the destination directory. Example: mv file1.txt file2.txt /destination/

9. How to Create Multiple Empty Files by Using Touch Command in Linux

Example: touch file1.txt file2.txt file3.txt

10. How to View the Content of Multiple Files in Linux

Use the cat command with multiple filenames. Example: cat file1.txt file2.txt

11. How to Create a file and add content in Linux Using cat Command

Example: cat > filename.txt (Enter content and press Ctrl+D to save).

12. How to Append the Contents of One File to the End of Another File using cat command

Example: cat source.txt >> destination.txt

13. How to use cat command if the file has a lot of content and can't fit in the terminal

Pipe the output to less or more. Example: cat largefile.txt | less

14. How to Merge Contents of Multiple Files Using cat Command

Example: cat file1.txt file2.txt > merged.txt

15. How to use cat Command to Append to an Existing File

Example: cat newcontent.txt >> existingfile.txt

16. What is chmod 777, chmod 755 and chmod +x or chmod a+x?

- chmod 777: Full read, write, and execute permissions.

- chmod 755: Owner has full permissions, others can only read and execute.

- chmod +x or chmod a+x: Adds execute permissions to all users.

17. How to find the number of lines that matches the given string/pattern

Use grep -c to count matches. Example: grep -c 'pattern' filename.txt

18. How to display the files that contain the given string/pattern

Use grep -l to list matching filenames. Example: grep -l 'pattern' *.txt

19. How to show the line number of file with the line matched

Use grep -n. Example: grep -n 'pattern' filename.txt

20. How to match the lines that start with a string using grep

Use grep '^string'. Example: grep '^hello' filename.txt

21. Can the sort command be used to sort files in descending order by default?

No, use sort -r for reverse order.

22. How can I sort a file based on a specific column using the sort command?

Use sort -k. Example: sort -k2,2 file.txt

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